ENVIRONMENTAL PROTECTION

LAND USE MANAGEMENT

Coastal Permit Program rules, N.J.A.C. 7:7

Coastal Zone Management rules, N.J.A.C. 7:7E

Adopted Emergency Amendments and Concurrent Proposed Amendments: N.J.A.C. 7:7-1.3, 2.1, 2.3, 7.2, 7.13, 7.29 and 7:7E-1.7, 1.8, 3.2, 3.6, 3.15, 3.16, 3.22, 3.27, 3A, 4.2, 4.10, 4.19, 7.3, 7.12, and 8.2.

Adopted Emergency Repeals and Concurrent Proposed Repeals: N.J.A.C. 7:7E-7.11

Adopted Emergency New Rules and Concurrent Proposed New Rules: N.J.A.C. 7:7-7.32, 7.33, 7.34, 7.35, and 7.36 and 7:7E-4.23 and 7.11.

Emergency Adopted Amendments, Repeals, and New Rules and Concurrent Proposed Amendments, Repeals, and New Rules Authorized: by Bob Martin, Commissioner, Department of Environmental Protection

Filed:

Gubernatorial Approval:

Authority: N.J.S.A. 13:1D-1 et seq.; 13:1D-29 et seq.; 12:5-3; 13:9A-1 et seq.; and 13:19-1 et seq.

Calendar Reference: See summary below for explanation of exception to calendar requirement

DEP Docket Number: 04-13-04

Emergency Amendments Effective Date:

Emergency Amendments Expiration Date:

A public hearing concerning this proposal will be held on:

Wednesday, May 22, 2013 at 5:30 P.M.

Long Branch Council Chambers, 2nd floor

344 Broadway

Long Branch, New Jersey

Submit written comments by (30 days from publication) electronically at http://www.nj.gov/dep/rules/comments.

The Department of Environmental Protection (Department) encourages electronic submittal of comments. In the alternative, comments may be submitted on paper to:

Gary J. Brower, Esq.

Attention: DEP Docket No.

Office of Legal Affairs

Department of Environmental Protection

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This emergency adoption and concurrent proposal may be viewed or downloaded from the Department's web site at http://www.nj.gov/dep/rules.

This is an emergency adoption and concurrent proposal of amendments, repeals, and new rules in the Coastal Permit Program rules, N.J.A.C. 7:7, and Coastal Zone Management (CZM) rules, N.J.A.C. 7:7E. The Department has determined that these amendments, repeals, and new rules are necessary in view of the significant adverse social, economic and environmental impacts associated with Superstorm Sandy which hit New Jersey's coastline on Monday October 29, 2012, and in support of the rebuilding and economic recovery of New Jersey's coastal areas in an expeditious and resilient manner, as explained further below.

These amendments, repeals, and new rules have been adopted on an emergency basis and became effective upon acceptance for filing by the Office of Administrative Law (see N.J.S.A. 52:14B-4(c) as implemented by N.J.A.C. 1:30-6.6(b)). Concurrently, the provisions of this emergency adoption are proposed for readoption pursuant to the rulemaking requirements of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. The readopted amendments, repeals, and new rules will be effective upon acceptance for filing by the Office of Administrative Law (N.J.A.C. 1:30-6.5(b)) if filed on or prior to the expiration date of the emergency rules.

Because it is an emergency rulemaking published in accordance with N.J.S.A. 52:14B-4(c), this rulemaking is excepted from the rulemaking calendar requirement under N.J.A.C. 1:30-3.3(a)3.

The agency emergency adoption and concurrent proposal follows:

Summary

By virtue of their location at the interface between oceans and land, coastal areas are among the most dynamic environments on earth. As a result, they are particularly susceptible to a broad range of natural hazards, such as flooding, storm surge, erosion, and storms. Catastrophic events, such as Superstorm Sandy, alter beaches, dunes, and wetlands, and threaten people's lives and property. Given the State's density, flooding and storm surge present severe and deleterious social, economic and environmental impacts within New Jersey's coastal areas when structures are not built to modern, appropriate standards.

New Jersey suffered extraordinary levels of damage to homes, businesses, and infrastructure as a result of Superstorm Sandy. In addition to the loss of life, damage to property and businesses, and disruption to the lives of the State's residents that occurred as a result of Superstorm Sandy, unprecedented damage was done to the coastal environment. To date, as much as 8 million cubic yards of debris from the storm had been removed, with removal continuing. As a result of the storm, nearly 1,400 vessels were either sunk or abandoned. In Mantoloking alone, 58 buildings and eight cars were washed into Barnegat Bay. The continued presence of sand washed into coastal water bodies and wetlands not only inhibits navigation, but also threatens the ecology of the bays and other waters, and wetlands.

These amendments, repeals, and new rules are intended to facilitate the expeditious rebuilding of more resilient coastal communities and coastal-related industries, and help facilitate the recovery of the coastal ecosystem. The amendments, repeals, and new rules fall into five broad categories: (1) facilitation of the expeditious rebuilding of residential and commercial developments; (2) facilitation of renovation or reconstruction of existing marinas and

construction of new marinas; (3) restoration of New Jersey's shellfish aquaculture industry; (4) maintenance of engineered beaches and dunes and establishment of living shorelines; and (5) facilitation of removal of sand and other materials, as well as the availability of dredged material disposal/placement areas. In addition to facilitating the resilient recovery and rebuilding of New Jersey's coastal communities, the amendments will enable the Department to implement the coastal management program in an effective, efficient, and environmentally protective manner. The coastal management program, through the coastal rules, will continue to steer development away from naturally hazardous and sensitive areas, protect estuarine and marine environments from adverse impacts, and promote resource conservation and designs sensitive to the environment.

Facilitation of the expeditious rebuilding of residential and commercial developments

Superstorm Sandy was the worst storm to strike New Jersey in 100 years. As a result of Sandy, New Jersey's housing stock was significantly affected. In March 2013, the State reported that approximately 67,977 owners' primary residences sustained some amount of physical damage and this number continues to increase as the assessment of damages continues. Many dwellings that suffered significant damage will continue to deteriorate and need to be reconstructed in an expeditious, resilient, and environmentally mindful manner. Residents remain displaced. A large number of commercial buildings also were physically damaged, many of which need to be substantially reconstructed. Many businesses that were not physically

destroyed were economically harmed because of the impacts on their neighbors and the community at large.

The New Jersey shore, which encompasses 127 miles of ocean beaches from Sandy Hook to Cape May, is a magnet for visitors and is less than one tank of gas from more than one-quarter of the U.S. population. Tourism is vital to the State's economy, generating approximately $38 billion in revenue annually. Tourism employment in 2011 consisted of 312,000 jobs and $9.5 billion in wages, approximately 9.8 percent of the total State's economy (The Economic Impact of Tourism in New Jersey, Tourism Satellite Account, Calendar Year 2011, see http://www.visitnj.org/sites/visitnj.org/files/2011-nj-tourism-economic-impact-state-and-counties.pdf).

Those choosing to rebuild in coastal communities will do so in a more resilient and environmentally protective manner. To facilitate that resilient rebuilding of the New Jersey Shore, revitalize the State's economy, and take advantage of resources available for rebuilding, it is essential that unnecessary regulatory impediments not be imposed and that these changes be made immediately through the emergency rule making process. Taking these actions will allow individuals, businesses, municipalities, and communities to begin or continue to recover from the devastation inflicted by Superstorm Sandy, while remaining mindful of environmental impacts and ensuring that the shore is rebuilt in a more resilient manner.

To assist in the monumental task of rebuilding, as discussed in more detail below, these amendments, repeals, and new rules streamline the permitting process through clarification of the exemption under the Waterfront Development Law concerning the reconstruction or replacement

of structures in-place at N.J.A.C. 7:7-2.3(d)6 and 7; modification of the permit-by-rule at N.J.A.C. 7:7-7.2(a)7 for reconstruction of residential or commercial development; and addition of a permit-by-rule at N.J.A.C. 7:7-7.2(a)8 for expansion or relocation (with or without expansion) laterally or landward of a residential or commercial development.

Facilitation of renovation or reconstruction of existing marinas and construction of new marinas

New Jersey's recreational boating industry was also severely impacted by Superstorm Sandy, with docks, marine equipment, buildings and boats significantly damaged or destroyed. The Marine Trades Association of New Jersey conducted a survey to assess the damage to marinas and recreational boating related businesses affected by Superstorm Sandy. One hundred nine businesses responded to the survey. As reported by the Marine Trades Association, damage to facilities, including buildings, property and docks, exceeded $35.5 million, while total losses of inventory, equipment, supplies, buildings, property, and docks exceeded $54.6 million. Using the information provided from the surveys submitted, the Marine Trades Association of New Jersey estimates that, including anticipated damages to other marinas that did not complete the survey, uninsured losses are in excess of $100 million.

As a tradition in New Jersey, the boating season begins on April 1. Many boaters are deciding now whether to dock their boats at New Jersey marinas or to go elsewhere, if they go anywhere at all. As marinas seek to rebuild it is imperative that our regulations reflect their need to rebuild quickly, better, with more resiliency, and in a manner that is cost effective and

economically viable. This is why these regulations need to be in place as soon as practicable. These regulatory changes will also help marina owners take advantage of grants and loans that will become available to them as part of the Superstorm Sandy recovery effort.

To facilitate the rebuilding of New Jersey's marinas, in addition to the clarification of the exemption under the Waterfront Development Law concerning the reconstruction or replacement of structures in-place at N.J.A.C. 7:7-2.3(d)6 and 7, modification of the permit-by-rule at N.J.A.C. 7:7-7.2(a)7 and addition of a new permit-by-rule at N.J.A.C. 7:7-7.2(a)8 noted above (which allow reconstruction of commercial development and the expansion or relocation of commercial development, respectively), the amendments also add a new permit-by-rule at N.J.A.C. 7:7-7.2(a)15 for the reconfiguration of any legally existing dock, wharf, or pier located at a legally existing marina and a new permit-by-rule at N.J.A.C. 7:7-7.2(a)20 for the construction and /or installation of a pumpout facility and/or pumpout support facility, and modify the coastal general permit at N.J.A.C. 7:7-7.13 for the construction of support facilities at legally existing and operating marinas. In addition, the focus of the breakwater rule at N.J.A.C. 7:7E-4.19 is changed to the protection of boat mooring areas, and flexibility in the design of these structures is added. To add flexibility in the design of new marinas, and reconstruction or renovation of existing marinas, the resort/recreational use rule at N.J.A.C. 7:7E-7.3 is amended.

Restoration of New Jersey's shellfish aquaculture industry

Information compiled by the New Jersey Department of Agriculture indicates that New Jersey's hard clam and oyster aquaculture industry suffered nearly $1,347,500 in damages to

property, buildings, gear, structures and product as a result of Superstorm Sandy. Specifically, it is estimated that the hard clam aquaculture industry, which is the largest aquaculture sector and valued at $3.5 million, suffered approximately $1,118,000 in property damage, with an estimated $130,000 in lost hard clams. New Jersey's second largest aquaculture sector, oysters, incurred approximately $33,000 in property damage and $66,500 in oysters lost.

To facilitate the restoration of this industry and to encourage shellfish aquaculture activities, the amendments streamline the permitting process through the addition of three new permits-by-rule: placement of land based upwellers and raceways, N.J.A.C. 7:7-7.2(a)17; placement of predator screens and oyster spat attraction devices, N.J.A.C. 7:7-7.2(a)18; and placement of shellfish cages within a shellfish lease area, N.J.A.C. 7:7-7.2(a)19. The amendments also add a new general permit for commercial aquaculture activities, N.J.A.C. 7:7-7.35, and a new general permit for placement of shell within shellfish lease areas, N.J.A.C. 7:7-7.36. The general water area rule at N.J.A.C. 7:7E-4.2, which contains the standards for aquaculture, is also modified to specifically address shellfish aquaculture.

Maintenance of engineered beaches and dunes and establishment of living shorelines

Superstorm Sandy wreaked havoc along the coast. Its effects on beaches, dunes, and wetlands varied in intensity based on the location of the beach, dune or wetland in relation to the center of the storm. As we rebuild we must do so in a way that is more resilient and better protects New Jerseyans and their property. Unfortunately, some of our existing regulations do not easily allow for measures such as living shore lines or the maintenance of beaches and dunes

at engineered levels. It is therefore essential to immediately adopt these rules so that the most protective and ecologically beneficial shore protection measures can be implemented.

Observations made in a study by Richard Stockton College of New Jersey (Stockton) based on the New Jersey beach profile data shows severe beach erosion along the New Jersey coast. The Department has reviewed three reports by Stockton dated November 13, 2012, December 5, 2012 and December 12, 2012, that assessed the performance of beaches and dunes that are part of New Jersey's Beach Profile Network. The New Jersey Beach Profile Network consists of over 100 beach profile sites along the entire shoreline, including the Raritan and Delaware Bays (see http://intraweb.stockton.edu/eyos/page.cfm?siteID=149&pageID=4). The reports indicate that municipalities with an engineered dune system or a wide and well developed natural beach and dune system had less damage than those without such protections.

Superstorm Sandy also severely impacted New Jersey's tidal wetlands. Tidal wetlands buffer uplands from chronic and episodic erosion caused by wave action, as well as provide habitat for aquatic flora and fauna. Significant amounts of tidal wetlands have been lost. To address this loss, rather than armoring the shoreline with hard structures, such as bulkheads or revetments, the State is looking to a natural solution through the establishment of living shorelines, as an alternative that adds diversity to other shore protection measures. Living shorelines are a shoreline management practice that addresses the loss of vegetated shorelines and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This is accomplished through the strategic placement of vegetation, sand, or other structural and organic materials.

The establishment, management, and maintenance of a dune system along the developed shoreline and the establishment of living shorelines will enhance storm protection. These enhancements are achieved through amendments to the dune and beach special area rules at N.J.A.C. 7:7E-3.16 and 3.22, respectively, as well as the new standards for beach and dune maintenance activities at N.J.A.C. 7:7E-3A, which will make it easier for municipalities to maintain engineered dune systems. Specifically, the amendments allow for the maintenance of engineered beaches and dunes to the design template, and allow for the removal of accumulated sand beneath a boardwalk, as well as placement of temporary sand fencing during the winter months. A permit-by-rule at N.J.A.C. 7:7-7.2(a)16 is added for the placement of sand fencing to create or sustain a dune. To facilitate the establishment of living shorelines, amendments are made to the general permit at N.J.A.C. 7:7.29 for habitat creation and enhancement, and to the CZM rules for shellfish habitat, N.J.A.C. 7:7E-3.2; submerged vegetation habitat, N.J.A.C. 7:7E-3.6; intertidal subtidal shallows, N.J.A.C. 7:7E-3.15; wetlands, N.J.A.C. 7:7E-3.27; filling, N.J.A.C. 7:7E-4.11; coastal engineering, N.J.A.C. 7:7E-7.11; and marine fish and fisheries, N.J.A.C. 7:7E-8.2. In addition, a new general water area rule at N.J.A.C. 7:7E-4.23 for living shorelines is created.

Facilitation of removal of sand and other materials, as well as the availability of dredged material disposal/placement areas

The navigability of New Jersey's coastal waters is significantly impeded by sand, other materials, and debris from Superstorm Sandy. The deposition of this material and debris

threatens the health and safety of boaters, as well as the aquatic environment. The amount of debris that was deposited into the waterways is so significant that the Department has contracted with three contractors to identify, remove, dispose of, or recycle the debris and dredge and redistribute sand on the coastal barrier islands.

To streamline the permitting process for dredging activities, a new permit-by-rule is added at N.J.A.C. 7:7-7.2(a)21 for the implementation of a sediment sampling plan in a water area as part of a dredging or dredged material management activity or as part of a remedial investigation of a contaminated site. In addition, to facilitate the removal of sand and other materials from lagoons, marinas, and where a bulkhead failed, three new general permits are added: one at N.J.A.C. 7:7-7.32 to address the circumstance where material was deposited as a consequence of a storm event for which the Governor declared a State of Emergency, including the dredging of sand from a man-made lagoon; one at N.J.A.C. 7:7-7.33 for the dredging of material from a waterway at a residential or commercial development deposited as a result of the failure of a bulkhead; and one at N.J.A.C. 7:7-7.34 for the dredging and management of material from a marina. The amendments also clarify the regulation of dredged material management areas under the Coastal Area Facility Review Act, N.J.S.A. 13:19-1 et seq. (CAFRA), at N.J.A.C. 7:7-2.1(b)13 and the beneficial use of dredged material is encouraged under the three new general permits at N.J.A.C. 7:7-7.32, 7.33, and 7.34 noted above, and the living shorelines rule at N.J.A.C. 7:7E-4.23, coastal engineering rule at N.J.A.C. 7:7E-7.11 and dredged material placement on land rule at N.J.A.C. 7:7E-7.12.

Coastal Permit Program rules, N.J.A.C. 7:7

Subchapter1. General provisions

7:7-1.3 Definitions

Definitions for the following terms are added:"living shoreline," "non-polluting material," "pumpout facility," and "sand." These terms are also added to the CZM rules at N.J.A.C. 7:7E-1.8.

A definition of "living shoreline" is included. As discussed in more detail with regard to the coastal general permit for habitat creation, restoration, enhancement, and living shoreline activities at N.J.A.C. 7:7-7.29, and the new living shorelines general water area rule at N.J.A.C. 7:7E-4.23, the installation of living shorelines along coastal waters is encouraged. The definition is based upon the Department's review of definitions used by other states, universities and conservation organizations.

A definition of "non-polluting material" is included. Docks, piers or moorings, when allowed in shellfish habitat or waters, are required to be constructed of non-polluting material. The definition is similar to that in the Statewide Programmatic General Permit 19 (SPGP-19) adopted by the U.S. Army Corps of Engineers (http://www.nan.usace.army.mil/Missions/Regulatory/RegionalGeneralPermits), except that "steel" has been added to the list of examples of non-polluting materials and the term "Wolmanized" deleted from the examples of lumber not considered "non-polluting material" since this term is a specific trade name for pressure-treated wood protection using preservatives, which is already covered by the description in the definition.

A definition of "pumpout facility" is included to describe the type of facility addressed in the permit-by-rule at N.J.A.C. 7:7-7.2(a)20 for the construction and/or installation of a pumpout facility and/or pumpout support facilities, the coastal general permit at N.J.A.C. 7:7E-7.13 for construction of support facilities at legally existing and operating marinas, the acceptability conditions for new dredging within shellfish habitat at N.J.A.C. 7:7E-3.2(e), and the standards relevant to marinas at N.J.A.C. 7:7E-7.3(d). A pumpout facility is a facility intended to receive the discharge of wastewater from a marine sanitation device; examples of pumpout facilities are included in the definition.

Subchapter 2. Activities for which a permit is required

7:7-2.1 CAFRA

N.J.A.C. 7:7-2.1(b) provides the Department's interpretation of the statutory intent of CAFRA, including its interpretation of various terms appearing in Act, as it applies to particular forms of development. At N.J.A.C. 7:7-2.1(b)13iii, the rehabilitation and use of an existing dredged material management area within the same footprint is included as an activity that is not a development under CAFRA and therefore does not require a CAFRA permit. The Department's determination that a dredged material management area does not require a CAFRA permit is consistent with its application of these rules to similar projects. By way of illustration, the definition of "development" at N.J.A.C. 7:7-1.3 includes the "construction, relocation or enlargement of the footprint of development of any building or structure…" If the footprint of development of the structure does not increase, no CAFRA permit is required. The amendment

to N.J.A.C. 7:7-2.1(b)13iii makes clear that a CAFRA permit is not required for the rehabilitation of an existing dredged material management area provided it is within the same footprint. This clarification to the rules will ensure that more capacity is available at dredged material management areas so that dredging can continue in tidal waterways to allow the recovery from the impacts to navigation resulting from Superstorm Sandy. This change will help ensure that boaters are safe from potentially deadly hazards.

7:7-2.3 Waterfront Development

N.J.A.C. 7:7-2.3(d)6 and 7 exempt from the general requirement that a waterfront development permit be obtained for the construction, reconstruction, alteration, expansion or enlargement of any structure the repair, replacement, renovation, or reconstruction of various waterfront structures in the same location and size. In 2006, these provisions were amended to clarify that the size of a structure is measured in three dimensions, length, width, and height. In certain situations, the use of three dimensions is appropriate, while in others it is not. Therefore the Department has determined to refine how the size of the structure is determined in order to facilitate a resilient recovery of the shore.

Where the structure to be repaired, replaced, renovated or reconstructed in the same location is a dock or pier over wetlands, or a low profile bulkhead where the top of the bulkhead is constructed at an elevation below the spring high water line, or a building over wetlands or water, N.J.A.C. 7:7-2.3(d)6i requires that the size of the original structure that is to be repaired, replaced, renovated or reconstructed in the same location and size must be measured in length,

width, and height. This requirement is intended to protect special areas. For example, an increase in the height of a low profile bulkhead could prevent water from reaching wetlands behind the bulkhead, thereby altering the wetlands hydrology and adversely impacting this special area. A decrease in the height of a dock or pier over wetlands, or an increase in the height of a building over wetlands or water, could adversely impact those special areas by decreasing the amount of sunlight penetration.

N.J.A.C. 7:7-2.3(d)6ii applies to any dock, wharf, pier or bulkhead, or building not identified at (d)6i above and provides that the size of the original structure that is to be repaired, replaced, renovated or reconstructed in the same location and size is to be measured only in length and width since the height of these structures is not a factor in determining compliance with the coastal rules. The size of the replacement structure as measured in height may vary from the original structure because these structures will not adversely affect special areas. For example, an applicant can replace a floating dock with a fixed dock and vice versa and the replacement structure will have no adverse impact to the water area. For similar reasons, at N.J.A.C. 7:7-2.3(d)7, as amended, the legally existing floating docks, mooring rafts or similar temporary or seasonal structures that are to be repaired, replaced, renovated, or reconstructed in the same location and size are to be measured in two dimensions, length and width, for purposes of determining if the repair, replacement, renovation, or reconstruction can be conducted without a permit.

These changes will enable those choosing to rebuild in coastal communities in the aftermath of Superstorm Sandy to do so in a more resilient and environmentally protective manner.

Subchapter 7. General permits and permits-by-rule

These amended and new general permits and permits-by-rule are intended to facilitate the expeditious rebuilding of more resilient coastal communities and coastal-related industries, and help facilitate the recovery of the coastal ecosystem.

Several of the new permits-by-rule authorize activities that may result in a discharge to waters of the United States, thereby requiring a water quality certificate from the Department. The water quality certification process under Section 401 of the Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C. §1341, provides states with a tool to protect water quality by providing an opportunity to address aquatic resource impacts of Federally issued permits and licenses. Under Section 401 of the Clean Water Act, a Federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the United States until the state where the discharge originates has granted or waived Section 401 certification. Examples of Federal licenses and permits subject to Section 401 certification include Clean Water Act Section 404 permits for discharge of dredged or fill material issued by the U.S. Army Corps of Engineers, and permits issued by the U.S. Army Corps of Engineers under Sections 9 and 10 of the Rivers and Harbors Act for activities which have a potential discharge in navigable waters.

Through the promulgation of the permits-by-rule at N.J.A.C. 7:7-7.2(a)15 for the reconfiguration of any legally existing dock, wharf, or pier located at a legally existing marina, at N.J.A.C. 7:7-7.2(a)17 for the placement of land-based upwellers and raceways, including intakes and discharges, for aquaculture activities, at N.J.A.C. 7:7-7.2(a)18 for the placement of predator screens and oyster spat attraction devices within a shellfish lease area, at N.J.A.C. 7:7-7.2(a)19 for the placement of shellfish cages within a shellfish lease area, and at N.J.A.C. 7:7-7.2(a)21 for the implementation of a sediment sampling plan for sampling in a water area as part of a dredging or dredged material management activity, the Department has determined that the activities which qualify for authorization under these permits-by-rule also comply with the Department's CZM rules and the Surface Water Quality Standards, N.J.A.C. 7:9B, which are used to review requests for water quality certificates. Because the Department does not issue a formal written approval for activities that qualify for a permit-by-rule, the Department is making it clear in the text of these new permits-by-rule that activities that are performed in accordance with their requirements will qualify for a water quality certificate. This will facilitate the issuance of the required Federal license or permit.

N.J.A.C. 7:7-7.2 Permits-by-rule

Permit-by-rule for the reconstruction of a legally constructed, residential or commercial development within the same footprint

At N.J.A.C. 7:7-7.2(a)7, the permit-by-rule for the voluntary reconstruction of a non-damaged, currently habitable residential or commercial development is amended to delete the

requirement that the development be non-damaged. CAFRA exempts the reconstruction of a development damaged in whole or in part by fire, storm, natural hazard, or act of God. This exemption is recognized in the rules at N.JA.C. 7:7-2.1(c)3. Therefore, prior to these amendments, the permit-by-rule at N.J.A.C. 7:7-7.2(a)7 applied only to the voluntary reconstruction of a non-damaged residential or commercial development in the CAFRA area. However, the Waterfront Development Law does not exempt reconstruction of a development located within the upland waterfront development area, as defined at N.J.A.C. 7:7E-5.1, that was damaged or destroyed by fire, storm, natural hazard or act of God. Therefore, under the rules prior to these amendments, the reconstruction of a residential or commercial development in the upland waterfront development area that was damaged by a storm or other event required authorization under a general permit or an individual permit. The deletion of the requirement that the development be non-damaged facilitates the rebuilding of any residential or commercial development in the CAFRA or upland waterfront development areas of the coastal zone regardless of whether the reconstruction is voluntary or the result of damage or destruction, provided the reconstruction complies with all municipal, State and Federal requirements as well as the requirements specified at N.J.A.C. 7:7-7.2(a)7i through vi. The term "voluntary" is also deleted since the scope of the permit-by-rule has been expanded to include both voluntary reconstruction and reconstruction of a development that was damaged. Prior to these amendments, "voluntary" was used to describe the rebuilding of a non-damaged structure. The amended permit-by-rule also requires that the development must have been or could have been legally occupied in the most recent five year period. This provision is intended to exclude the

reconstruction of residential and commercial developments that have not been recently occupied or are derelict while taking into account that, after a storm or other event rendering the structure uninhabitable, there may be some period before reconstruction begins when the structure is not inhabited. The Department has determined that the permit-by-rule as amended will result in minimal adverse environmental impact, is consistent with recent amendments to the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13, and will facilitate redevelopment in the aftermath of Superstorm Sandy.

Permit-by-rule for expansion or relocation (with or without expansion) of the footprint of a residential or commercial development landward or parallel to the mean high water line

At N.J.A.C. 7:7-7.2(a)8, a new permit-by-rule is added for the expansion or relocation (with or without expansion) of the footprint of a legally constructed residential, including accessory structures, or commercial development, landward or parallel to the mean high water line provided the development has been or could have been legally occupied in the most recent five year period. This new permit-by-rule is consistent with recent amendments made to the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13, and will facilitate redevelopment in the aftermath of Superstorm Sandy.

The expansion or relocation must not be proposed on a beach, dune, or wetland. However, structures such as stairs or an ADA-compliant ramp, which are constructed only for access to a residential or commercial development required to be elevated pursuant to the New Jersey Uniform Construction Code in accordance with the Flood Hazard Area Control Act rules,

for which there is no feasible alternative location outside of a beach, dune, wetland, are allowed under the permit-by-rule. Also, the reconstruction or relocation can have no additional impacts to special areas, although again, structures such as stairs or an ADA-compliant ramp, which are constructed only for access to a residential or commercial development required to be elevated and for which there is no feasible alternative location outside of special areas, are permitted. The Department has determined that in these limited circumstances, these structures will have minimal impacts.

There can be no increase in the number of dwelling units, if it is a residential development, or in the number of parking spaces, if it is a commercial development. The construction of the expansion or relocation must meet the flood hazard area rule at N.J.A.C. 7:7E-3.25 and riparian zone rule at N.J.A.C. 7:7E-3.26. In addition, for expansions only, the expansion cannot exceed a cumulative surface area of 400 square feet on the property constructed after July 19, 1994, which is the date that the CAFRA regulatory thresholds were amended to reflect a tiered approach depending upon the type of development and its proximity to the mean high water line, a beach or a dune, and must be located on the non-waterward side of the development. These requirements ensure that the expansion or relocation (with or without expansion) of the residential or commercial development does not adversely affect special areas, the structure is constructed in a manner that is consistent with the Department's standards for elevation and flood proofing, and the development is not located closer to a tidal waterway.

Permit-by-rule for the reconfiguration of any legally existing dock, wharf, or pier located at a legally existing marina

At N.J.A.C. 7:7-7.2(a)15 a new permit-by-rule is added for the reconfiguration of any legally existing dock, wharf, or pier located at a legally existing marina that is not located within shellfish habitat, submerged vegetation habitat, or wetlands. The reconfiguration of existing docks, wharfs, or piers within shellfish habitat, submerged vegetation habitat, and wetlands requires review by the Department to ensure that these special areas are not adversely impacted by the relocated structures and their use. These changes will facilitate the reconstruction of marinas that have been devastated by Superstorm Sandy and will provide them with the flexibility to be more viable economically.

The reconfiguration of a dock, wharf, or pier within a marina qualifies for this permit-by-rule provided the reconfiguration does not result in structures located outside the area covered by an existing Tidelands instrument, increase the number of boat slips, hinder navigation, or increase the total linear footage of docks or piers in the marina. In addition, the structures must be configured in such a manner as to minimize the water area covered by structures and provide a minimum of four feet from all property lines. These requirements ensure additional water areas are not affected by the reconfiguration, the number of boat slips and linear footage of docks or piers at the marina are not increased, the water area covered by structures is minimized, and navigation in the waterway and access to any adjacent docks is not impeded. The reconfiguration of docks, wharfs, and piers at a marina when located in accordance with the requirements of this permit-by-rule will have minimal adverse impact.

Permit-by-rule for the placement of sand fencing to create or sustain a dune

At N.J.A.C. 7:7-7.2(a)16, a new permit-by-rule is added for the placement of sand fencing to create or sustain a dune, provided the fencing does not require the grading or excavation of a dune. The placement of sand fencing for the purposes of creating or sustaining a dune is a common practice in the coastal zone and, when sand fencing is placed in accordance with the requirements of this permit-by-rule, it will have no adverse environmental impact. As illustrated by the State's recent experience with the impacts of Superstorm Sandy, robust beach and dune systems assist in protecting coastal communities from severe damage from storms. Dunes are dynamic natural features that help protect lives and property in adjacent landward areas, and buffer barrier islands and spits from the effects of major natural coastal hazards such as hurricanes, storms, flooding and erosion.

Beaches are habitat for threatened and endangered beach nesting birds, such as piping plovers and least terns, and plant species, such as seabeach amaranth. To ensure that the placement of the sand fencing will not adversely affect threatened and endangered wildlife and plant species habitat which is located on the waterward side of the dune, this permit-by-rule requires that the sand fencing be located on the landward side of the dune.

To protect the public's ability to access tidal waters, this permit-by-rule requires that the sand fencing be placed parallel to the mean high water line, and provides that the sand fencing cannot prevent perpendicular public access to the beach. As such, breaks in the fencing may be necessary to maintain perpendicular access.

New permits-by-rule for shellfish aquaculture activities (N.J.A.C. 7:7-7.2(a)17, 18 and 19)

As explained previously, Superstorm Sandy severely impacted New Jersey's shellfish aquaculture industry. Not only will the addition of the below permits-by-rule assist in the restoration of this industry, the permits-by-rule will encourage and facilitate new and continued aquaculture activities.

Almost all aquaculture in New Jersey's waters involves hard clams and oysters. However, of the approximately 2,500 acres of bay or river bottom leased for shellfish aquaculture along the Atlantic Coast estuaries (excluding the Delaware Bay), less than an estimated 600 acres are actively used for hard clam aquaculture activities. Further, while oyster aquaculture activities are dominant in the Delaware Bay, of the approximately 34,000 acres of bay bottom leased, less than 10 percent of those acres are actively used for traditional aquaculture activities such as shell planting and seed transplanting. Nevertheless, both hard clams and oysters have a long history of commercial production, and the biological benefits and commercial potential remain quite high in New Jersey.

The production of hard clams within the Atlantic coastal estuaries is of particular importance to aquaculture in New Jersey. The best data currently available indicates that in New Jersey hard clams account for two-thirds of total aquaculture farm-gate sales (that is, sales directly from the producer). In fact, New Jersey ranks fifth among hard clam producing states behind Virginia, Florida, Connecticut, and Massachusetts. The top one-third of hard clam growers produces 87 percent of all hard clams grown in New Jersey. Many of these top growers

are third to fifth generation harvesters whose families helped to develop a hard clam aquaculture industry in New Jersey.

The Delaware Bay oyster industry is one of the oldest forms of aquaculture in North America. Most of the current harvest comes directly from the seed beds rather than aquaculture leases, mainly because of problems with mortality associated with the oyster diseases MSX and Dermo.

Permit-by-rule for the placement of land-based upwellers and raceways for aquaculture activities

At N.J.A.C. 7:7-7.2(a)17, a new permit-by-rule is included for the placement of land-based upwellers and raceways, including intakes and discharges, for aquaculture activities. An upweller is a flow-through system that is used for growing shellfish seed contained in compartments where water, which is drawn from the adjacent water body, flows through the system to carry nutrients to the seed. A raceway is a long rectangular flow-through system in which shellfish seed can be grown to a sufficient size for planting. Water drawn from the adjacent waterway nourishes the juvenile shellfish, which, in turn, filter the water prior to its discharge, thereby improving the quality of the discharged water. Land-based upwellers and raceways, when appropriately placed, do not adversely affect the adjacent waters.

As stated above, the discharged water from a land-based upweller or raceway does not have an adverse effect on water quality. When located in appropriate upland areas, the structures and activity will not have an effect on special areas. Accordingly, this permit-by-rule requires

the structures be located on the upland portion of a lot with a legally existing, functioning bulkhead thus ensuring that wetlands, beaches and dunes are not present on the site. The grading, excavation, filling, or placement of structures on a beach, dune or wetland is prohibited. This permit-by-rule also requires that the discharge of the water from the system must be to a water body and not directly into a wetland in order to protect any wetlands on the site from impacts such as erosion.

Permit-by-rule for the placement of predator screens and oyster spat attraction devices within a shellfish lease area

At N.J.A.C. 7:7-7.2(a)18, a new permit-by-rule is added for the placement of predator screens and oyster spat attraction devices within a shellfish lease area. Predator screens allow shellfish seed to grow to a harvestable size by reducing predation. Oyster spat attraction devices, such as Chinese hats, French sticks and shell bags, provide oyster larvae (spat) with a suitable material on which to attach and grow, and then be efficiently collected for planting on oyster bottom or aquaculture grow-out equipment. Shellfish aquaculturists have traditionally used these devices without any adverse environmental effects. Predator screens and oyster spat attraction devices are temporarily placed on the bay or river bottom during times when clam seed is planted or during the spawning time for oysters. This permit-by-rule does not authorize the placement of shell within a shellfish lease area.

Predator screens and oyster spat attraction devices can also have a positive environmental impact because, in addition to increasing shellfish populations in a given area, they provide habitat for other marine organisms such as juvenile fish and crabs.

This permit-by-rule requires that predator screens and oyster spat attraction devices be located in an area that is covered by a valid shellfish lease issued pursuant to N.J.S.A. 50:1-23, which governs the leasing of shellfish areas. Shellfish leases are issued by the New Jersey Shellfisheries Council, subject to approval by the Commissioner and in accordance with the Department's shellfish lease regulations at N.J.A.C. 7:25-24. To ensure that the structures are promptly removed so that they do not create a hazard or nuisance after a lease is terminated or the use of predator screens and oyster spat attraction devices cease, this permit-by-rule requires that these structures be removed within five days after expiration or termination of a shellfish lease or the cessation of the use of predator screens and oyster spat attraction devices, whichever occurs first. Further, to ensure that the predator screens will not present a hazard to navigation, the screens must not extend into the water column more than six inches above the substrate and that all oyster spat attraction devices must not extend more than 24 inches above the substrate. A typical oyster spat attraction device is approximately 24 inches in height. Therefore, this limit will allow the placement of these structures on the water body bottom while not posing a hazard to navigation.

This permit-by-rule requires that no activity undertaken under this permit-by-rule prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner in accordance with N.J.S.A. 50:1-33.

Permit-by-rule for the placement of shellfish cages within a shellfish lease area

At N.J.A.C. 7:7-7.2(a)19, a new permit-by-rule is added for the placement of shellfish cages within shellfish lease areas. Shellfish cages are used to store or grow shellfish in a confined area. Cages provide protection from predators and allow the aquaculturist to maintain and harvest shellfish in a more efficient manner. To qualify for this permit-by-rule, the cages must be located in a shellfish lease area authorized pursuant to N.J.S.A. 50:1-23. For the same reasons discussed with regard to N.J.A.C. 7:7-7.2(a)18, the removal of cages within five days of the expiration or termination of a shellfish lease or the cessation of the use of shellfish cages, whichever occurs first, is required.

To ensure that the cages do not pose a hazard to navigation, a minimum water depth of four feet between the top of the cage and the water surface at mean low water is required. In addition, the cages must be continuously checked and repaired to ensure that the structures are not displaced off of the lease area. This requirement is also consistent with the U.S. Army Corps of Engineers Nationwide Permit 48 for existing commercial shellfish aquaculture activities.

Because the cages are submerged in the water, this permit-by-rule requires that the cages must be constructed of non-polluting materials to ensure that no contaminants leach into the water. In addition, the placement of cages shall not prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner in accordance with N.J.S.A. 50:1-33.

Permit-by-rule for construction and/or installation of a pumpout facility and/or pumpout support facilities

To encourage the installation of pumpout facilities at marinas rebuilding after Superstorm Sandy, a new permit-by-rule at N.J.A.C. 7:7-7.2(a)20 is added for the construction and/or installation of a pumpout facility and/or pumpout support facilities, as well as the connection of a pumpout facility and/or pumpout support facility to an existing sewer line.

Sewage discharged from recreational and commercial vessels can contribute to the degradation of coastal water quality. The impacts of vessel-generated discharges are of particular concern in coastal embayments where marinas and other boating facilities are located because of the high concentrations of boats, reduced tidal flushing capacity, and general proximity to sensitive natural resources.

The National Marine Manufacturers Association reports that New Jersey is currently ranked 26th in the nation based on the number of vessels registered. Using 2008 boater registration figures, approximately 31,884 of New Jersey's recreational vessels have the potential to have a marine sanitation device on board. A marine sanitation device is equipment installed on board a vessel which is designed to receive, treat, or discharge sewage.

The Clean Vessel Act Program approved by Congress in 1992 provides assistance to states for the construction, renovation, operation, and maintenance of pumpout stations and dump stations. The United States Fish and Wildlife Service provides overall administration of the Clean Vessel Act Program. In New Jersey, the Department's Division of Fish and Wildlife oversees the Clean Vessel Act Program, but the implementation of the program is through a

collaborative effort of many participants from public and private agencies and organizations. To date, there have been 306 applications for funding for the construction, renovation, operation and maintenance of sewage pumpout facilities from marinas, county governments and other interested parties. More than 250 marina pumpout stations and eight pumpout boats in New Jersey waters have been funded since the program's inception in January 1994. It has been estimated that pumpout stations at marinas prevented approximately 500,000 gallons of sewage from entering the water and pumpout boats accounted for an additional 120,000 gallons. However, vessels with portable toilets and holding tanks continue to require more accessible sewage pumpout facilities.

"Pumpout facility" as defined at N.J.A.C. 7:7-1.3 is a facility intended to receive the discharge of wastewater from a marine sanitation device. Pumpout facilities include, but are not limited to, fixed pumpout stations, dockside pumpouts, portable pumpouts, pumpout boats, and dump stations.

This permit-by-rule authorizes the construction and/or installation of a pumpout facility and/or pumpout support facility at a marina, boat yard, boat sales facility, yacht club, restaurant, boat ramp, or other waterfront facility. To qualify under this permit-by-rule, the pumpout must discharge to a municipal or regional treatment plant where practicable; to a subsurface sewage disposal system; or to a holding tank, with waste being removed by a licensed septage hauler. Pumpout facilities utilizing one of these three discharge methods were previously authorized through the general permit for the construction of support facilities at legally existing and operating marinas at N.J.A.C. 7:7-7.13. As explained in the summary of the coastal general

permit for support facilities at legally existing and operating marinas, the provisions regarding pumpout facilities are deleted, enabling these activities to be conducted under a permit-by-rule without application to the Department for authorization as is required under a general permit. The Department has determined that the construction or installation of a pumpout facility when constructed or installed in accordance with these criteria will have minimal adverse impacts on the environment and can be governed by a permit-by-rule.

This permit-by-rule also authorizes the installation of a sewer line connecting the pumpout facility or pumpout support facility to an existing on-site sewer line or sewer line located immediately adjacent to the site, provided the connecting sewer line and the area of the connection are located within areas containing non-porous cover such as asphalt paving, porous paving, paver blocks, gravel, crushed shell, crushed stone and any other similar surfaces. This requirement ensures that special areas are not impacted by the connection because the structures will be placed in areas that are already disturbed. If the sewer line is attached to an existing dock, it cannot extend below the stringers of the dock, making it is less likely to be damaged by waves or flooding. In addition, a Treatment Works Approval must be obtained for the construction of the sewer line associated with the pumpout facility when required under the Department's rules governing Treatment Works Approvals at N.J.A.C. 7:7-14A, the New Jersey Pollutant Discharge Elimination System rules. Any connection that does not meet the above requirements is instead regulated under the coastal general permit for the construction of support facilities at legally existing and operating marinas, N.J.A.C. 7:7-7.13(b)5.

Activities authorized under this permit-by-rule must not have any adverse impact on special areas. For example, if wetlands exist on the site, during the construction of the pumpout facility all safeguards, such as silt fencing to ensure sediment does not run off into the wetland and adversely impact the plant community, must be in place.

Permit-by-rule for the implementation of a sediment sampling plan for sampling in a water area as part of a dredging or dredged material management activity or as part of a remedial investigation of a contaminated site

As stated in the general summary, significant amounts of debris, sand and other materials were deposited into New Jersey's waterways as a result of Superstorm Sandy. In addition, potential contamination of waterways occurred during Superstorm Sandy from the flooding of industrial facilities and Superfund sites located adjacent to tidal waterways. Accordingly, much of the sediment that will be removed during the coming months will need to be characterized. Therefore, at N.J.A.C. 7:7-7.2(a)21, a new permit-by-rule is included for sediment sampling performed in a water area described at N.J.A.C. 7:7E-4.1, for the purpose of characterizing the physical and chemical composition of sediments in two instances: when performed as part of a dredging or dredged material management activity or when performed as part of a remedial investigation of a contaminated site.

Typically, sampling cores are collected using a device that pulls a sample of substrate approximately six to eight inches in diameter from a particular sample location. Sample locations are generally spaced 100 feet or more apart, depending on the size of the dredged area

or the contaminated site. Once the substrate is removed from the sampling location, the hole naturally fills back in. Thus, the environmental impacts from sediment sampling are temporary in nature and result in minimal disturbance to the substrate during the sampling event.

This permit-by-rule authorizes sediment sampling in a water area for purposes of characterizing the sediments that may be removed as part of a dredging or dredged material management activity. In this case, the sediment sampling plan must be approved in writing by the Department's Office of Dredging and Sediment Technology. The Department has prepared a dredging technical manual, titled "The Management and Regulation of Dredging Activities and Dredged Material Disposal in New Jersey's Tidal Waters," October 1997, which provides guidance on dredged material sampling.

This permit-by-rule also authorizes sampling of sediments during a remedial investigation of a contaminated site. In this case, the sediment sampling plan must be prepared in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, and must be approved by the Department or certified by a Licensed Site Remediation Professional in accordance with the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS), N.J.A.C. 7:26C.

Prior to this rulemaking, in order to conduct sampling for purposes of these types of sediment sampling plans, an applicant was required to obtain authorization under the general permit for geotechnical borings at N.J.A.C. 7:7-7.27. Because sampling plans that are part of a dredging or dredged material management activity are reviewed and approved by the Department pursuant to the CZM rules, review of the plans as part of an application for authorization under

the geotechnical borings general permit is duplicative. Likewise, because sampling plans that are part of a remedial investigation are reviewed and approved by the Department or certified by a Licensed Site Remediation Professional pursuant to the rules governing site remediation, reviewing the same plans for purposes of obtaining an authorization under the geotechnical borings general permit is unnecessary.

7:7-7.13 Coastal general permit for construction of support facilities at legally existing and operating marinas

Marinas are an essential component of the State's waterfront communities as they provide necessary infrastructure and services to the boating public. Marinas also contribute to the State's economy.

Prior to Superstorm Sandy, the marina industry was struggling. The conversion of marinas to waterfront condominiums and other non-water dependent development is a trend that is growing both on a national and State level. The Marine Trades Association of New Jersey has been tracking the loss of marine facilities within the State. According to the Marine Trades Association of New Jersey, as of 2011, the marina industry has lost over 500 slips and seventeen marina facilities have been closed or sold for development. This is supported by the Department's experience in reviewing development proposals to convert existing water dependent uses to housing. The services lost from the conversion of these marinas include boat storage, repair and maintenance facilities, fuel sales, pumpout facilities and retail sales of boating and related supplies.

Those struggles were exacerbated by Sandy's impact. As noted previously, damage to facilities, including buildings, property and docks, exceeded $35.5 million, while total losses of inventory, equipment, supplies, buildings, property, and docks exceeded $54.6 million. Using the information provided from the surveys submitted, the Marine Trades Association of New Jersey estimates that, including anticipated damages to other marinas that did not complete the survey, uninsured losses are in excess of $100 million.

In an effort to preserve existing marinas and make them economically viable, as well as facilitate the rebuilding of marinas damaged by the storm while assuring that important environmental concerns continue to be addressed, the coastal general permit for the construction of marina support facilities is amended as described below. Failure to take action to help facilitate rebuilding and enhancing this industry in light of the economic impacts caused by Superstorm Sandy may result in this industry not being able to recover.

N.J.A.C. 7:7-7.13(b)1 sets forth the standards for the construction of boat rack systems/marina support buildings including, but not limited to, showrooms, maintenance/repair, marine supplies, bait/tackle, boat sales, dock masters office buildings, and sheds. Storage buildings are added to this list in response to comments received through the marina stakeholder group. These facilities, constructed in accordance with the requirements of this section, do not pose any impacts different than the other structures allowed under this paragraph. In addition, this subsection is amended to reduce the setback requirement for buildings at N.J.A.C. 7:7-7.13(b)1ii, from 100 feet to 15 feet from a shore protection structure and 25 feet from the mean high water line where no shore protection structures are present. These setback requirements are

consistent with the setback requirements for other structures from a shore protection structure such as single family homes or duplexes, and riparian zone setbacks (see N.J.A.C. 7:7E-7.2(e)11 and N.J.A.C. 7:7E-3.26). The 100-foot setback was intended to preserve that portion of the sire having direct water access for water dependent activities, Because a marina is a water dependent activity, it is appropriate to allow marina related support facilities to be located within this area. The setback was not intended to address storm or flooding issues. Any proposed development under this general permit must also comply with current construction codes which will address flood resistant construction techniques. The Department also included the same setback requirement for restrooms as an amendment at N.J.A.C. 7:7-7.13(b)2iii. As discussed in the summary of N.J.A.C. 7:7-1.3, the Department added a definition of "pumpout facility" to the rules. Consistent with this change, the Department has amended N.J.A.C. 7:7-7.13(b)1vi, which requires that marinas with 25 or more vessels or one live aboard vessel to provide for pumpout facilities, to use the newly defined term.

For clarity, N.J.A.C. 7:7-7.13(b)3 (recodified from N.J.A.C. 7:7-7.13(b)4) is amended to specify that what had been identified simply as "pumpouts" includes both pumpout facilities and pumpout support facilities.

N.J.A.C. 7:7-7.13(b)3iv, which addresses the construction of new sewer lines to connect to restrooms, pumpout facilities and/or pumpout support facilities is amended to provide that a Treatment Works Approval for the sewer line must be obtained only when required under the Department rules governing Treatment Works Approvals at N.J.A.C. 7:7-14A.

N.J.A.C. 7:7-7.13(c)4, recodified from N.J.A.C. 7:7-7.13(c)5, formerly required that the proposed development comply with the flood hazard area and riparian zone rules, N.J.A.C. 7:7E-3.25 and 3.26, respectively. Existing marinas do not have a functional riparian buffer since the area along the waterway is already disturbed. Therefore, compliance with the riparian zone rule, N.J.A.C. 7:7E-3.26, is not required. Accordingly, reference the riparian zone rule is deleted.

7:7-7.29 Coastal general permit for habitat creation, restoration, enhancement, and living shoreline activities

New Jersey's coastal environment is dynamic, shaped by natural forces such as wind, waves and storms. To protect development from these forces, shorelines are typically armored with hard structures such as bulkheads and revetments. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter which is necessary to maintain tidal waters. The result is the degradation of the coastal environment through increases in erosion and impacts to natural habitats, such as tidal wetlands and spawning grounds.

As stated in the general summary, New Jersey is looking to natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. The benefits of living shorelines to property owners and the environment include trapping and retaining land runoff containing nutrients and pollutants; providing flood protection for adjacent and upland properties; providing aesthetic value, enhanced views, a sense of place, and privacy to the property owner; preserving, creating or maintaining habitat for

aquatic flora and fauna; restoring critical feeding and nursery habitat for aquatic flora and fauna; providing wildlife access to the shoreline for nesting species of birds and terrapins; increasing carbon sequestering marshland vegetation; and, in low energy environments, living shorelines are less costly then structural stabilization.

As the State rebuilds after Superstorm Sandy and seeks to become more resilient and do so in an ecologically beneficial manner, it is important that to allow options such as living shorelines to be used as shore protection measures. Putting these provisions for living shorelines in place immediately will provide greater flexibility with respect to rebuilding a more resilient, diverse, and environmentally protective shoreline.

Living shoreline activities are becoming a more common means of shoreline stabilization. Assessments by other Atlantic Coastal states show living shorelines remained intact and the upland development adjacent to them also fared better during Superstorm Sandy. Living shorelines are a means to building a more resilient shoreline. Through the Department's stakeholder process, the concept of living shorelines, and the addition of a general permit to facilitate research associated with the creation of living shorelines, was supported by all stakeholder groups. Based on stakeholder interest, a living shoreline subcommittee was formed. The subcommittee, comprised of representatives of the Department, Federal agencies, Monmouth University, environmental groups and local government, met on May 11, 2011 and October 3, 2011 to discuss the incorporation of the establishment of living shorelines as an activity subject to the general permit for habitat creation and enhancement at N.J.A.C. 7:7-7.29 and the standards that would apply to such activities.

In response to the need for research specific to New Jersey and stakeholder support, the coastal general permit for habitat creation and enhancement at N.J.A.C. 7:7-7.29 is amended to include living shoreline activities conducted by specific State and Federal agencies, as well as living shoreline research projects conducted by a college or university, as described further below. The Department reviewed the living shoreline programs of other Atlantic coast states in developing the standards for living shoreline activities.

This general permit previously authorized habitat creation and enhancement activities. To facilitate the addition of living shorelines to this general permit, the term "restoration" is included throughout the section as living shoreline projects are more appropriately considered restoration projects than creation or enhancement projects.

At N.J.A.C. 7:7-7.29(a), the description of a "sponsor" is amended to enable more persons and entities to apply for authorization under this general permit while still ensuring oversight of the activities by the Federal and/or State experts or colleges/universities conducting research who are responsible for the plans identified at N.J.A.C. 7:7-7.29(b)1 through 9. As amended, a sponsor is an entity that endorses the proposed activities in writing, meaning that the entity has reviewed the project and concurs that the proposed project is suitable for its intended purpose. "Sponsor" does not mean that the entity is funding or partially funding the project. As discussed previously, a living shoreline subcommittee was convened to assist the Department in developing standards for living shoreline plans to be conducted under a general permit. The subcommittee recommended that living shoreline plans governed by this general permit be limited to the entities listed at (b)1 through 9 because the science relating to living shorelines in

New Jersey continues to evolve and projects sponsored by these entities undergo an extensive review process by the entities listed at (b)1 through 9 prior to submittal of an application for authorization under the general permit. Prior to this amendment, applicants were required to obtain sponsorship for habitat creation and enhancement activities. This change continues the requirement for sponsorship but removes the requirements that the sponsor financially support the plan or be an active participant in the plan.

N.J.A.C. 7:7-7.29(b) lists the types of habitat creation, restoration, and enhancement plans that qualify for authorization under this general permit. This listing is amended to add, at new N.J.A.C. 7:7-7.29(b)8, living shoreline projects designed and/or sponsored by the Department, the U.S. Fish and Wildlife Service, the Natural Resource Conservation Services, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, or the National Oceanic and Atmospheric Administration's Restoration Center, and, at new (b)9, a living shoreline project implemented by a college or university for the purpose of research.

N.J.A.C. 7:7-7.29(c), which identifies the activities that are authorized under this general permit, is amended to include the establishment of a living shoreline to protect, restore or enhance a habitat.

To be eligible for authorization under this general permit, N.J.A.C. 7:7-7.29(d) requires an applicant to demonstrate that the proposed project plan complies with the intent of the general permit. In response to stakeholder recommendations, the term "comprehensive," used in describing the plan that the proposed project is intended to implement, is deleted. In the context of Federal government projects of this type, the term "comprehensive plan" means a formal

document and for the purposes of this general permit the Department does not want to limit the application of this general permit since "comprehensive plans" can take years to develop.

N.J.A.C. 7:7-7.29(d)2, which requires that the project be sponsored or partially funded by an appropriate entity identified at N.J.A.C. 7:7-7.29(b), is deleted consistent with the amendment to N.J.A.C. 7:7-7.29(a) that eliminated the requirement that a sponsor actively participate in or provide funding for the proposed project.

For clarity, N.J.A.C. 7:7-7.29(d)3, previously codified as N.J.A.C. 7:7-7.29(d)4, is amended to include the objective of maintaining the values and functions of the ecosystem. This language is added since it is possible that a living shoreline, wetland or any other habitat enhancement activities could be implemented to maintain the existing conditions of the site and ensure no additional loss of habitat.

N.J.A.C.7:7- 7.29(d)4, previously codified as N.J.A.C. 7:7-7.29(d)5, is amended to provide that, rather than a likelihood of success, the proposal for a living shoreline project conducted by a college or university for purposes of research must demonstrate that the project will advance the level of knowledge regarding living shorelines in the State. This is appropriate because, with respect to research, useful knowledge is gained from the process of experimentation as well as from the results.

The standards specific to habitat creation and enhancement activities are set forth at N.J.A.C. 7:7-7.29(e). The ability to restore an existing habitat as another means to improve the coastal ecosystem is incorporated. Accordingly, restoration is added to the suite of activities that may be conducted under this general permit. At N.J.A.C. 7:7-7.29(e)5, the requirement that the

habitat creation or enhancement area be subject to a conservation restriction is deleted. In many instances, the types of activities for which this general permit is authorized are voluntary projects for the sole purpose of increasing the ecological benefits of a site. In addition to providing comments on the incorporation of living shorelines into the general permit, members of the living shoreline subcommittee also provided comments on the existing provisions of the general permit relating to habitat creation and enhancement. The living shoreline subcommittee recommended that this requirement be deleted as it was unnecessary and often prevented beneficial projects from proceeding. The Department concurs, and notes that the deletion of this provision does not preclude the Department or another State or Federal agency from requiring a conservation restriction for mitigation projects.

New N.J.A.C. 7:7-7.29(f) sets forth standards specific to living shoreline activities. Based on the recommendations of the living shoreline subcommittee, the size of a living shoreline project is limited to no more than one acre, unless the applicant is a Federal or State agency that demonstrates that a larger project size is necessary to satisfy the goals of the project. In this case, the Department has determined that a Federal or State agency has the expertise and staff to undertake a larger scale project. Often, larger scale projects have undergone an extensive environmental review process, including in some cases, the development of an Environmental Impact Statement. In addition, this process often involves a public comment period. The Department recognizes that a living shoreline project, particularly a project that is proposing to restore a habitat to pre-erosion conditions, has the potential to change the existing conditions or habitat on a site. Therefore, similar to the standard for habitat creation, enhancement or

restoration at N.J.A.C. 7:7-7.29(e)2, new N.J.A.C. 7:7-7.29(f)2 requires that the living shoreline activities disturb the minimum amount of special areas necessary to successfully implement the project plan. The Department may approve a reduction in the size of a particular special area in order to allow an increase in a different special area if it is determined that there are sufficient environmental benefits to outweigh any negative environmental impacts associated with the reduction. For example, the Department may approve a reduction in the amount of submerged vegetation habitat for an increase in coastal wetlands habitat in order to reduce the loss of shoreline. The short term loss of some submerged vegetation habitat may be acceptable where an applicant can demonstrate that the active erosion is having a detrimental impact on the submerged vegetation habitat such that, over time, the habitat may be lost and that stabilizing the shoreline will eventually lead to a healthier vegetated community.

New N.J.A.C. 7:7-7.29(f)3 addresses living shoreline projects which are intended to restore an existing shoreline to a pre-erosion location. In such cases, the living shoreline, including associated fill, cannot exceed the footprint of the shoreline as it appears on the applicable Tidelands Map adopted by the Tidelands Resource baseline photography 1977/1978. This requirement is intended to limit the filling of tidal waters associated with a living shoreline activity. This limitation does not include the installation of a structural component of the project which is intended to reduce wave energy, such as a breakwater. The requirement that public access be provided at N.J.A.C. 7:7-7.29(f) is continued at N.J.A.C. 7:7-7.29(g) with no changes in text.

As amended, N.J.A.C. 7:7-7.29(h), provides that this general permit does not authorize an activity unless its sole purpose is habitat creation, restoration, enhancement, or a living shoreline.

The information requirements specific to an application for authorization under this general permit at N.J.A.C. 7:7-7.29(i) are amended to require that, when a living shoreline activity includes the placement of fill, the footprint of the shoreline as it appeared on the applicable Tidelands Map must be provided.

New general permits for dredging activities as a result of a storm event in which the Governor declared a State of Emergency

As stated in the general summary, significant amounts of debris, sand and other materials were deposited into New Jersey's waterways as a result of Superstorm Sandy. To facilitate the removal of these materials, the following three new coastal general permits are added: coastal general permit for dredging of sand from a man-made lagoon deposited as a result of a storm event for which the Governor declared a State of Emergency, N.J.A.C. 7:7-7.32; coastal general permit for the dredging of material from a waterway at a residential or commercial development deposited as a result of failure of a bulkhead as a result of a storm for which the Governor declared a State of Emergency, N.J.A.C. 7:7-7.33; and coastal general permit for dredging and management of material from a marina that was deposited as a result of a storm event for which the Governor declared a State of Emergency, N.J.A.C. 7:7-7.34. As explained below, the Department has determined that the activities authorized under these general permits will have

minimal environmental impacts, and that any impacts will further be limited through the use of best management practices.

The new general permits all address a unique circumstance created as a consequence of a storm event in which the Governor has declared a State of Emergency. The Governor will declare a State of Emergency to provide for the health, safety, and welfare of the people of New Jersey and to aid in the prevention of damage to and the destruction of property during any emergency. A State of Emergency represents an imminent hazard threatening the health, safety and resources of the residents of one or more municipalities in the State. Most recently, Governor Christie declared a State of Emergency in advance of Superstorm Sandy since the storm had the potential to bring heavy rains, high winds, storm surges, and stream and river flooding that would threaten homes and other structures, and endanger lives in the State. The storm did cause a storm surge and flooding that deposited sand from the ocean to the tidal waterways of the State as well as other materials and debris. This deposition of material and debris has created a significant hazard to users of the State's waterways. These new general permits will only apply in situations such as Superstorm Sandy, where the Governor declares a State of Emergency. Further, an application that meets the requirements of N.J.A.C. 7:7-7.3 for authorization under one of these general permits must be received by the Department no later than 24 months after the date of the declaration of the Emergency. The Department has determined that this 24-month period provides sufficient time to properly identify the deposited materials and prepare and submit an application to the Department.

As discussed previously, these dredging general permits are intended to facilitate the dredging of material that was deposited as a result of a storm event, the magnitude of which warranted the Governor to declare a State of Emergency. In some instances, special areas, such as shellfish habitat and submerged vegetation habitat, may be present in the area where the material was deposited. In most circumstances, new dredging in these areas is discouraged or prohibited. However, in the circumstances of a declared State of Emergency, the removal of the material deposited as a result of the storm will assist in the recovery of these special areas by restoring pre-storm elevations and sediment structure. Dredging below pre-storm elevations is not authorized under these general permits. In an effort to balance the removal of the material from New Jersey's waterways and the restoration of special areas, the Department has determined that dredging within special areas in the limited circumstances of a declared State of Emergency is appropriate.

N.J.A.C. 7:7-7.32(b), 7.33(b) and 7.34(e) provide that authorization of dredging under these general permits will not be considered in determining whether a future dredging activity constitutes maintenance dredging, as the Department considers this activity restoration, as described above. Maintenance dredging is the removal of accumulated sediment from previously authorized and legally dredged areas and is conditionally acceptable within special areas. However, new dredging is discouraged or prohibited because the new dredging activities would result in the destruction of special areas.

7:7-7.32 Coastal general permit for the dredging of sand from a man-made lagoon deposited as a result of a storm event for which the Governor declared a State of Emergency

The requirements of the general permit at N.J.A.C. 7:7-7.32 for dredging of sand from a man-made lagoon deposited as a result of a storm event for which the Governor declared a State of Emergency are similar to those of the coastal general permit for minor maintenance dredging of man-made lagoons at N.J.A.C. 7:7-7.20.

N.J.A.C. 7:7-7.32(a) specifies that the material to be dredged must be sand. Sand, for the purposes of this general permit, is a material consisting of 90 percent or greater of particles by weight retained on a 0.0625 mm sieve. The Department has determined that it is not appropriate to require testing on dredged material comprised of sand. Sand particles do not readily bind contaminants, and sandy sediment is also very low in organic carbon (to which contaminants tend to bind). The Department has previously conducted an analysis of the available sediment data in Region 2 (Atlantic Ocean coast from Sandy Hook to the western entrance of the Cape May Canal, including the Navesink and Shrewsbury Rivers, Barnegat Bay and associated tributaries, Mullica River, Great Egg Harbor River, and Cape May Canal) and Region 3 (Delaware Bay, tidal Delaware River, and associated tributaries), as defined in the Departments' dredging technical manual titled, "The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters," October 1997 and concluded that there is a very low probability that dredged material comprised of sand would be contaminated at levels of environmental or public health concern. To demonstrate that the material to be dredged is sand,

a grain size analysis of the material is required pursuant to N.J.A.C. 7:7-7.32(c)2. The Department's dredging technical referenced above provides guidance on performing a grain size analysis.

This general permit is intended to return the area impacted by the storm to pre-storm conditions. Therefore, N.J.A.C. 7:7-7.32(a)1 and 2 require, respectively, that the volume of sand to be dredged be limited to that which was deposited as a result of the storm and that the area to be dredged be limited to that where the sand was deposited as a result of the storm event. Pre- and post-storm bathymetry of the area to be dredged, bathymetry from previous dredging operations, as well as aerial photographs can be used to assist in determining the appropriate area to be dredged and the volume of sand to be dredged.

N.J.A.C. 7:7-7.32(a)3 requires that the sand be placed on an upland site, dewatered as necessary within a temporary dewatering area, and capped with a six-inch layer of clean fill and stabilized. This provision ensures that the placement of the sand and any dewatering of the material will not adversely affect special areas or surface water quality, and that the erosion of the dredged material to the adjacent waterway is minimized. The Department encourages the beneficial use of this material. It is the long-standing policy of the State to treat dredged material as a resource and to beneficially use dredged material in appropriate applications rather than relying on disposal of dredged material in confined disposal facilities.

N.J.A.C. 7:7-7.32(a)4 requires a 25 foot buffer be provided from any wetlands to the nearest edge of the area to be dredged. This requirement will protect the wetlands and prevent its sloughing.

N.J.A.C. 7:7-7.32(a)5 requires that any debris contained within the sand be removed and disposed of properly. Due to the intensity of a storm event such as Superstorm Sandy, remnants of buildings, houses and other structures, such as pieces of wood, nails and glass, may be present in the sand. To protect human health, prior to the placement of this material at an upland site, any debris contained within the material must be removed and disposed of properly.

For the reasons discussed in the general summary of the new general permits relating to dredging, N.J.A.C. 7:7-7.32(b) requires that an application that meets the requirements of N.J.A.C. 7:7E-7.3 for authorization under this general permit must be received by the Department no later than 24 months after the date of declaration of the State of Emergency..

For the reasons discussed in the general summary above regarding the three new dredging general permits, N.J.A.C. 7:7-7.32(c) provides that an authorization of dredging activities under this general permit shall not be considered in determining whether a future dredging activity at the same site constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6.

N.J.A.C. 7:7-7.32(d) identifies specific information that must be included as part of an application for authorization under this general permit. N.J.A.C. 7:7-7.32(d)1 requires one copy of a site plan(s) showing the mean high and mean low water lines of the tidal waters at the site; the upper and lower limits of wetlands on site and on adjacent lagoon front properties; the pre- and post-storm bathymetry of the area to be dredged (if available); the method of dredging; the location of the dredged material placement site; and the method of stabilization of the dredged material. This information will ensure that the proposed dredging complies with the

requirements of this general permit. As discussed previously, N.J.A.C. 7:7-7.32(d)2 requires the submission of a grain size analysis to demonstrate that the material to be dredged is sand. N.J.A.C. 7:7-7.32(d)3 requires the submission of a compliance statement demonstrating how the proposed dredging complies with the requirements of this general permit.

7:7-7.33 Coastal general permit for the dredging of material from a waterway at a residential or commercial development deposited as a result of the failure of a bulkhead as a result of a storm event for which the Governor declared a State of Emergency

Storm surge can cause existing bulkheads to fail and the material located landward of the bulkhead to be deposited into the adjacent waterway. The general permit at N.J.A.C. 7:7-7.33 for dredging of material from a waterway at a residential or commercial development deposited as a result of the failure of a bulkhead as a consequence of a storm event for which the Governor declared a State of Emergency allows for the removal of this material from the waterway and its placement on the upland portion of the site from which it came.

N.J.A.C. 7:7-7.33(a)1 and 2 require, respectively, that the volume of material to be dredged be limited to that which resulted from the failure of the bulkhead and that the area to be dredged is limited to that where the sand was deposited as a result of the failure of the bulkhead. Similar to the new general permit at N.J.A.C. 7:7-7.32 for dredging sand from a lagoon after a storm event, existing and pre-storm bathymetry of the area to be dredged, bathymetry from any previous dredging operations, as well as aerial photographs can be used to assist in determining the area to be dredged and the volume of dredging. In some instances, special areas such as

shellfish habitat and submerged vegetation habitat may be present in the area where the material has been deposited. By limiting the volume of material and area to be dredged to the amount that was deposited and to the location at which it was deposited as a result of the bulkhead failure, pre-storm elevations and sediment structure will be restored, thereby assisting in the recovery of these habitats.

N.J.A.C. 7:7-7.33(a)3 requires that the dredged material be placed on the upland portion of the lot, dewatered as necessary within a temporary dewatering area, and capped with a six-inch layer of clean fill and stabilized. This provision ensures that the material is returned to the lot from which it came and that the placement of this material will not adversely affect special areas and surface water quality. Capping and stabilization of the material is required to prevent erosion of the material into the waterway.

For the reasons discussed at N.J.A.C. 7:7-7.32(a)4 and 5 above, N.J.A.C. 7:7-7.33(a)4 and 5 require, respectively, a 25 foot buffer from any wetlands to the nearest edge of the area to be dredged and that any debris contained within the dredged material be removed and disposed of properly.

For the reasons discussed in the general summary of the new general permits relating to dredging, N.J.A.C. 7:7-7.33(b) requires that an application that meets the requirements of N.J.A.C. 7:7E-7.3 for authorization under this general permit must be received by the Department no later than 24 months after the date of declaration of the State of Emergency.

For the reasons discussed in the general summary above regarding the three new dredging general permits, N.J.A.C. 7:7-7.33(c) provides that an authorization of dredging

activities under this general permit shall not be considered in determining whether a future dredging activity at the same site constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6.

N.J.A.C. 7:7-7.33(d) identifies specific information that must be included as part of an application for authorization under this general permit. N.J.A.C. 7:7-7.33(d)1 requires one copy of a site plan(s) showing: the mean high and mean low water lines of the tidal waters at the site; the upper and lower limits of wetlands on site and on adjacent properties; the alignment of the bulkhead that failed; the pre- and post-storm bathymetry of the area to be dredged (if available); the method of dredging; the location of the dredged material placement site; and the method of stabilization of the dredged material. This information will ensure that the proposed dredging complies with the requirements of this general permit. N.J.A.C. 7:7-7.33(d)2 requires the submission of a compliance statement demonstrating how the proposed dredging complies with the requirement of this general permit.

7:7-7.34 Coastal general permit for dredging and dredged material management of material from a marina that was deposited as a result of a storm event for which the Governor declared a State of Emergency

At N.J.A.C. 7:7-7.34, a new general permit is added for dredging and dredged management of material from a marina that was deposited as a result of a storm event for which the Governor declared a State of Emergency. Marinas are an integral component of New Jersey's recreational boating industry and require access to tidal waters. The effects of storm

events such as Superstorm Sandy can be devastating to this industry. To assist marina owners in restoring access to slips, this new general permit authorizes the dredging of material deposited within the marina and the subsequent management of such material.

N.J.A.C. 7:7-7.34(a) provides that dredging and management of the material from a marina basin is authorized under this general permit where the material is sand, or where the material is not sand, it is temporarily disposed of in an existing upland confined disposal facility located on the marina property until a final placement site is determined in accordance with subsection (e). Sand, for purposes of this general permit, is a material consisting of 90 percent or greater of particles by weight retained on a 0.0625 mm sieve. As discussed at N.J.A.C. 7:7-7.32(a) above, contaminants do not readily bind to sand and therefore additional testing of the material prior to its disposal is not required. However, where the material is not sand, there is a higher probability of the material being contaminated at levels of concern. Due to the unique circumstances resulting from a storm event in which a State of Emergency is declared by the Governor, and the need to expeditiously remove the material from the marina, the Department is not requiring sampling of the material prior to its removal. Because the Department is not requiring bulk chemistry, elutriate, modified elutriate and biological testing of the material prior to its removal, the Department is requiring that the dredged material be disposed of in an existing upland confined disposal facility on the marina site prior to its final placement. By requiring the material to be disposed of on site in an existing confined disposal facility, risk to public health and safety is low and impacts to the environment and adjacent waterway minimized.

N.J.A.C. 7:7-7.34(b) sets forth the requirements for the dredging activities. N.J.A.C. 7:7-7.34(b)1 and 2, respectively, require that the depth in the area after the proposed dredging activity is completed not exceed the depth prior to the storm event and that the area to be dredged be limited to the area in which the material was deposited as a result of the storm event. These requirements ensure that the dredging activity is limited in scope to the areas and depths affected by the storm.

N.J.A.C. 7:7-7.34(b)3 addresses impacts to wetlands. A 25 foot buffer must be provided from any wetlands to the nearest edge of the area to be dredged to protect the wetlands and prevent their sloughing. However, where the area to be dredged is within an existing maintained navigation channel or marina basin, the buffer may be reduced to allow dredging within the limits of the existing navigation channel or basin**.**

For the reasons discussed in the general summary of the new general permits relating to dredging, N.J.A.C. 7:7-7.34(c) requires that an application that meets the requirements of N.J.A.C. 7:7E-7.3 for authorization under this general permit must be received by the Department no later than 24 months after the date of declaration of the State of Emergency.

N.J.A.C. 7:7-7.34(d) and (e) address the management of the dredged material. N.J.A.C. 7:7-7.34(c) provides that if the dredged material is sand, it must be placed at either an on-site or off-site location that has been approved by the Department. The Department encourages the beneficial use of dredged material.

N.J.A.C. 7:7-7.34(e) requires that dredged material that is not sand be disposed of in an existing upland confined disposal facility located on the marina property, until the appropriate

final placement can be determined. The Department must approve the final placement site for the dredged material. Under normal circumstances, the Department would require testing of the proposed dredged material from a marina to determine the appropriate placement site. However, in recognition of the unique circumstances in which this dredging may occur (removal of material resulting from a storm event in which a State of Emergency is declared by the Governor), and the need to expeditiously remove the material, the Department is not requiring sampling of the material prior to its removal.

The upland confined disposal facility located on-site must be large enough to contain and dewater the dredged material, not be located in any wetlands or wetland buffers, and be operated and maintained in a manner to minimize the discharge of dredged material into the adjacent surface waters and wetlands. These requirements will ensure that the disposal facility and its operation will not adversely affect special areas and surface water quality.

For the reasons discussed in the general summary above regarding the three new dredging general permits, N.J.A.C. 7:7-7.34(f) provides that an authorization of dredging activities under this general permit shall not be considered in determining whether a future dredging activity at the same site constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6.

N.J.A.C. 7:7-7.34(g) identifies specific information that must be included as part of an application for authorization under this general permit. N.J.A.C. 7:7-7.34(g)1 requires one copy of a site plan(s) showing the mean high, mean low and spring high water lines of the tidal waters at the site; the upper and lower limits of wetlands on site and on adjacent properties; the pre- and

post-storm bathymetry of the area to be dredged (if available); the method of dredging; the location and areal dimensions of the existing on-site disposal area, including inflow and weir discharge points; and cross-sections showing the heights of the berms of the existing disposal area. This information will ensure that the proposed dredging complies with the requirements of this general permit. N.J.A.C. 7:7-7.34(g)2 requires the submission of the results of a grain size analysis categorizing the material to be dredged. This information will determine the disposal method. N.J.A.C. 7:7-7.34(g)3 requires the submission of calculations demonstrating the available capacity of the upland disposal facility located on-site. This will ensure that the disposal facility has adequate capacity to receive the dredged material. N.J.A.C. 7:7-7.34(g)4 requires the submission of a compliance statement demonstrating how the proposed dredging complies with the requirement of this general permit.

7:7-7.35 Coastal general permit for commercial aquaculture activities

At N.J.A.C. 7:7-7.35 a new general permit is added for the construction and/or placement and maintenance of aquaculture equipment including floating upwellers, shellfish rafts, racks and bags, lantern nets, and cages. As explained previously, Superstorm Sandy severely impacted New Jersey's shellfish aquaculture industry. Not only will the addition of this general permit assist in the restoration of this industry, it will encourage and facilitate new and continued aquaculture activities.

Floating upweller systems are aquaculture systems that float on the water and use the tidal flow to move water through the system to provide necessary elements for the rearing of juvenile shellfish. These systems are relatively small in size.

Shellfish rafts are floating aquaculture structures that are used for the rearing of shellfish (typically oysters). The shellfish rafts provide protection from predators and are typically used in "deep" water shellfish leases so they can be easily accessed and maintained more efficiently.

Rack and bag systems involve a fixed structure on the bottom which supports mesh bags filled with oysters. These structures are typically set on intertidal/subtidal flats and can be accessed and maintained by foot. The structure also secures the shellfish bags in place.

Lantern nets are net-like enclosures that are hung from a float, buoy, or long-line suspended in the water column in deep water. These nets are similar to floating rafts in that they are not designed to rest on the bottom.

Cages are structures used to store or grow shellfish in a confined area that are placed on the bottom. Cages can be placed on a shallow or deep-water shellfish lease. In contrast to the permit-by-rule at N.J.A.C. 7:7-7.2(a)19 for the placement of shellfish cages in an area subject to a valid shellfish lease pursuant to N.J.S.A. 50:1-23, this general permit allows cages to be placed on leases without depth clearance conditions.

All structures listed above will have no lasting effect on the environment as they are temporary and made of non-polluting materials. These structures will also provide habitat and structure for other marine organisms such as juvenile finfish and crabs. These shellfish grow out

structures are designed to protect the shellfish product from predators and allow the aquaculturist to maintain and harvest their shellfish product in a more efficient manner.

N.J.A.C. 7:7-7.35(a) sets forth the conditions that must be met for these structures to be approvable under this general permit. For the same reasons discussed in the summary of N.J.A.C. 7:7-7.2(a)18 for the placement of predator screens and oyster spat attraction devices within a shellfish lease and N.J.A.C. 7:7-7.2(a)19 for the placement of cages within a shellfish lease, N.J.A.C. 7:7-7.35(a)1 requires that all structures be located within a valid shellfish lease area that is authorized in accordance with N.J.S.A. 50:1-23. As previously discussed in the summary of N.J.A.C. 7:7-7.2(a)18, shellfish leases are issued by the New Jersey Shellfisheries Council, subject to approval by the Commissioner of the Department of Environmental Protection, as specified in N.J.S.A. 50:1-23. Leases are issued in areas within the coastal estuaries subject to certain criteria specified in the Leasing of Atlantic Coast Bottom for Aquaculture regulations, N.J.A.C. 7:25-24.

To ensure that the proposed structures do not adversely affect special areas, N.J.A.C. 7:7-7.35(a)2 requires that the proposed structures not be located in submerged infrastructure routes, N.J.A.C. 7:7E-3.12, shipwreck and artificial reef habitat, N.J.A.C. 7:7E-3.13, or wetlands, N.J.A.C. 7:7E-3.27.

The placement of structures in navigable waters may affect navigation. To ensure that these structures do not pose a hazard to navigation, N.J.A.C. 7:7-7.35(a)3 requires that the structures cannot be located within 50 feet of any designated navigation channel, unless it is demonstrated that the proposed structure will not hinder navigation. Further, the placement of

structures within designated navigation channels is prohibited. In addition, N.J.A.C. 7:7-7.35(a)4 requires that the boundaries of the area where the structures are placed be clearly marked in accordance with United States Coast Guard requirements for regulatory and informational markers *(US Coast Guard "U.S. Aids to Navigation System" http://www.uscgboating.org/ATON/index.htm.*

To ensure that no contaminants leach into the water, N.J.A.C. 7:7-7.35(a)5 requires that the equipment be constructed of non-polluting materials. N.J.A.C. 7:7-7.35(a)6 requires that all structures be properly secured to ensure that they remain within the shellfish lease area. Consistent with N.J.A.C. 7:7-7.2(a)18, N.J.A.C. 7:7-7.35(a)7 requires that the structures must not hinder the ability to fish within the lease area.

For the same reasons as discussed in the summary of at N.J.A.C. 7:7-7.2(a)18 for the placement of predator screens and oyster spat attraction devices within a shellfish lease pursuant to N.J.S.A. 50:1-23, N.J.A.C. 7:7-7.35(b) requires the removal of structures within five days of expiration or termination of the lease, or the cessation of the aquaculture activities, whichever occurs first.

N.J.A.C. 7:7-7.35(c) requires the permittee to notify the Department's Bureau of Shellfisheries prior to the commencement of the activities authorized under this general permit and N.J.A.C. 7:7-7.35(d) specifies the contents of such notice. Notification is necessary to track the commencement of activities undertaken under this general permit as well as to confirm consistency of the activities with the shellfish lease.

N.J.A.C. 7:7-7.35(e) identifies specific information that must be included as part of an application for authorization under this general permit. N.J.A.C. 7:7-7.35(e)1 requires one copy of a site plan showing the mean high, mean low and spring high water lines of the tidal waters at the site, the area covered by the shellfish lease, existing water depths in the area where the structures will be located and the location of the structures. This information will ensure that the proposed commercial shellfish aquaculture equipment complies with the requirements of this general permit. N.J.A.C. 7:7-7.35(e)2 requires the submission of a compliance statement demonstrating how the proposed placement of the commercial aquaculture equipment complies with the requirements of this general permit.

7:7-7.36 Coastal general permit for placement of shell within shellfish lease areas

At N.J.A.C. 7:7-7.36, a new general permit is added for the placement of shell within shellfish lease areas. The purpose of placing shell on shellfish lease areas is to provide clean cultch material (material that forms the basis for the oyster bed) for the setting of juvenile oysters (spat) and to provide a good shell base in areas where oyster habitat has either deteriorated or has become silted over. Barnegat Bay is a good example of a water body where this method of revitalizing shellfish areas is appropriate as many of the extant oyster shell beds have been silted over and current restoration activities have had to use the planting of shell to prepare these shell beds for planting oysters. This activity will be especially important in light of impacts to shellfish beds caused by Superstorm Sandy. Clean cultch material such as shell has been demonstrated to greatly enhance spat set as it provides a greater clean surface area for the oyster larvae to set

upon. By utilizing clean shell, oyster habitat is increased as well as the number of oysters available to the harvester. This provides both an ecological and economic benefit. Ecologically, oysters are a natural filterer of estuarine waters and provide habitat for other marine organisms. Economically, more oysters become available to the harvester, since spat set is increased greatly which allows for more product to be harvested without degradation to the existing lease beds. Shelling projects have also been frequently undertaken for the enhancement of existing natural oyster beds or the restoration of extant oyster shell beds.

N.J.A.C. 7:7-7.36(a) sets forth the conditions that must be met for the placement of shell to be approvable under this general permit. For the same reasons discussed at N.J.A.C. 7:7-7.2(a)18, N.J.A.C. 7:7-7.36(a) requires that all shell be located within a valid shellfish lease area that is authorized in accordance with N.J.S.A. 50:1-23. N.J.A.C. 7:7-7.36(a)1 requires that the planting of cultch be comprised of processed oyster, surf clam and/or ocean quahog shell or other acceptable shell material. Oyster shell is the preferred natural material used by oyster larvae to set on and build oyster reefs. Other types of shell material may be used as an alternative cultch material as oyster shell has become harder to secure due to demand. The use of processed surf clam and ocean quahog shell has been used as an excellent, cost effective natural alternative since clamshell is very similar to oyster shell and provides a large surface area for oyster larvae to set on. Processed shell enhances spat set even further as it is clean when it is planted.

N.J.A.C. 7:7-7.36(a)2 requires that the height of the shell material placed on the bottom of the water body not exceed six inches above the bottom substrate. The planting of thick layers of shell (exceeding six inches) will waste valuable oyster setting surface area as shell buried

below the surface layer will not be available for the larvae to set on. The preferred method is to plant a thin veneer of shell over a larger area, which maximizes the surface area for spat set relative to volume planted. However, the six inch threshold provides some latitude to the lessee planting shell. For example, more than a thin veneer of shell may be preferred by a planter who wants to build their lease bed to enhance habitat or who is building on an extant shell bed that may be silted over or sinking into the substrate.

N.J.A.C. 7:7-7.36(a)3 requires that the placement of shell not pose a hazard to navigation. To ensure that the planted shell does not adversely affect water quality, N.J.A.C. 7:7-7.36(a)4 requires that all shell be clean and free of contaminants.

Due to the potential impacts to environmentally sensitive areas, N.J.A.C. 7:7-7.36(b) provides that this general permit does not authorize the stockpiling of shell or dredging activities.

N.J.A.C. 7:7-7.36(c) identifies specific information that must be included as part of an application for authorization under this general permit. N.J.A.C. 7:7-7.36(c)1 requires one copy of a site plan showing the mean high, mean low and spring high water lines of the tidal waters at the site, the area covered by the shellfish lease, existing water depths in the area where the structures will be located and the location of the structures. This information will ensure that the proposed placement of the shell complies with the requirements of this general permit. N.J.A.C. 7:7-7.36(c)2 requires the submission of a compliance statement demonstrating how the proposed placement of the shell complies with the requirements of this general permit.

N.J.A.C. 7:7E Coastal Zone Management Rules

Subchapter 1. Introduction

7:7E-1.7 Correspondence with the Department

The Department's mailing address to which correspondence under this chapter is to be sent is amended to reflect the current address.

7:7E-1.8 Definitions

In addition to the definitions added to this section that are discussed in the summary of amendments to N.J.A.C. 7:7-1.3, definitions are also added in this section for "engineered beach," "engineered dune," and "State Aid Agreement."

The definition of "engineered beach" describes either a beach that has been built in accordance with a Federally authorized beach berm design template for shore protection and/or storm damage reduction purposes, for which the Department has issued a Federal consistency determination; or a beach that has been built in accordance with a beach berm design template for shore protection and/or storm damage reduction purposes, which has been funded through the New Jersey Shore Protection Program, and for which the Department has issued a permit under the CZM rules. For the purposes of this definition, the beach berm design template is the height, width, slope, and length of the engineered beach. At N.J.A.C. 7:7E-3.22, standards are included for maintaining an engineered beach berm to its design template.

Similar to "engineered beach," the definition of "engineered dune" describes either a dune that has been built in accordance with a Federally authorized dune design template for shore protection and/or storm damage reduction purposes for which the Department has issued a Federal consistency determination; or a dune that has been built in accordance with a dune design template for shore protection and/or storm damage reduction purposes, which has been funded through the New Jersey Shore Protection Program and for which the Department has issued a permit under the CZM rules. For the purposes of this definition, dune design template means the height, width, slope, and length of the engineered dune. At N.J.A.C. 7:7E-3.16, standards are added for maintaining an engineered dune to its design template.

A definition of "State Aid Agreement" is included for purposes of N.J.A.C. 7:7E-3.16(d) and 3.22(b)10 in the standards, respectively, for engineered dunes and beaches. A State Aid Agreement is a binding agreement between the Department and a municipality or county for the construction of a shore protection project funded through the State Shore Protection Fund. The Agreement specifies how activities receiving shore protection funding are to be conducted, and under N.J.A.C. 7:7E-3.16(d) and 3.22(b)10 an Agreement is a pre-requisite for conducting maintenance of an engineered dune or beach. For Federally funded projects, the State Aid Agreement contains the project agreement between the Department and the U.S. Army Corps of Engineers, and defines the project design template.

Subchapter 3. Special areas

7:7E-3.2 Shellfish habitat

Many shore protection structures suffered significant damage from Superstorm Sandy and will need to be reconstructed in an expeditious, resilient, and environmentally mindful manner. The Department is amending the rule to allow the establishment of a living shoreline or the one-time replacement, reconstruction, or renovation of a legally existing bulkhead within shellfish habitat, and making certain clarifying changes.

New N.J.A.C. 7:7E-3.2(h) provides that the establishment of a living shoreline in shellfish habitat to address the loss of vegetated shorelines and habitat in the littoral zone, is conditionally acceptable provided the living shoreline complies with the new living shoreline general water area rule at N.J.A.C. 7:7E-4.23. Living shoreline projects designed in accordance with the living shoreline rule at N.J.A.C. 7:7E-4.23 will enhance the overall health and ecology of the coastal waters in which they are placed thus enhancing the shellfish habitat that may exist at that location. Because a living shoreline project is a habitat protection, restoration or enhancement project that will result in a net gain of habitat functions and values, mitigation is not required.

New N.J.A.C. 7:7E-3.2(i) allows for the one-time replacement, reconstruction or renovation of a legally existing bulkhead outshore of the existing bulkhead within waters classified as prohibited for harvesting shellfish. Specifically, the replacement or reconstructed bulkhead must be constructed of a non-polluting material and must be located within 18 inches of the existing bulkhead, except where the replacement bulkhead is constructed of a corrugated material in which case it shall be located no more than 24 inches from the existing bulkhead. Non-polluting materials are required to minimize impacts to water quality. The 18 inch and 24

inch distances are intended to allow the replacement or reconstruction of an existing functioning bulkhead outshore of the existing bulkhead while minimizing the amount of substrate impacted by the bulkhead. These distances are also consistent with those in the filling rule at existing N.J.A.C. 7:7E-4.10 and the coastal engineering rule at N.J.A.C. 7:7E-7.11. The Department is allowing for the replacement or reconstruction of a bulkhead outshore of the existing bulkhead as long as the replacement or reconstructed bulkhead is made of non-polluting materials. This will encourage the elimination of polluting material in shellfish habitat and the correction or prevention of erosion. In many instances, the bulkhead being replaced will have been constructed of a treated material that is not considered to be non-polluting. Allowing the replacement or reconstruction outshore of the existing bulkhead will prevent the detrimental impact to water quality that could occur through the sloughing of soil that has been in contact with the sheathing of the existing bulkhead. The replacement or reconstruction is limited to one time only in order to limit the encroachment into shellfish habitat.

Where the one-time replacement, reconstruction or renovation of a legally existing functioning bulkhead outshore of the existing bulkhead is allowed, N.J.A.C. 7:7E-3.2(i)3 requires that a conservation restriction be placed on the property associated with the bulkhead requiring that any future replacement bulkhead be located in the same location as the bulkhead replaced or reconstructed under this subsection. This requirement is consistent with the existing mitigation requirement at N.J.A.C. 7:7E-3.2(d)3vi(1) for impacts associated with the installation of a dock or pier at a single family dwelling. This requirement balances the need to replace existing bulkheads while preventing future encroachments within shellfish habitat.

N.J.A.C. 7:7E-3.2(d)3i(1), which requires that a proposed single noncommercial dock, pier or boat mooring associated with a single family dwelling in shellfish habitat be constructed of a non-polluting material, is amended to delete reference to "other inert material" since non-polluting material as defined at N.J.A.C. 7:7E-1.8 includes inert products.

Prior to this rulemaking, N.J.A.C. 7:7E-3.2(c) prohibited development that would result in the destruction, condemnation (downgrading of the shellfish growing water classification) or contamination of shellfish habitat except for a dock, pier or boat mooring constructed in accordance with N.J.A.C. 7:7E-3.2(d)3. However, N.J.A.C. 7:7-3.2(d)1 as well as other subsections in the rule also allow, under specific circumstances, certain activities that would affect shellfish habitat. Accordingly, for clarity, the exception to the prohibition at N.J.A.C. 7:7E-3.2(c) is expanded to reference the activities already described in the rule and to add reference to living shorelines, which are governed by the standards in new N.J.A.C. 7:7-3.2(h) (described below). Further, N.J.A.C. 7:7E-3.2(c) is amended to make it clear that the construction of docks and piers and the one-time replacement or reconstruction of a legally existing functioning bulkhead outshore of the existing bulkhead when located in waters that have been classified as prohibited for the purpose of harvesting shellfish are acceptable in accordance with (d)2 and (i). At N.J.A.C. 7:7E-3.2(c)1, the term "spoils" is replaced with "dredged materials" since the latter is the term used throughout the CZM rules.

The rule rationale N.J.A.C. 7:7E-3.2(m) is amended to update cited statistics and to include rationale concerning the establishment of living shorelines within this special area and the one-time replacement or reconstruction of a legally existing functioning bulkhead outshore of

the existing bulkhead when located in waters that have been classified as prohibited for the purpose of harvesting shellfish.

7:7E-3.6 Submerged vegetation habitat

N.J.A.C. 7:7E-3.6 is amended to include at N.J.A.C. 7:7-3.6(b)8 the establishment of a living shoreline to address the loss of vegetated shorelines and habitat in the littoral zone among the activities that are acceptable in submerged vegetation habitat. The Department has determined that the establishment of a living shoreline is environmentally beneficial and therefore conditionally acceptable within submerged vegetation habitat provided the living shoreline complies with the new living shoreline general water area rule at N.J.A.C. 7:7E-4.23. Some types of living shorelines may require the placement of fill within submerged vegetation habitat in order to restore habitat that has been lost or to protect existing habitat. For example, increased sedimentation from an eroding shoreline will directly affect the submerged vegetation habitat in the immediate area where the erosion is occurring and may also adversely affect a larger area of habitat through indirect impacts associated with the suspension of sediment in the water column. While the placement of fill to construct the living shoreline will also directly impact the submerged vegetation habitat in the immediate area, the long-term stabilization of the shoreline will protect the larger area of submerged vegetation habitat.

The rule rationale at N.J.A.C. 7:7E-3.6(e) is amended to include information supporting the changes to the rule allowing the establishment of living shorelines within this special area.

7:7E-3.15 Intertidal and subtidal shallows

Many shore protection structures suffered significant damage from Superstorm Sandy and will need to be reconstructed in an expeditious, resilient, and environmentally mindful manner. The Department is amending the rule to allow the establishment of a living shoreline within intertidal and subtidal shallows.

N.J.A.C. 7:7E-3.15 is amended to include new subsection (g) allowing the establishment of a living shoreline in intertidal and subtidal shallows to address the loss of vegetated shorelines and habitat in the littoral zone, provided the living shoreline complies with N.J.A.C. 7:7E-4.23. Some types of living shorelines may require the placement of structures or fill within intertidal and subtidal shallows in order to restore habitat that has been lost or to protect existing habitat. Because intertidal and subtidal shallows include areas from the spring high tide line to a water depth of four feet mean low water, the establishment of a living shoreline will affect this special area. However, for the reasons described with regard to allowing living shorelines in submerged vegetation habitat and shellfish habitat, the Department has determined that the establishment of living shorelines is environmentally beneficial and therefore conditionally acceptable within intertidal and subtidal shallows.

New N.J.A.C. 7:7E-3.15(h) allows for the construction and/or replacement of a bulkhead in intertidal and subtidal shallows, provided the bulkhead complies with the filling rule and the coastal engineering rule, N.J.A.C. 7:7E-4.10 and 7.11, respectively. While this activity was allowable under the rules prior to this rulemaking, the addition of N.J.A.C. 7:7E-3.15(h) makes the acceptability of this activity explicit. As provided at recodified N.J.A.C. 7:7E-3.15(i)1 and 5,

mitigation is not required for impacts to the shallows where the replacement bulkhead is constructed in accordance with the filling rule at N.J.A.C. 7:7E-4.10(c) and (f)1 through 3 and the coastal engineering rule at N.J.A.C. 7:7E-7.11(d)2i or ii. The construction and/or replacement of an existing bulkhead that meets those requirements will have only minimal impacts on intertidal and subtidal shallows.

N.J.A.C. 7:7E-3.15(i), previously N.J.A.C. 7:7E-3.15(g), requires mitigation for the destruction of intertidal and subtidal shallows, and identifies the activities for which mitigation is not required. At N.J.A.C. 7:7E-3.15(i)6, the establishment of a living shoreline is added to the list of activities for which mitigation is not required.

The rule rationale at N.J.A.C. 7:7E-3.15(k) is amended to include language supporting the changes to the rule allowing the establishment of living shorelines within this special area.

7:7E-3.16 Dunes

As noted previously, municipalities with an engineered dune system or a wide and well developed natural beach and dune system had less damage from Superstorm Sandy than those without such protections. Accordingly, the Department is amending the special area rule for dunes to establish standards for maintaining engineered dunes to the dune design template to protect coastal communities from impacts of future storms.

Typically, beach nourishment projects include the construction of dunes for shore protection and/or storm damage reduction purposes. These engineered dunes are designed to a specific height, width, slope, and length, in accordance with a dune design template. See the

definition of "engineered dune" at N.J.A.C. 7:7E-1.8. In some instances, an engineered dune may capture sand and grow beyond the design template, in which case, maintenance of the dune to its design template may be necessary to minimize the effects that an influx of sand has on infrastructure, access, and public safety. This excess sand can then be utilized along sections of dune or upper beach berm in the areas that have eroded and no longer meet the design template. Engineered dunes are designed to provide storm damage reduction in addition to the beach berm, and are subject to the influx of wind-blown sand from the beach berm as well as erosion from wave and tidal current activity. Engineered dunes may be supplemented during periodic renourishment cycles to replenish lost material to maintain the overall design template. Maintenance activities between renourishment cycles may potentially reduce the volume of material needed when accreted sand is transferred from areas that exceed the design template in height, width, slope, or length to areas that have experienced increased erosion. However, maintenance of the engineered dune must not reduce the dune to less than the dune design template.

New N.J.A.C. 7:7E-3.16(d) sets forth the standards for the maintenance of an engineered dune to the dune design template. N.J.A.C. 7:7E-3.16(d)1 requires that the applicant demonstrate that the engineered dune existing at the time of application is not consistent with the dune design template and that the proposed maintenance activities will not result in the reduction of any part of the dune to less than the dune design template. Pre- and post- construction surveys, typically every 200 feet, which are overlaid on the design template of the dune, are required. N.J.A.C. 7:7E-3.16(d)2 requires that a New Jersey licensed professional engineer must

certify that alteration of the existing dune to the dune design template will not compromise the beach and dune system. These requirements are intended to ensure that the level of shore protection provided by the engineered dune will not be compromised when it is altered by the maintenance activity.

To ensure that the activity does not interfere or conflict with any State or Federal agreements relating to the engineered dune or threatened or endangered wildlife or plant species, N.J.A.C. 7:7E-3.16(d)3 requires that the activity be conducted in accordance with the State Aid Agreement between the Department and a municipality or a county and comply with any management plan for the protection of State and Federally listed threatened and endangered species, approved by the Department's Division of Fish and Wildlife and the U.S. Fish and Wildlife Service, that is applicable to the portion of the dune that is the subject of the application.

N.J.A.C. 7:7E-3.16(d)4 requires that all existing public accessways be maintained.

To ensure the stability of the altered dune, N.J.A.C. 7:7E-3.16(d)5 requires that any vegetation disturbed during the maintenance activities be restored in accordance with the dune construction planting specifications in the Federal consistency determination or Department permit for the engineered dune, as applicable.

N.J.A.C. 7:7E-3.16(d)6 requires that the sand removed during maintenance activities remain within the shore protection project and be placed within the existing dune system or the engineered beach berm, in accordance with N.J.A.C. 7:7E-3.22(b). This provision will ensure that the sand is used for the purposes of replenishing the shore protection project.

At N.J.A.C. 7:7E-3.16(e), the rule rationale is amended to include a discussion on the importance of maintaining the dune design template.

7:7E-3.22 Beaches

As noted with regard to the special area rule for dunes at N.J.A.C. 7:7E-3.16, municipalities with an engineered dune system or a wide and well developed natural beach and dune system had less damage from Superstorm Sandy than those without such protections. Accordingly, the Department is amending the special area rule for beaches to establish standards for maintaining engineered beaches to the beach design template to protect coastal communities from impacts of future storms.

Many of New Jersey's beaches, especially those along the Atlantic Ocean, have been nourished through the State's Shore Protection Program. These beaches, referred to for purposes of the CZM rules as engineered beaches, are designed for shore protection and/or storm damage reduction purposes. They are designed to a specific height, width, slope, and length, in accordance with a beach berm design template. As previously discussed at N.J.A.C. 7:7E-3.16, the Department is allowing maintenance of an engineered dune to the engineered dune design template. The amendments at N.J.A.C. 7:7E-3.22 are consistent with the amendments at N.J.A.C. 7:7E-3.16 and will allow maintenance of an engineered beach that is part of a shore protection project. Engineered beaches are subject to erosive forces of waves, winds, and tidal currents; in many instances, eroded material is moved and deposited in areas within the shore protection project in such a way that the beach grows beyond the design template and thus the

beach no longer conforms to the shore protection project design. For engineered beaches to provide storm damage reduction and shore protection, the design template needs to be maintained throughout the entire project area. Municipalities are encouraged to maintain the project design, to the maximum extent feasible, between project renourishment cycles. However, maintenance of the engineered beach must not reduce any portion of the beach to less than the beach berm design template.

N.J.A.C. 7:7E-3.22(b) prohibits development on beaches, except for development that has no prudent or feasible alternative in an area other than a beach, provided that the development will not cause significant adverse long-term impacts to the natural functioning of the beach and dune system. Engineered beaches are designed to react to wave and tidal current activity, with periodic renourishment cycles intended to replenish lost material to maintain the overall design template. Maintenance activities between renourishment cycles can potentially reduce the volume of material needed when accreted sand is transferred from areas that have expanded beyond the design template to areas that have experienced increased erosion. Therefore, the transfer of sand within the shore protection project will not cause a significant long-term impact to the natural functioning of the beach and dune system.

New N.J.A.C. 7:7E-3.22(b)10 sets forth the standards for maintaining an engineered beach berm to its design template through the transfer of sand. Similar to N.J.A.C. 7:7E-3.16(d)1 and 2 applicable to engineered dunes, N.J.A.C. 7:7E-3.22(b)10i requires that the applicant demonstrate that the engineered beach berm as it exists at the time of application is not consistent with the design template in height, width, slope, or length and that the sand transfer

will not result in the grading of any portion of the beach below the beach berm design template. Pre- and post- construction surveys, typically every 200 feet, which are overlaid on the beach berm design template, are required to demonstrate compliance with these provisions. N.J.A.C. 7:7E-3.22(b)10ii requires that a New Jersey licensed professional engineer must certify that sand transfer to the beach berm design template will not compromise the beach system. These provisions are intended to ensure that the level of shore protection provided by the engineered beach will not be compromised when it is altered by the maintenance activity.

For the same reasons discussed at N.J.A.C. 7:7E-3.16(d)3, N.J.A.C. 7:7E-3.22(b)10iii requires that the maintenance activities be conducted in accordance with the State Aid Agreement between the Department and a municipality or a county and comply with the management plan for the protection of State and Federally listed threatened and endangered species, approved by the Department's Division of Fish and Wildlife and the U.S. Fish and Wildlife Service, that is applicable to the portion of the dune that is the subject of the application.

N.J.A.C. 7:7E-3.22(b)10iv provides that the sand transfer cannot impact a dune unless the transfer complies with the dune rule at N.J.A.C. 7:7E-3.16. N.J.A.C. 7:7E-3.22(b)10 is intended to only allow the alteration of an engineered beach to the beach berm design template. In some cases, dunes may form on the engineered beach through natural processes or may be built by the municipality. Thus the maintenance activities under N.J.A.C. 7:7E-3.22(b)10 cannot impact any existing dunes unless the activity complies with the dune rule.

Similar to N.J.A.C. 7:7E-3.16(d)6, N.J.A.C. 7:7E-3.22(b)10v requires that any sand transferred as part of the maintenance of the beach berm design template must remain within the

area covered by the shore protection project and must be placed within the existing engineered dune in accordance with N.J.A.C. 7:7E-3.16(d). This will ensure that the sand is kept within the designed project, allowing the beach to provide the storm damage reduction and shore protection for which it was designed.

At N.J.A.C. 7:7E-3.22(d), the rule rationale is amended to discuss the importance of maintaining the beach berm design template.

7:7E-3.27 Wetlands

Tidal wetlands are a major component of the coastal ecosystem that serve multiple ecosystem purposes as well as functioning as a first defense against coastal storms. Living shorelines are a means to protect, restore, or enhance this special area. Accordingly, new N.J.A.C. 7:7E-3.27(d) allows for the establishment of living shorelines within wetlands provided the living shoreline complies with the standards set forth at N.J.A.C. 7:7E-4.23. Because a living shoreline project is a habitat protection, restoration or enhancement project that will result in a net gain of habitat functions and values, mitigation is not required. An applicant seeking to protect, restore or enhance an existing habitat should not be required to provide additional compensation, which is typically only required when there is a loss of habitat under specific conditions as outlined under this chapter.

N.J.A.C. 7:7-9.27(j), which contains the rule rationale, is amended to include language supporting the changes to the rule allowing the establishment of living shorelines within this special area.

Subchapter 3A. Standards for beach and dune activities

7:7E-3A.1 Purpose and scope

The N.J.A.C. 7:7E-3A standards for beach and dune activities are referenced in various specific CZM rules. They are also the standards for the coastal general permit for beach and dune maintenance activities at N.J.A.C. 7:7-7.6 in the Coastal Permit Program rules.

New N.J.A.C. 7:7E-3A.1(b) requires that any beach and dune maintenance activity subject to the subchapter must comply with any applicable management plan for the protection of State and Federally listed threatened and endangered species, approved by the Department and the U.S. Fish and Wildlife Service. This provision is consistent with State and Federal requirements and will ensure that these species are protected. For example, all cost sharing agreements between the Department and a municipality for the construction of a shore protection or beach nourishment project, known as a State Aid Agreement, require beach management plans where these species are present.

7:7E-3A.2 Standards applicable to routine beach maintenance

As noted with regard to the special area rule for dunes at N.J.A.C. 7:7E-3.16 and for beaches at N.J.A.C. 7:7E-3.22, municipalities with an engineered dune system or a wide and well developed natural beach and dune system had less damage from Superstorm Sandy than those without such protections. Accordingly, the Department is amending the rule containing standards for routine beach maintenance to allow the removal of sand accumulated beneath a

boardwalk, to conduct winter sand management activities, and to ensure that beach maintenance is conducted in a manner that does not adversely impact endangered or threatened wildlife or plant species or their habitat.

New N.J.A.C. 7:7E-3A.2(a)1 requires all routine beach maintenance to be conducted in a manner that does not destroy, jeopardize, or adversely modify endangered or threatened wildlife or plant species habitat; and shall not jeopardize the continued existence of any local population of an endangered or threatened wildlife or plant species.

At N.J.A.C. 7:7E-3A.2(a)3 reference to the Land Use Regulation Program is updated to Division of Land Use Regulation.

N.J.A.C. 7:7E-3A.2(a)4 addresses routine beach maintenance activities within documented habitat for threatened or endangered beach nesting shorebirds. This subsection provides that no beach raking or other mechanical manipulation of the beach may occur in areas documented by the Department as habitat for threatened or endangered beach nesting shorebirds during specified time periods. The use of non-emergency vehicles is added to the list of prohibited activities within documented habitat. This prohibition is necessary to protect nests and unflighted Piping Plover chicks from being run over. In addition, unflighted chicks have difficulty navigating vehicle tire ruts.

The list of examples of threatened or endangered beach nesting shorebirds whose habitat is protected by this provision is amended to update the scientific name of the least tern and to include Black Skimmers (*Rynchops niger*). Black Skimmers were placed on New Jersey's threatened and endangered species list in the early 1980's. Although historically these birds

have nested in remote areas, more recently the species has demonstrated a willingness to nest on beaches that have undergone beach maintenance.

Further, the time period in which beach raking, other mechanical manipulation, and the use of non-emergency vehicles are prohibited is expanded from April 1 through August 15 to March 15 through August 31. This change reflects current science and is consistent with the U.S. Fish and Wildlife Service's current recommendations for Piping Plover and with the Department's current timing restrictions for threatened or endangered beach nesting shorebirds codified at N.J.A.C. 7:25. The earlier start time for the time period reflects the fact that Piping Plover begin to arrive and establish their territory around March 15. The extension of the time period into August is necessary because Least Terns and Black Skimmers nest later in the season than Piping Plovers. Additionally, Piping Plover chicks and fledges can be present and continue to be vulnerable after August 15. As a result of this timing change, as specified in N.J.A.C. 7:7E-3A.2(a)4i, the Department will be providing permittees with the updated list of areas that have been documented to contain threatened and endangered species habitat during the most recent nesting seasons prior to March 1 of each year; this information is currently provided prior to April 1 each year. N.J.A.C. 7:7E-3A.2(a)4iii is amended to add that if a beach area not identified on the updated list described above in N.J.A.C. 7:7E-3A.2(a)4i is found to contain an unflighted chick, then no beach raking is to be undertaken. This subparagraph previously only provided this protection if a nest of a threatened or endangered beach nesting shorebird was located. In addition, for the reasons previously discussed, the use of non-emergency vehicles during March 15 and August 31 is prohibited within these areas.

New N.J.A.C. 7:7E-3A.2(a)5 addresses the protection of known occurrences of Federally listed endangered and threatened plant species, such as seabeach amaranth (*Amaranthus pumilus*), and known occurrences of State listed endangered plant species, such as sea beach knotweed (*Polygomum glaucum*).

Similar to the restriction for threatened or endangered beach nesting shorebirds, no beach raking, other mechanical manipulation of the beach, or use of non-emergency vehicles is permitted in areas documented by the Department as supporting known occurrences of threatened and endangered plant species. These activities are not permitted to take place between May 15 and November 30. These restrictions are consistent with protections afforded to seabeach amaranth under CAFRA permits pursuant to N.J.A.C. 7:7E-3.36, endangered and threatened wildlife or plant species habitat, and by the U.S. Fish and Wildlife Service, prior to these amendments. Similar to the provisions for threatened or endangered beach nesting shorebirds, N.J.A.C. 7:7E-3A.2(a)5 specifies that the Department will develop a list of specific areas where this restriction applies, update the list annually and provide the list to each permittee prior to May 1 of each year. If a particular beach area is not identified on the list but is subsequently found to contain an occurrence, in accordance with N.J.A.C. 7:7E-3A.2(a)5ii the Department will notify the permittee and no beach raking, mechanical manipulation of the beach, or use of non-emergency vehicles will be permitted from May 15 through November 30. N.J.A.C. 7:7E-3A.2(a)5iii provides that the restrictions in N.J.A.C. 7:7E-3A.2(a)5i may be waived where the Department determines that the area identified does not support an occurrence of these species.

New N.J.A.C. 7:7E-3A.2(a)7 addresses the excavation of sand accumulated beneath a boardwalk. Beach and dune systems are dynamic, changing from the movement of sand throughout the system by wind, waves and storms. Sand routinely accumulates under boardwalks. This sand may be part of a beach or dune depending upon whether a dune is present and the location of the dune; that is, whether the dune is located landward or waterward of the boardwalk. The accumulation of sand may in some cases result in public safety issues from the upheaving of planks. In order for excavation of sand beneath a boardwalk to be authorized, the elevation of the area after the excavation is completed must not be lower than either the upper beach berm design template for an engineered beach, or, for a non-engineered beach, lower than the elevation of the existing beach berm. The excavated sand must be relocated to the seaward toe of the dune, if one is present, or on the upper beach berm. This ensures that the sand is placed in an area where it is least likely to be affected by wind and wave action, most likely to help protect adjacent properties and public safety, and can potentially become part of the dune system. Where breaching of an existing dune is necessary to excavate sand, the area of the breach must be minimized and the breached area must be restored to pre-existing conditions, thus assuring that the dune is impacted to the least extent possible and any reduction to the functions served by the dune is short-term. Where the proposed excavation of sand from under a boardwalk would affect the landward dune slope, the dune slope must be restored to the preexisting condition and in no case can the slope be steeper than three horizontal to one vertical. Further, the landward dune slope is required to be revegetated. These standards are intended to balance public safety with protecting and maintaining the beach and dune system. Based on the

Department's experience issuing such permits, the Department has determined that the excavation of sand from beneath boardwalks will have minimal adverse impacts provided the activity complies with the specified conditions.

New N.J.A.C. 7:7E-3A.2(a)8 requires sand removed from boardwalks, street ends, and single family homes to be placed on the seaward toe of the existing dune or, if no dune is present, on the upper beach berm. This provision ensures that the sand is put back into the beach and dune system from which it came in a location that will increase the size of the dune or will become a part of the beach ecosystem. The higher the elevation of the upper beach berm, the greater the storm protection will be for the adjacent community.

New N.J.A.C. 7:7E-3A.2(a)9 provides for the placement of temporary sand fencing during the winter months. The placement of sand fencing on an existing beach allows for the accumulation of sand during the winter months. The accumulated sand is then redistributed along the beach berm prior to the beach season. Prior to this amendment, this activity was performed by several communities under a CAFRA individual permit. The activities allow for the sand that accumulates each year under a boardwalk, alongside a home, or at street ends to be placed back onto the beach or dune in a manner that will assist in the maintenance of the beach and dune system, thus preserving that system's ecological and flood protection role. Based on the Department's experience, this management activity will have only minimal temporary impacts on the beach and dune system and may in fact provide additional storm protection during the winter months.

N.J.A.C. 7:7E-3A.2(a)9i sets forth the standards for the placement of sand fencing. The sand fencing must be placed a minimum of 15 feet waterward from the seaward toe of any existing dune or structure. This provides separation of the accumulated sand and the existing dune and will also provide a buffer to any structure where no dune is present. The sand fencing cannot be installed until October 15 and must be removed before the Memorial Day weekend, unless timing restrictions for endangered or threatened wildlife or plant species apply. The sand fencing cannot be installed in a manner that prevents public access along the tidal waterway and cannot restrict public access to the beach from existing public access points.

N.J.A.C. 7:7E-3A.2(a)9ii sets forth the standards for the redistribution of sand that accumulates against the sand fence. These standards are intended to ensure that the activity of redistributing accumulated sand will have a positive effect on the beach berm and that the sand is redistributed consistent with the existing beach contours. Specifically, the redistributed sand must be placed on the beach, at or above the elevation of the beach berm design template for engineered beaches or, for non-engineered beaches, at or above the elevation of the beach berm elevation existing prior to the redistribution. Further, the redistribution must not result in the grading of the beach below the beach berm design template for engineered beaches or, for non-engineered beaches, the existing beach berm elevation; and, where feasible cannot result in a beach face slope steeper than ten horizontal to one vertical.

N.J.A.C. 7:7E-3A.2(b) sets forth the standards for the mechanical transfer of sand from the lower beach profile to the upper beach profile or alongshore. The term “mechanical redistribution” is replaced with “transfer.” This change makes clear that transfer of sand by any

means is subject to this subsection and is consistent with the description of these activities in other paragraphs within this subsection (see, for example, N.J.A.C. 7:7E-3A.2(b)3).

N.J.A.C. 7:7E-3A.2(b)1 contains the same language as N.J.A.C. 7:7-3A.2(a)1 for general beach maintenance activities and is intended to protect Federal or State listed endangered or threatened wildlife or plant species and their habitat.

N.J.A.C. 7:7E-3A.2(b)3, is recodified as (b)4, and amended to clarify that the 30 day period within which fencing must be placed where a transfer is made to repair eroded dunes is intended to refer to 30 calendar days. N.J.A.C. 7:7E-3A.2(b)4 is recodified as (b)5 with no change in text.

N.J.A.C. 7:7E-3A.2(b)6 addresses sand transfers and the protection of beach nesting shorebird habitat. For the same reasons described above regarding proposed N.J.A.C. 7:7E-3A.2(a)4, the scientific name of the Least Tern is updated, the Black Skimmer is added to the list of examples of endangered or threatened beach nesting birds whose habitat is protected under this provision, and the timing restrictions applicable to sand transfers in areas of documented habitat for threatened or endangered beach nesting shorebirds at N.J.A.C. 7:7E-3A.2(b)6 are amended. In addition, consistent with N.J.A.C. 7:7E-3A.2(a)5, standards for the protection of known occurrences of Federal listed threatened or endangered plant species and State listed endangered plant species are included at N.J.A.C. 7:7E-3A.2(b)7.

7:7E-3A.3 Standards applicable to emergency post-storm beach restoration

N.J.A.C. 7:7E-3A.3(b) identifies beach restoration activities as part of an emergency post-storm recovery to which the standards in this section apply. Prior to this rulemaking, this section indicated that the placement of geotextile bags or tubes was preferred to the placement of concrete, rubble or other material. Geotextile bags when they first emerged on the market were thought to be the best method for stabilizing an eroded beach. Since that time, it has been the Department's experience that there are many ways to solve an emergency post-storm beach erosion problem, depending upon the extent of the damage, the urgency of the situation and the likely permanent solution. These methods include the placement of concrete, rubble, and other material, such as rock. Therefore, the indication that the use of geotextile bags is preferred to the placement of concrete, rubble and other material is deleted. The subsection is additionally amended to specifically recognize rock as one of the materials used in beach restoration activities.

At N.J.A.C. 7:7E-3A.3(e) the word "longshore" is corrected to "alongshore" with reference to transfer of sand from one beach area to another.

N.J.A.C. 7:7E-3A.3(f) contains the standards for the placement of sand filled geotextile bags or geotubes as part of an emergency post-storm beach restoration plan. N.J.A.C. 7:7E-3A.3(f)6, which requires the fill material be from an upland source excluding the beach and dune, is amended to allow for the use of suitable dredged material. As stated previously, the Department encourages the beneficial use of dredged material. This change supports that policy. A new provision, requiring that the geotextile bag or geotube be installed with a manufacturer's recommended scour apron is included at N.J.A.C. 7:7E-3A.3(f)8. The use of a scour apron will

reduce the potential for undermining of the geotube or bag and will minimize the effects if such undermining occurs.

N.J.A.C. 7:7E-3A.3(g) contains the standards that must be met for the placement of sand, gravel, rubble, concrete, and other inert materials to be allowed as part of an emergency post-storm beach restoration plan. Rock is added to this listing to make it clear that the Department finds the use of this material acceptable. Rock is generally used along the Delaware bayshore and other high energy environments. N.J.A.C. 7:7E-3A.2(g)3 is amended to require that concrete, rubble or rock placed on the beach be removed within 90 calendar days, unless an application is filed within 90 calendar days of the placement of the material for Department approval of an engineered design for permanent shore protection**.** Prior to this amendment, all concrete and rubble placed on the beach was required to be removed within 90 days, unless the placement was part of a Department approved, engineered design for permanent shore protection. As amended, if a permit application is filed within this period, the material may remain on the beach until a determination is made on the application.

7:7E-3A.4 Standards applicable to dune creation and maintenance

Vegetation is an important component of the beach and dune system as the vegetation traps windblown sand and helps the dune grow through accretion. Dune vegetation also helps to stabilize the dune and protect it from erosion. N.J.A.C. 7:7E-3A.4(c) is amended to require that all proposed dune vegetation be species native to New Jersey and to specify that the coastal species specified within this paragraph should be utilized, to the maximum extent practicable.

Requiring species that are native to New Jersey will assure that species utilized have the greatest probability of surviving and thriving on the dune, and will assure that non-native species that could negatively affect coastal species native to the State and become invasive are not introduced to the State's coastal area, therefore facilitating the resilient recovery of dunes in an environmentally protective manner. In addition, Shore Juniper (*Juniperus conferta*) and Sea Oats (*Uniola paniculata*) are deleted from the list. Shore Juniper is not a suitable plant for the building of dunes and Sea Oats is not native to New Jersey. The Department also modified the rule by eliminating the sentence "although they may not be currently available from commercial nurseries at this time, the following plant species are also well suited to the dune environment" since that is no longer the case. Bitter Panicgrass and Saltmeadow cordgrass are commercially available so these species are listed as optional native plantings. The following native species are added to the listing as they are common and thrive in New Jersey's dune environment: Switchgrass (*Panicum virgatum*), Partridge Pea (*Chamaecrista fasiculata*), Eastern red cedar (*Juniperus virginiana*), and Groundsel tree (*Baccharis halimifolia*).

N.J.A.C. 7:7E-3A.4(c)2, which addresses the diversity of dune vegetation, is modified to specify that dune vegetation be diversified to the maximum extent practicable. New N.J.A.C. 7:7E-3A.4(c)3 requires that a landscape plan be created as part of any dune creation activity. The plan must depict the vegetative community on the dune and include the species, quantity of each species, density, stock type, and the source of the plant material. This provision will ensure that the Department has the information needed to assess compliance with this section.

N.J.A.C. 7:7E-3A.4(d)1 identifies how copies of the cited specifications for the construction of dune walkovers may be obtained. An extraneous reference to a Soil Conservation Service report is deleted.

Subchapter 4. General water areas

7:7E-4.2 Shellfish aquaculture

Superstorm Sandy severely impacted New Jersey's shellfish aquaculture industry and, as explained above, the Department in this rulemaking has put in place new permits-by-rule and a general permit for aquaculture. The amendments to the Shellfish aquaculture rule at N.J.A.C. 7:7E-4.2 relate to those permits-by-rule and general pemit in order to encourage and facilitate recovery of the aquaculture industry after Superstorm Sandy.

Prior to this rulemaking, aquaculture as defined at N.J.A.C. 7:7E-4.2 included the growth and harvesting of plants and animals. The rule is amended to apply only to shellfish aquaculture activities. According to the New Jersey Coastal Management Program's Section 309 Assessment, 2011-2015 (http://www.state.nj.us/dep/cmp/nj2011-309assessment.pdf), almost all aquaculture in New Jersey's waters consists of hard clams and oysters and interest in aquaculture relating to finfish and aquatic plants in New Jersey is low. In addition to hard clam and oyster aquaculture, soft clam and bay scallop aquaculture activities are present in the State (see http://www.jerseyseafood.nj.gov/aquaculture.html).

The title of this section is renamed "Shellfish aquaculture" to reflect the new focus of the rule. As a result of this change, should a future applicant be interested in finfish or plant

aquaculture in a water area (as opposed to an upland operation), this general water area rule would not apply; rather, N.J.A.C. 7:7E-4.22, Miscellaneous uses, would apply. The new definition of shellfish aquaculture at N.J.A.C. 7:7E-4.2(a) is similar to the definition of aquaculture set forth in the New Jersey Aquaculture Development Act at N.J.S.A. 4:27-3. However, in addition to focusing specifically on shellfish aquaculture, the definition excludes the statement that aquaculture does not include the placement of structures because this rule is intended to address shellfish aquaculture activities which include structures such as cages and racks and bags. The definition also identifies the species of shellfish subject to this rule.

N.J.A.C. 7:7E-4.2(b) contains the conditions that must be satisfied for shellfish aquaculture activities to be allowed in general water areas. N.J.A.C. 7:7E-4.2(b)1, requires that shellfish aquaculture activities not unreasonably conflict with other marine uses. The phrase "other marine uses" replaces the previous reference to "resort or recreational uses" to make clear that the activity is not allowed to unreasonably conflict with marine uses beyond just resort or recreational uses, such as individual noncommercial docks at single family home lots. N.J.A.C. 7:7E-4.2(b)2, which required that the aquaculture activity not cause significant adverse off-site environmental impacts, is generalized to apply to any adverse environmental impact. This amendment is necessary in order to protect the marine ecosystem, since adverse impacts can occur as a result of an aquaculture activity on the site of the activity or off the site. New N.J.A.C. 7:7E-4.2(b)4 requires that the aquaculture activities not prevent the catching and taking of free swimming fish from tidal waters of the State in any lawful manner. This provision, which is consistent with N.J.S.A. 50:1-33, N.J.A.C. 7:7-7.2(a)18ii and 19iv, as well as N.J.A.C.

7:7-7.35(a)6, will ensure that the aquaculture activities will not affect the public's ability to catch fish. For example, shellfish cages could be placed in such a manner as to prevent a boater from traversing the water area. New N.J.A.C. 7:7E-4.2(b)5 requires that shellfish aquaculture activities be conducted in shellfish lease areas authorized under N.J.S.A. 50:1-23, which governs the leasing of shellfish areas.

New N.J.A.C. 7:7E-4.2(c) addresses the removal of structures associated with aquaculture activities upon expiration or termination of a shellfish lease, or the cessation of aquaculture activities. This provision, which is consistent with N.J.A.C. 7:7-7.2(a)18(a) and 19(a), as well as N.J.A.C. 7:7-7.35(b), will ensure that abandoned structures do not create a hazard when a lease or activities have ended.

The rule rationale at N.J.A.C. 7:7E-4.2(d) is amended to describe the importance of the shellfish aquaculture industry in New Jersey.

7:7E-4.10 Filling

New N.J.A.C. 7:7E-4.10(d) allows for the establishment of a living shoreline in accordance with the new living shoreline general water area rule at N.J.A.C. 7:7E-4.23. Some types of living shoreline projects may require filling in order to restore the habitat that has been lost to erosion. The Department has determined that the establishment of living shorelines is environmentally beneficial and therefore filling to establish a living shoreline is conditionally acceptable under this rule, provided it meets the standards set forth at N.J.A.C. 7:7E-4.23.

N.J.A.C. 7:7E-4.10(f)1 through 5 identify activities for which mitigation is not required. Two new activities are added to this listing: the establishment of living shorelines in accordance with N.J.A.C. 7:7E-4.23 and the construction of boat ramps in accordance with N.J.A.C. 7:7E-4.3.

New N.J.A.C. 7:7E-4.10(f)4 provides that filling associated with the establishment of a living shoreline in accordance with new N.J.A.C. 7:7E-4.23 will not require mitigation. Establishing a living shoreline for purposes of habitat protection, restoration, or enhancement of a vegetative community results in a net gain of habitat functions and values. Therefore, additional compensation in the form of mitigation is not necessary, since mitigation is typically required under these rules when there is a loss of habitat.

New N.J.A.C. 7:7E-4.10(f)5 provides that filling associated with the construction of a boat ramp in accordance with N.J.A.C. 7:7E-4.3 does not require mitigation because the impacts are de minimis. Boats ramps were also damaged as a result of Superstorm Sandy and applicants may want to rebuild a boat ramp in a new location. This provision makes it clear that the Department supports the construction of boat ramps and that mitigation is not required. N.J.A.C. 7:7E-4.11(f) is recodified as (g) with no changes in text.

N.J.A.C. 7:7E-4.10(h), formerly codified at N.J.A.C. 7:7E-4.10(g), addresses filling for the purposes of beach nourishment. Prior to this rulemaking, filling using clean sediment of suitable particle size and composition was acceptable for beach nourishment projects provided it met the standards of the coastal engineering rule, N.J.A.C. 7:7E-7.11. This subsection is amended to reflect the addition of filling for the purposes of a living shoreline project as an

acceptable use and to allow for the beneficial use of dredged material that is deemed appropriate fill material for beach nourishment or living shoreline projects through a determination of the acceptable use of the material by the Department. This change will continue to promote the long-standing State policy of treating dredged material as a resource and to beneficially use dredged material in appropriate applications, rather than relying on disposal of dredged material in confined disposal facilities. N.J.A.C. 7:7E-4.10(h) is recodified as (i) with no changes in text.

The rule rationale is recodified as N.J.A.C. 7:7E-4.10(j) and amended to reflect the addition of living shorelines as an acceptable use, and to recognize the beneficial use of dredged material of the appropriate grain size and composition in beach nourishment and living shoreline projects.

7:7E-4.19 Vertical wake or wave attenuation structures

As explained above, in the aftermath of Superstorm Sandy, marinas that suffered damage are looking to rebuild quickly, better, and with more resiliency. N.J.A.C. 7:7E-4.19 is amended to focus on the protection of boat mooring areas such as those at marinas and to include flexibility in the design of vertical wake or wave attenuation structures.

Prior to this rulemaking, N.J.A.C. 7:7E-4.19 contained standards applicable to breakwater structures designed to protect shoreline areas or boat moorings. The section as amended addresses the construction of vertical wake or wave attenuation structures designed to protect boat mooring areas, including marinas, rather than shorelines. The amendments reflect the results and recommendations of the New Jersey Wake Mitigation Study discussed below. Under

the amended rule, breakwaters, which are hard structures, such as jetties and groins, that dissipate wave energy in higher energy environments and are designed to protect shoreline areas from erosion, are required to comply with the filling rule at N.J.A.C. 7:7E-4.10 and the coastal engineering rule at N.J.A.C. 7:7E-7.11.

In 2009 and 2010 Stevens Institute of Technology, Center for Maritime Systems, conducted the New Jersey Wake Mitigation Study which evaluated wake attenuation and flushing characteristics of vertical breakwaters (wake attenuation structures). The study concluded that the design of a wake attenuation structure should be site specific, based on vessel traffic, water depth and tidal flow. (See New Jersey Wake Mitigation Study, prepared for the New Jersey Department of Transportation, Office of Maritime Administration, by Thomas O. Herrington, March 2010. The study can be viewed online at www.state.nj.us/transportation/airwater/maritime/documents/NJWakeMitigationStudy_Final.pdf. While this study evaluated the effectiveness of vertical breakwaters in protecting marina basins from wake, the Department has determined that it is also appropriate to apply the design standards resulting from this study to waves created by natural forces. Regardless of source, waves have the same effect on boats moored within marina basins.

N.J.A.C. 7:7E-4.19(a) describes wake or wave attenuation structures. These structures are designed to protect boat moorings, including those at marinas, by intercepting wakes or waves and reducing wake or wave energy which would normally impact mooring areas. N.J.A.C. 7:7E-4.19(a) also reflects that breakwaters designed for the protection of shoreline areas, which were formerly subject to this section, must instead comply with the filling rule at

N.J.A.C. 7:7E-4.10 and the coastal engineering rule at N.J.A.C. 7:7E-7.11.

N.J.A.C. 7:7E-4.19(b) provides that the porosity of a vertical wake or wave attenuation structure and the distance between the structure and the bottom of the water body will be determined on a case by case basis, taking into consideration vessel traffic, water depth, and tidal flow. Porosity refers to the space between planking and/or the distance between the structure and the bottom of the water body. When designed in accordance with the above, the structure will not adversely affect the movement of sediment and marine organisms, or water circulation patterns.

Prior to these amendments, N.J.A.C. 7:7E-4.19(b)1 required that timber, vinyl or plastic breakwaters to be designed to have a minimum of three inch spacing between planking and the distance between the structure and the water body bottom to be a minimum of 18 inches, unless the structure was one constructed in compliance with the filling rule at N.J.A.C. 7:7E-4.10 and the coastal engineering rule at N.J.A.C. 7:7E-7.11. These standards were intended to protect boat mooring areas and shorelines while allowing for movement of sediment and marine organisms and water circulation.

The wake mitigation study found that wake transmission through vertical wake attenuation structures of very low porosity allows a significant amount of wave energy to cross the structure. An analysis of the impact of low porosity wake attenuation structures on the flushing of mooring areas located within the vicinity of strong currents found that a complete water exchange within the mooring area occurred within one to two hours. Based on these findings, the study recommended that the design of wake attenuation structures for the purposes

of protecting boat mooring areas be based on the type of wake energy generated within the vicinity of the mooring area. New N.J.A.C. 7:7E-4.19(c)1 through 3 provide guidance on the design of a vertical wake or wave attenuation structure when located in a high, medium or minor wake or wave energy environment.

New N.J.A.C. 7:7E-4.19(c)1 addresses high wake or wave energy environments. Boat moorings located in or near deep water and that are exposed to port, harbor, and/or ferry traffic are subject to high wake energy. The Hudson River between New Jersey and New York is an example of a high wake or wave energy area. Vertical wake or wave attenuation structures located in these areas may be designed to provide no spacing between planks and extend to a depth of between 30 and 40 feet or to the bottom of the water body, whichever is less, in order to intercept almost all wave energy. The distance between the structure and the bottom of the water body will be dependent upon the water depth of the area in which the structure will be located. In general, high wake energy environments can generate water movement at depths exceeding 25 feet. In order to provide the greatest amount of protection in these deep waters, the larger wake or wave attenuation structures are necessary.

New N.J.A.C. 7:7E-4.19(c)2 addresses medium wake or wave energy environments. Boat moorings located adjacent to or near navigation channels subject to light commercial and recreational boat traffic are subject to medium wake or wave energy. Cape May Harbor is an example of a medium wake energy environment. Vertical wake or wave attenuation structures located in these areas may be designed to have approximately one inch spacing between planking and to extend to the bottom of the water body. By extending the structure to the bottom of the

water body, most of the wave energy will be intercepted.

New N.J.A.C. 7:7E-4.19(c)3 addresses minor wake or wave energy environments. Boat moorings that do not meet the criteria of (c)1 and 2 are considered minor wake energy environments. The Upper Manasquan River is an example of a minor wake environment. In these environments, wake or wave attenuation structures may be designed to provide three inch spacing between planking and the distance between the structure and the bottom of the water body will be determined on a case-by-case basis taking into account the potential wake or wave energy at that mooring location. However, in areas of low tidal flow, that is areas with a tidal range of less than two feet, this distance must be at least 18 inches. This distance is consistent with the existing rule and will allow sufficient movement of sediment and marine organisms and water circulation in low flow tidal areas.

New N.J.A.C. 7:7E-4.19(d) requires that detached vertical wake or wave attenuation structures which are not fixed directly to a dock or pier be marked with photocell lights and/or reflectors. This requirement is the same as the requirement in the previous rule at N.J.A.C. 7:7E-4.19(b)2.

The rule rationale is recodified at N.J.A.C. 7:E7-4.19(e) and amended to reflect the focus of the rule on the protection of boat mooring areas.

7:7E-4.23 Living shorelines

New N.J.A.C. 7:7E-4.23 contains the Department's standards for the establishment of living shorelines. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of

sandy beach, and decrease the amount of organic matter, the presence of which is important to maintaining tidal wetlands. This erosion results in the degradation of the coastal environment through impacts to natural habitats. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion. Living shorelines are a shoreline management practice that addresses the loss of vegetated shorelines and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This shoreline management practice provides "living space" for organisms through the strategic placement of plants, sand, or other structural and organic materials.

There are three types of living shorelines: natural, hybrid and structural. Natural living shorelines include natural vegetation, submerged vegetation, fill and biodegradable organic materials. Hybrid living shorelines incorporate natural vegetation, submerged vegetation, fill, biodegradable organic materials and low-profile rock structures such as segmented sills, containment and living breakwaters seeded with native shellfish. Structural living shorelines include, but are not limited to, revetments and jetties. Because living shorelines are intended to address the loss of vegetation and habitat, the CZM rules relating to shellfish habitat, submerged vegetation, intertidal and subtidal shallows, wetlands and marine fisheries are amended to encourage use of these structures.

N.J.A.C. 7:7E-4.23(a) sets forth a definition of living shoreline. As stated previously, living shorelines are a shoreline management practice that addresses the loss of vegetated shorelines and habitat in the littoral zone by providing for the protection, restoration, or enhancement of these habitats accomplished through the strategic placement of vegetation, sand

or other structural and organic materials. The goal of a living shoreline project is to protect, restore or enhance a habitat.

N.J.A.C. 7:7E-4.23(b), identifies the conditions under which the Department considers the establishment of a living shoreline acceptable. N.J.A.C. 7:7E-4.23(b)1 requires a demonstration that the proposed project is part of a plan for the restoration, creation, or enhancement of the habitat and water quality functions and values of wetlands, wetland buffers and open water areas; is consistent with the requirements of the Wetlands Act of 1970, the Waterfront Development Law, CAFRA and the CZM rules; will improve or maintain the values and functions of the ecosystem; and will have a reasonable likelihood of success, or, if performed by a college or university, will advance the level of knowledge regarding the success or failure of various designs in New Jersey's waters. These criteria are the same as those included in the coastal general permit for habitat creation, restoration, enhancement and living shoreline activities at N.J.A.C. 7:7-7.29 and are necessary to protect special areas such as shellfish habitat, submerged vegetation, intertidal and subtidal shallows, and wetlands, as well as resources such as marine fish and fisheries, while advancing the engineering knowledge of the success rates of different forms of living shoreline to determine the methods best suited to conditions found in the State's waters.

N.J.A.C. 7:7E-4.23(b)2i requires that the disturbance of special areas associated with the establishment of a living shoreline be the minimum necessary to implement the project. The Department may approve a reduction in the size of a particular special area in order to allow an increase in a different special area if it is determined that there are sufficient environmental

benefits to outweigh any negative environmental impacts associated with the reduction. This requirement is the same as that applicable to the general permit at N.J.A.C. 7:7-7.29(f)2. In addition, N.J.A.C. 7:7E-4.23(b)2ii limits the amount of fill that may be used in the establishment of the living shoreline, that is, fill cannot be placed beyond the footprint of the shoreline as it appeared on the applicable Tidelands Map adopted by the Tidelands Resource Council (base map photography dated 1977/1978), except for a structural component of the project intended to reduce wave energy. This provision is necessary to ensure that a project does not impact more special areas than is necessary to protect, restore or enhance a habitat. Fill in the form of a structural component intended to reduce wave energy is permitted. Often the placement of these structural components is beyond the footprint of the shoreline as shown on the Tidelands Map; therefore it is necessary to allow for this exception to ensure a successful living shoreline project.

N.J.A.C. 7:7E-4.23(c) allows for the beneficial use of dredged material in the establishment of a living shoreline, provided it is determined by the Department that the material is acceptable for use in a living shoreline. N.J.A.C. 7:7E-4.23(d) sets forth the rationale for the rule.

Subchapter 7. Use rules

7:7E-7.3 Resort/recreational use

The Department's standards applicable to marina development are set forth at N.J.A.C. 7:7E-7.3(d). Prior to this rulemaking, N.J.A.C. 7:7E-7.3(d)2i provided that new marinas or the expansion or renovation (including, but not limited to, dredging, bulkhead construction and

reconstruction, and relocation of docks) of existing marinas for recreational boating are conditionally acceptable if the marina includes the development of an appropriate mix of dry storage areas, public launching facilities, berthing spaces, repair and maintenance facilities, and boating and hardware supply facilities, depending upon site conditions. This standard is deleted. Marinas are not one size fits all. The service provided by new marinas and the expansion of an existing marina will be dependent upon existing site conditions, their customers' needs, and the types of surrounding development.

Prior to this rulemaking, N.J.A.C. 7:7E-7.3(d)10ii prohibited all new, expanded, and renovated boat mooring facilities with five or more slips on the Navesink, Shrewsbury, Manasquan (upstream of Rt. 35 bridge) or St. George's Thorofare from using pressure treated lumber or other lumber treated with any other substance in any portion of the project. This restriction applied to bulkhead sheathing and planking but not pilings. As discussed in the summary of N.J.A.C. 7:7-1.3, a definition of "non-polluting material" is added to both that section of the Coastal Permit Program rules and in the definitions section of the CZM rules at N.J.A.C. 7:7E-1.8 to describe materials not considered to result in discharge of pollutants when used in the marine environment. N.J.A.C. 7:7E-7.3(d)10ii is amended to incorporate the use of the defined term "non-polluting material" for clarity.

These changes will facilitate the resilient rebuilding of marinas after Superstorm Sandy in an environmentally responsible manner.

7:7E-7.11 Coastal engineering

The Department has repealed and put in place a new Coastal engineering rule at N.J.A.C. 7:7E-7.11. While the new rule continues the standards from the repealed rule, the standards are reorganized and modified (as discussed below) to emphasize and clarify the Department's shore protection and/or storm damage reduction priorities, and to facilitate the rebuilding of a more resilient shoreline in the aftermath of Superstorm Sandy.

N.J.A.C. 7:7E-7.11(a) explains that coastal engineering measures include a variety of structural, hybrid, and non-structural shore protection and/or storm damage reduction measures intended to manage water areas and protect the shoreline from the effects of erosion, storms, and sediment and sand movement. A shore protection and/or storm damage reduction measure is designed to stabilize and/or restore shorelines in coastal areas and/or prevent or reduce damage caused by erosion, and flood and wave impact due principally to storm tide levels and wave action, including wave setup and run up. The examples of coastal engineering measures are expanded to include living shorelines in recognition of their importance as a shoreline stabilization measure.

N.J.A.C. 7:7E-7.11(b) establishes a hierarchy of the shore protection and/or storm damage reduction measures that can be implemented, with non-structural measures to be considered first (see N.J.A.C. 7:7E-7.11(b)1), then hybrid measures (see N.J.A.C. 7:7E-7.11(b)2), then structural measures (see N.J.A.C. 7:7E-7.11(b)3).

Where non-structural measures are feasible, the prior rule specified that vegetative measures were preferred. Vegetative shore protection and storm damage reduction measures are non-structural measures that offer many environmental benefits. The root systems of the

vegetation help to hold the soil particles, reducing erosion and increasing bank stability. The vegetation can also increase the resistance to the hydraulic flow of the waterbody and reduce local velocities in smaller channels. Vegetation can also serve as a buffer to wrack (seaweed or other marine vegetation that floats in a tidal waterbody or is cast onto the shore); will allow sediment deposition; and can redirect water flow away from the bank.

N.J.A.C. 7:7E-7.11(b)1 identifies the factors the Department will consider in determining whether a non-structural shore protection and/or storm damage reduction measure is feasible. These factors are the type of waterway on which the site is located, the distance to the navigation channel, the width of the waterway, the water depth at the toe of bank, bank orientation, shoreline slope, fetch, erosion rate, the amount of sunlight received, substrate composition and presence of shellfish habitat, submerged vegetation and wetlands at the site. The Department has developed a worksheet entitled, "Guidance for Appropriate Shoreline Protection and/or Storm Damage Reduction Measures for a Site." The guidance explains how the factors influence the choice of a shore protection measure for a site. This guidance is available from the Division of Land Use Regulation's website at www.state.nj.us/dep/landuse.

If non-structural measures are not feasible, N.J.A.C. 7:7E-7.11(b)2 provides that hybrid shore protection and/or storm reduction measures, which include rip rap and gabions, are to be used. These measures provide some habitat functions by allowing the establishment of vegetation within the structure. The establishment of vegetation within the structure provides some of the functions of a non-structural vegetative measure as described above.

N.J.A.C. 7:7E-7.11(b)3 provides that if use of hybrid shore protection and/or storm damage reduction measures is not feasible, then structural measures such as bulkheads, revetments, sea walls, or other retaining structures are to be used. Structural shore protection and/or storm damage reduction measures are least preferred because the structures often increase erosion to adjacent properties, reflect wave energy, eliminate intertidal habitat, reduce the amount of sandy beach and decrease the amount of organic matter necessary to maintain tidal wetlands.

N.J.A.C. 7:7E-7.11(c) provides that the hierarchy set forth at N.J.A.C. 7:7E-7.11(b) does not apply to water dependent uses within existing ports. Ports are designed to accommodate the mooring and passage of large vessels, and the high volume of boat traffic and the water depths are such that non-structural shore protection measures are not feasible.

N.J.A.C. 7:7E-7.11(d) contains the standards for the construction, maintenance, or reconstruction of a bulkhead. N.J.A.C. 7:7E-7.11(d)1 addresses the construction of a bulkhead in a V-zone. As described at N.J.A.C. 7:7E-3.18 (not amended in this rulemaking), a V-zone, or coastal high hazard area, is a flood prone area subject to high velocity waters as delineated on the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency and areas within 25 feet of oceanfront shore protection structures, which are subject to wave run-up and overtopping. The standards previously codified at N.J.A.C. 7:7E-7.11(e)5 are continued.

N.J.A.C. 7:7E-7.11(d)2 contains the standards for the maintenance or reconstruction of an existing bulkhead. These standards allow for replacement to be accomplished outshore of the existing bulkhead. The standards for both replacement and maintenance or reconstruction

specify how far outshore of the existing bulkhead construction may occur. If construction is to occur more than 18 inches outshore of the existing bulkhead, the replacement, maintenance, or reconstruction is required to occur as close as physically possible to the existing bulkhead. These standards are continued from N.J.A.C. 7:7E-7.11(e)2 in the prior rule.

N.J.A.C. 7:7E-7.11(e) provides that dune restoration, creation, and maintenance projects as non-structural shore protection and/or storm damage reduction measures are encouraged, and must comply with the standards for beach and dune maintenance at N.J.A.C. 7:7E-3A.

N.J.A.C. 7:7E-7.11(f) provides that beach nourishment projects as non-structural shore protection and/or storm damage reduction measures are encouraged, provided the enumerated standards are met. The standards are continued from N.J.A.C. 7:7E-7.11(d) in the prior rule.

N.J.A.C. 7:7E-7.11(g) sets forth the standards for structural shore protection and/or storm damage reduction projects funded using monies from the Shore Protection Fund established pursuant to N.J.S.A. 13:19-16 and/or any other Department monies. The standards are continued from N.J.A.C. 7:7E-7.11(e) in the prior rule. The rule is modified to make it clear that these standards apply only to publicly funded projects, as had been indicated in the rule rationale previously codified at N.J.A.C. 7:7E-7.11(e)6. As noted in the revised rationale at N.J.A.C. 7:7.11(h), structural shore protection measures are appropriate and essential at certain locations, given the existing pattern of urbanization of New Jersey's shoreline. However, the creation, repair, or removal of publicly funded shore protection or storm damage reduction measures must serve clear and broad public purposes, and must be undertaken only with a clear understanding, on a regional basis, of the consequences to natural shoreline sand systems.

New N.J.A.C. 7:7E-7.11(g)1 sets forth the conditions that must be met for the construction of new shore protection structures or expansion or fortification of existing structures, which are continued from N.J.A.C. 7:7E-7.11(e)1 in the prior rule. N.J.A.C. 7:7E-7.11(g)2 requires public access to a shore protection project and continues the requirement for public access at N.J.A.C. 7:7E-7.11(e)4 in the prior rule.

New N.J.A.C. 7:7E-7.11(h) contains the rule rationale. The separate rationales in the prior rule at N.J.A.C. 7:7E-7.11(b)2, (c)2, (d) 2 and (e)6 are consolidated and modified to reflect the reorganized and amended rule as described above.

7:7E-7.12 Dredged material management on land

Superstorm Sandy deposited sand and debris in many coastal waterways and, as explained above, the Department in this rulemaking has put in place new general permits for dredging of material deposited as a consequence of storm events for which the Governor declared a State of Emergency. The amendments to the Dredged material management on land rule at N.J.A.C. 7:7E-7.12 relate to those general permits in order to encourage and facilitate recovery of coastal waterways through the beneficial use of the dredged material.

N.J.A.C. 7:7E-7.12(a) explains that dredged material management is the disposal or beneficial use of sediments removed during dredging operations and provides examples of beneficial uses of dredged material. “Capping material” is added as another example of a beneficial use of dredged material. This use is currently referenced in N.J.A.C. 7:7E-7.12(d).

N.J.A.C. 7:7E-7.12(c), which addresses the disposal of dredged material in wetlands, is modified to clarify that disposal of dredged material and/or the construction of a dredged material confined disposal facility is prohibited unless the criteria, including the requirement for mitigation, in the wetlands special area rule, N.J.A.C. 7:7E-3.27, are met.

N.J.A.C. 7:7E-7.12(d), which provides that the use of dredged material of appropriate quality and particle size is encouraged, is modified to clarify that the use referred to is the beneficial use of the material. "Transportation projects" are included in the list of activities in which dredged material may be beneficially used. For example, the Department of Transportation uses dredged material that meets the standards of these rules as fill in roadway projects.

N.J.A.C. 7:7E-7.12(e) addresses the potential adverse effects associated with the transport of dredged material to an upland site. The subsection is amended to make clear that the requirement to minimize to the maximum extent feasible any adverse effects associated with the transport of dredged material applies both to transport of the dredged material to an upland confined disposal facility and to the site where dredged material will be beneficially used.

N.J.A.C. 7:7E-7.12(h), which addresses potential discharges of water from a confined disposal site, is modified to replace "sites" with "facilities" for consistency of terminology throughout the chapter.

The rule rationale at N.J.A.C. 7:7E-7.12(j) is modified to recognize the State's longstanding policy concerning the beneficial use of dredged material.

Subchapter 8. Resource rules

7:7E-8.2 Marine fish and fisheries

N.J.A.C. 7:7E-8.2(c) sets forth activities that are conditionally acceptable provided the activity complies with the appropriate general water area rule(s) at N.J.A.C. 7:7E-4. The establishment of living shorelines to protect, restore, or enhance a habitat area, provided the living shoreline is created in accordance with the requirements specified in the new living shoreline general water area rule at N.J.A.C. 7:7E-4.23, is added to the list of conditionally acceptable activities. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. The result is the degradation of the coastal environment through increases in erosion and impacts to natural habitats, such as spawning grounds. In the aftermath of Superstorm Sandy, New Jersey is looking towards natural solutions, such as the creation of living shorelines, as an alternative that adds diversity to other shore protection measures.

The rule rationale at N.J.A.C. 7:7E-8.2(d) is amended to update cited statistics and include rationale concerning the establishment of living shorelines.

Social Impact

The concurrently proposed amendments, new rules and repeals will have an overall positive social impact. This proposal includes eight new permits-by-rule, five new general permits and amendments to one existing permit-by-rule and two existing general permits. The proposed amendments to existing and new permits-by-rule and general permits will facilitate the

expeditious rebuilding of New Jersey's coastal communities and coastal-related industries. The proposed eight new permits-by-rule will have a positive social impact by facilitating regulated activities which the Department has determined will cause only minimal environmental impacts, provided the activity is conducted in accordance with the specific requirements of the permit-by-rule. The addition of these permits-by-rule will simplify the coastal permitting process for persons undertaking certain activities, such as the expansion or relocation landward or laterally of the footprint of a legally constructed residential or commercial development, the reconfiguration of any legally existing dock, pier or wharf at a legally existing marina, placing sand fencing to create a dune, engaging in certain shellfish aquaculture activities, installing a pumpout facility at a waterfront facility, or implementing a sediment sampling plan in a water area as part of a dredging or dredged material management activity or remedial investigation of a contaminated site. The modification of the permit-by-rule for the reconstruction of a residential or commercial development within the same footprint will facilitate the rebuilding of these developments that was damaged by Superstorm Sandy. Conducting activities in accordance with the requirements of the permit-by-rule will eliminate the need to apply for and receive a permit from the Department prior to conducting the activity, thus eliminating the application costs (both the application fee and costs associated with the preparation of the application) and time associated with the coastal permitting process.

The addition of five new general permits and proposed amendments to two existing general permits will also have a positive social impact by facilitating the rebuilding of coastal areas, the maintenance of shore protection measures and establishment of living shorelines. The

new general permits provide a simplified permitting process for those persons proposing to conduct activities involving the removal of sand and other materials from lagoons, marinas, and where a bulkhead failed as a consequence of a storm event in which the Governor declared a State of Emergency, commercial aquaculture, and the placement of shell within shellfish lease areas, while assuring that the Department is provided with the information necessary to assure the activities will be conducted in a manner protective of the environment. The proposed amendments to existing general permits expand the scope of the activities authorized under such permits by, for instance, including as authorized activities the removal of sand beneath a boardwalk, the placement of temporary sand fencing during the winter months, reducing the setback requirements for support facilities at legally existing marinas, and the creation of living shorelines.

Beaches and/or dunes that are part of a shore protection project are designed to a specific height, width, slope and length for purposes of shore protection and/or storm damage reduction. Maintenance of engineered beaches and/or dunes to the design template will assure that the level of protection for which the beach and/or dune was designed is provided in the event of a storm. Thus, the proposed amendments to the dune and beach special area rules, allowing for the maintenance of engineered dunes and/or beaches to assure that they remain consistent with the design template will have a positive social impact. Maintenance activities between renourishment cycles may potentially reduce the volume of material needed when accreted sand is transferred from areas that have expanded above the design template to areas that have experienced increased erosion therefore increasing the longevity of the shore protection project.

Marinas are an essential component of the State's waterfront communities as they provide necessary infrastructure and services, such as boat storage, repair and maintenance facilities, fuel sales, pumpout facilities and retail sales of boating and related supplies, to the boating public. Over the past five years, the State has lost more than 500 marina slips and 17 marinas to development, such as condominiums or housing, resulting in a loss of jobs, revenue and services. The new and amended permits-by-rule and general permits, and the added flexibility in the design of a new marina and reconstruction or renovation of an existing marina, are intended to assist in the rebuilding of marinas damaged by Superstorm Sandy and preserve existing marinas and the services they provide while minimizing their impacts to coastal resources. The preservation of marinas will have a positive social impact on boaters as marinas will be able to continue to provide the services needed by the boating public.

The proposed amendments to the shellfish aquaculture rule will have a positive social impact as the amendments provide clear standards for shellfish aquaculture activities. The amended rule additionally facilitates new permits-by-rule and general permits for aquaculture activities that, as described above streamline the permitting process.

Safe navigation is critical to the State's recreational and commercial boating industry and marine commerce. The deposition of sand and other debris into New Jersey's waterways as a result of Superstorm Sandy, threatens the health and safety of boaters. Dredging is necessary to restore adequate water depths for the safe passage and berthing of recreational and commercial vessels. To facilitate safe navigation, the proposed amendments facilitate the removal of sand and other materials deposited as a consequence of a storm event in which the Governor declared

a State of Emergency, promote the State's policy of encouraging the beneficial use of dredged material; and clarify that the rehabilitation and reuse within the existing footprint of a dredged material management area does not require a CAFRA permit. These amendments will have a positive social impact on the recreational and commercial boating industry and marine commerce. Failure to maintain navigational depths creates a hazard to all boating traffic and can impede growth of, or actually reduce, commercial and recreational activities in coastal communities. Similarly, failure to maintain adequate water depths at marinas may impede recreational boating opportunities.

The proposed new living shoreline general water area rule will have a positive social impact on property owners located adjacent to water areas as the new rule will provide a natural alternative for addressing erosion and property loss. Living shorelines also create recreational areas thereby having a positive social impact on the affected community as well as the tourism industry.

Economic Impact

The proposed amendments, new rules and repeals will have a positive economic impact as they support the rebuilding and economic recovery of New Jersey's coastal areas in an expeditious and resilient manner. Economic recovery and revitalization are a central component of the State's long-term recovery efforts.

The proposed eight new permits-by-rule and modification of one existing permit-by-rule will have a positive economic impact on persons proposing certain activities as they will reduce

the costs associated with obtaining a coastal permit. By permitting certain activities through a permit-by-rule, the costs associated with the application fee and the preparation of a permit application are eliminated, as no formal application to the Department is required provided the requirements of the permit-by-rule are satisfied. The proposed amendments to two existing general permits and addition of five new general permits will also have a positive economic impact on persons proposing activities subject to the general permit as there will be a reduction in the application fee and the permit application requirements as compared to the process applicable to obtaining an individual permit.

The proposed amendments relating to shellfish aquaculture will provide a streamlined and systematic permitting structure for the shellfish aquaculture industry in order for the industry to rebuild and operate at an economically sustainable level while protecting environmental quality and reducing conflicts between different groups seeking to use the State's coastal resources, including fishermen. In an effort to streamline the application process and assist in the restoration of New Jersey's shellfish aquaculture industry, the proposal sets forth a tiered permitting system that is based on the type, scale and location of the activities and eliminates the need for individual permits in many instances. Further, the addition of permits-by-rule and general permits for certain aquaculture activities results in a significant reduction in the costs associated with applying for a coastal permit.

The need for an efficient permitting system which maintains effective environmental oversight of shellfish aquaculture activities is critical not only to protect public welfare and resources, but also to ensure the continued viability of shellfish aquaculture operations. The

proposed rule amendments will allow the shellfish aquaculture industry to investigate new grow-out methods and will encourage small-scale innovation. The expansion of shellfish aquaculture through innovation will facilitate the generation of a more immediate economic return to the harvester. This return can be converted into wages, equipment, debt maintenance, and operating capital to expand the scale of the shellfish aquaculture activities at the site and increase employment.

It is anticipated that the proposed amendments relating to the maintenance of engineered beaches and dunes will have a positive economic impact on shore protection/storm damage reduction projects. Maintenance activities between renourishment cycles has the potential to reduce the volume of material needed when accreted sand is transferred from areas that have expanded above the design template to areas that have experienced increased erosion. Beaches and/or dunes that are part of a shore protection project are designed to a specific height, width, slope and length for purposes of shore protection and/or storm damage reduction. Maintenance of engineered beaches and/or dunes to the design template will assure that the level of protection for which the beach and/or dune was designed is provided in the event of a storm.

Marinas are an essential component of the State's waterfront communities as they provide necessary infrastructure and services to the boating public. Therefore, to assist in the rebuilding of marinas impacted by Superstorm Sandy and in an effort to preserve existing marinas and make them economically viable, the proposed amendments, while minimizing environmental impacts, add flexibility in marina design through the reduction of setbacks.

Dredging is necessary to provide and maintain adequate water depths for the safe passage of recreational and commercial vessels. It is anticipated that the streamlining of the regulatory process for sediment sampling and certain dredging activities resulting from a storm event in which the Governor declared a State of Emergency will have a positive economic impact on prospective dredging applicants, dredgers and dredged material facility operators. The proposed amendments also promote the State's policy of encouraging the beneficial use of dredged material. For example, in many areas of the State, existing dredged material management areas are at capacity or will be in the near future, preventing needed dredging projects from moving forward due to a lack of disposal facilities. As a result, negative economic impacts can occur through the loss of use of the areas in need of dredging, such as navigation channels, marinas and ports. The beneficial use of dredged material that was previously placed in dredged material management areas will result in added capacity at such facilities allowing needed dredging projects to move forward.

The proposed amendments related to living shorelines are intended to provide an alternative means of shore protection. A vegetative living shoreline is an economical means of shore protection with costs between $100.00 and $200.00 per linear foot. In comparison, a bulkhead or revetment can cost between $500.00 and $1500 per linear foot. Living shorelines are cost effective, having fewer costs associated with their installation and requiring minimal to no maintenance once they are established; whereas hardened structures, such as bulkheads and revetments, have higher installation costs and require maintenance and eventual replacement. Therefore, the proposed amendments facilitating the installation of living shorelines present an

economically beneficial opportunity for those property owners choosing this means of shore protection.

Environmental Impact

The proposed new rules and amendments are expected to have an overall positive environmental impact and will assist in the recovery and rebuilding of New Jersey's coastal areas in an environmentally protective manner.

The proposed amendments clarifying that a CAFRA permit is not required for the rehabilitation and reuse of an existing dredged material management area provided it is in the same footprint will have an overall positive environmental impact. By continuing to allow these areas to be used for the placement of dredged material it may prevent the development of new dredged material management areas, which in most cases must be located within close proximity to the proposed dredging activity. The proposed clarification of the exemption relating to the reconstruction, rehabilitation or renovation of certain waterfront structures in-place will not have an environmental impact. The proposed amendments merely clarify how the size of a structure is determined for the purposes of the exemption.

The proposed new permits-by-rule and general permits, and proposed amendments to existing permit-by-rule and general permits contain specific acceptability standards and requirements that will ensure the environmental impact of new developments and activities authorized under these permits is minimized. The activities regulated by these proposed new permits-by-rule and general permits, and proposed amendments to existing permits-by-rule and

general permits will have only minimal adverse environmental impacts when performed separately, and will have only minimal cumulative adverse impacts on the environment. The Department has further determined that this proposal is in keeping with the legislative intent to protect and preserve the coastal areas from inappropriate development.

Similarly, the requirements within a proposed new permit-by-rule for the placement of sand fencing and the amendments to permits regulating beach and dune maintenance ensure that the beach and dune activities will be conducted in such a way that no adverse environmental impacts result, and, especially in the case of the permit amendments, will increase environmental protection. Further, amendments to the special area rules for dunes and beaches and to the standards for beach and dune activities will have a positive environmental impact by assuring that engineered beaches and/or dunes provide the shore protection/storm damage reduction for which they were designed.

Proposed new permits-by-rule and general permits that regulate aquaculture activities will have an overall positive environmental impact. The regulated activities, when conducted in accordance with the proposed rules, will positively affect beaches, dunes or wetlands, may improve water quality, and may provide habitat for other marine organisms and increase shellfish populations in a given area. Consistent with the environmental impacts of the proposed new permits-by-rule and general permits, the proposed amendments to the shellfish aquaculture rule will have an overall positive environmental impact. See also the Agricultural Industry Impact Statement.

The installation of pumpout facilities under a new permit-by-rule will have positive environmental impacts as the pumpout facilities will remove nonpoint source pollution thereby protecting water quality, environmentally sensitive areas, and coastal resources.

The proposed amendments relating to beneficial use of dredged material will have a positive environmental impact in that these dredged material management areas will be preserved, reducing the need for the creation of new management areas. The beneficial use of dredged material provides renewed capacity by opening up existing dredged material management areas to accept dredged material from future dredging projects.

Proposed amendments to include the establishment of living shorelines as an authorized activity under a general permit and to the proposed new living shoreline general water area rule will have an overall positive environmental impact as living shorelines provide a natural means for reducing shoreline erosion through protection, restoration and enhancement of vegetated shorelines, beaches, and tidal wetlands which serve multiple ecosystem purposes and are a first defense against coastal storms. Living shorelines have numerous environment benefits, including trapping and retaining land runoff nutrients and pollutants; preserving, creating or enhancing aquatic flora and fauna; restoring critical feeding and nursery habitat for aquatic flora and fauna; providing wildlife access to the shoreline for nesting birds and terrapins; and increasing carbon sequestering marshland vegetation. The Department recognizes, however, that a living shoreline project, particularly a project that is proposing to restore a habitat to pre-erosion conditions, has the potential to change the existing habitat or conditions on a site. Therefore, to minimize the impacts of the establishment of a living shoreline on certain special

areas such as shellfish habitat, submerged vegetation, wetlands and intertidal subtidal shallows, the proposed standards require that the impacts be the minimum amount necessary to successfully implement the proposed living shoreline project.

Overall, the proposed amendments will enable the Department to implement the coastal management program in an effective, efficient, and environmentally protective manner. The coastal management program, through the coastal rules, steers development away from naturally hazardous and sensitive areas, protects estuarine and marine environments from adverse impacts, and promotes resource conservation and designs sensitive to the environment.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. The Federal Coastal Zone Management Act, 16 U.S.C. §§1451 et seq. (Federal CZMA) does not set specific regulatory standards or requirements for development in the coastal zone; rather, it provides broad guidelines for states developing coastal management programs. The general requirements for what a state coastal management program must include are found at 15 C.F.R. Part 923. The requirements do not specifically address the review standards that should be applied to new coastal development in order to preserve and protect coastal resources and to concentrate the pattern of coastal development. The guidelines simply provide a planning and management process, without establishing development standards for development in the coastal area. Therefore, the proposed

new rules, amendments and repeals do not exceed any Federal standards or requirements of the Federal CZMA.

Jobs Impact

These concurrently proposed new rules, amendments and repeals will have a positive effect on jobs in New Jersey. Based on the scale of damage Superstorm Sandy caused to homes, businesses, and infrastructure, significant rebuilding and repair will occur in coastal communities over the coming months and years. As a result, the construction and trade industries, as well as the construction-related manufacturing sector, are expected to experience a significant and sustained upswing in job creation and/or level of business activity. While encouraging the resilient recovery and rebuilding of New Jersey's coastal areas, these rules will streamline the Department's implementation of its coastal program as well as the permitting process, allowing employers to invest more time, energy, and resources into their businesses and employees.

Agricultural Industry Impact

Under the New Jersey Aquaculture Development Act, N.J.A.C. 4:27-1 et seq., aquaculture is a component of agriculture in the State. Accordingly, the proposed amendments and new rules will impact New Jersey's agricultural industry. The proposed amendments to the shellfish aquaculture general water area rule and proposed new permits-by-rule and general permits are expected to have a positive impact on the aquaculture industry.

The proposed amendments and new rules related to aquaculture provide a streamlined and systematic permitting structure for the shellfish aquaculture industry in order for the industry to develop and operate at an economically sustainable level while protecting environmental quality and reducing user group conflicts. Further, the proposed amendments and new rules will improve interagency coordination as well as the management of shellfish aquaculture activities in the State. An efficient permitting system combined with effective environmental oversight of shellfish aquaculture activities is critical to protect public welfare and resources and to ensure the continued viability of shellfish aquaculture operations.

The proposed new permits-by-rule for land based upwellers, predator screens and oyster spat attraction devices, and cages within shellfish lease areas will facilitate these types of aquaculture activities as no formal application to the Department is required, thereby eliminating the costs associated with such an application. The proposed new general permits for commercial aquaculture activities and the placement of shell within a shellfish lease area will also have a positive impact by reducing the permit application fee and the permit application requirements as compared to an application for an individual permit.

The proposed amendments and new rules will not impose any new permitting burdens on the industry; rather, the rules reduce the permitting requirements for certain activities that have been found to have minimal adverse impacts to the environment and, in many cases, positive environmental impacts. In addition, the proposed amendments and new rules will allow the shellfish aquaculture industry to investigate new grow-out methods and will encourage small-scale innovation without compromising the environment. By allowing small scale initiatives the

State will encourage innovative aquaculture activities and maintain existing traditional operations. Knowledge gained from small-scale initiatives within the industry will increase production, which would contribute to the overall health of New Jersey coastal waters as well as to the State's economy. Therefore, the Department anticipates that the proposed amendments and new rules will have a significant benefit on the aquaculture industry.

Regulatory Flexibility

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has determined that the proposed new rules and amendments will positively impact a significant number of "small businesses," as that term is defined in the Act. The proposed new permits-by-rule and general permits, and amendments to existing general permits will provide greater flexibility to small businesses that are planning to undertake regulated activities within the coastal area. They will additionally simplify, streamline, and reduce the costs associated with the permitting process for small businesses seeking to rebuild their business in the wake of Superstorm Sandy. For small businesses seeking to restore aquaculture activities impacted by the storm, engage in new aquaculture activities, or install pumpout facilities that comply with the criteria of the proposed permits-by-rule, the costs associated with applying for a coastal permit, which would otherwise be required to perform these regulated activities, would be eliminated because no plans, application forms, photographs, or application fees must be submitted to perform the regulated activities subject to the permits-by-rule.

The proposed amendments to the existing general permits will also add flexibility for small businesses. For example, marina owners will be provided more flexibility in the siting of support buildings within their property due to the proposed reduction of the setback from a bulkhead. The proposed new general permits will also reduce the costs of a coastal permit application due to the decrease in the permit application fee and information requirements.

The proposed new rules and amendments will not impose additional reporting or recordkeeping requirements on small businesses. The proposed amendments to the vertical wake or wave attenuation structures rule (existing breakwater rule) will also positively affect marina owners by providing flexibility in wake or wave attenuation structure design, which is proposed to be dependent upon the vessel traffic, water depth and tidal range and currents.

The proposed amendments to the dredging and dredged material management rules will affect water-dependent business owners because the proposed changes will make it easier for these property owners to restore access to their businesses The proposed amendments relating to the beneficial use of dredged material will protect existing dredged material management areas and increase their longevity for future use thereby providing small business marina owners with dredged material placement opportunities.

Housing Affordability Analysis

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008 by P.L. 2008, c. 46, the Department has evaluated the proposed new rules, amendments, and repeals to determine the impact if any on the affordability of housing.

The proposed modification of the existing permit-by-rule for the reconstruction of a residential development within the same footprint, and the addition of a new permits-by-rule for the expansion or relocation landward or laterally of the footprint of development of a residential development will simplify the permitting process for these types of developments. However, the Department believes there is an extreme unlikelihood that the proposed rules would evoke a change in the average costs associated with housing.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the proposed new rules, amendments and repeals to determine the impacts, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan (State Plan). Further, the proposed modification of the existing permit-by-rule for the reconstruction of a residential development within the same footprint, and the addition of a new permits-by-rule for the expansion or relocation landward or laterally of the footprint of development of a residential development may result in some changes for specific property owners. However, the proposed changes are not anticipated to have an overall impact on housing. Therefore, while these changes will result in some cost savings, such savings will not be large enough to evoke a change in housing production in planning areas 1 or 2 or within designated centers.

Full text of the proposed repeal may be found in the New Jersey Administrative Code at

N.J.A.C. 7:7E-7.11.

Full text of the emergency adoption and concurrent proposal follows (additions indicated in boldface **thus**: deletions indicated in brackets[thus]):

CHAPTER 7
COASTAL PERMIT PROGRAM RULES

SUBCHAPTER 1. GENERAL PROVISIONS

7:7-1.3 Definitions

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

…

"Living shoreline" means a shoreline management practice that addresses the loss of vegetated shorelines, beaches, and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This is accomplished through the strategic placement of plants, stone, sand, or other structural and organic materials. There are three types of living shorelines: natural, hybrid, and structural. Natural living shorelines include natural vegetation, submerged aquatic vegetation, fill, and biodegradable organic materials. Hybrid living shorelines incorporate natural vegetation, submerged aquatic vegetation, fill, biodegradable organic materials, and low-profile rock structures such as segmented sills, stone containment, and living breakwaters seeded with native shellfish. Structural living shorelines include, but are not limited to, revetments, breakwaters, and groins.

…

"Non-polluting material" means a material such as plastic, natural cedar or other untreated wood, polymer coated pressure-treated wood, concrete, steel or other inert

products. Creosote and pressure-treated lumber (that is, treated with preservatives such as CCA-C, ACZA, CC, and ACQ) which is susceptible to leaching is not considered "non-polluting material."

…

"Pumpout facility" means a facility intended to receive the discharge of wastewater from a marine sanitation device. Pumpout facilities include, but are not limited to, fixed pumpout stations, dockside pumpouts, portable pumpouts, pumpout boats, and dump stations.

…

SUBCHAPTER 2. ACTIVITIES FOR WHICH A PERMIT IS REQUIRED

7:7-2.1 CAFRA

(a) (No change.)

(b) The Department interprets its obligation and responsibility to regulate development as defined by CAFRA to include review of the potential impacts of any development, if at least part of that development is located within the area in which a CAFRA permit is required. Therefore, if any development requires a CAFRA permit, the Department will review all of the components of the development, not just those that triggered the regulatory thresholds of CAFRA. In addition, the Department will review all the components of a development that spans the zones in (a) above if the total development exceeds a regulatory threshold. The Department interprets the

statutory intent as excluding developments with relatively minor impacts. In addition, the repair and maintenance of utilities within rights-of-way on beaches and dunes are not regulated development, as defined at N.J.A.C. 7:7-1.3 provided that all disturbed areas are restored to their pre-disturbance condition. To that end, the following statutory terms are interpreted to mean the following, for the purposes of this section.

1. – 12. (No change.)

13. Development is not the following:

i. The installation of a wind turbine(s) provided the turbine(s) is:

(1) – (3) (No change.)

(4) Any portion of the tower of the wind turbine more than 100 feet above the ground surface is a freestanding monopole;[or]

ii. The installation of a solar panel(s) provided the solar panel(s) is:

(1) – (3) (No change.)

(4) On a sanitary landfill provided the solar panel is included in the Closure and Post-Closure Care Plan or modified plan as approved by the Department in accordance with N.J.A.C. 7:26[.]**; or**

iii. The rehabilitation and use of an existing dredged material management area within the same footprint.

(c) – (f) (No change.)

7:7-2.3 Waterfront development

(a) – (c) (No change.)

(d) A permit shall be required for the construction, reconstruction, alteration, expansion or enlargement of any structure, or for the excavation or filling of any area, any portion of which is in the waterfront area as defined in (a) above, with the exceptions listed below:

1. - 5. (No change.)

6. The repair, replacement, renovation, or reconstruction, in the same location and size, as **determined in accordance with (d)6i and ii below** [measured in three dimensions (length, width and height),] of the preexisting structure, of any dock, wharf, pier, bulkhead or building, legally existing prior to January 1, 1981, that appears on the applicable Tidelands Map adopted by the Tidelands Resource Council (base map photography dated 1977/1978) or that appears on the applicable New Jersey Coastal Wetlands maps promulgated by the Department pursuant to the Wetlands Act of 1970 (base map photography dated 1971, 1972) or that received a Waterfront Development permit subsequent to the date of the photograph provided that the repair, replacement, renovation, or reconstruction, **is** in the same location [and size of] **as** the preexisting structure, and does not increase the size of the structure and the structure is used solely for residential purposes or for the docking of or servicing of pleasure vessels[;]**.**

i. The size of a dock or pier over wetlands, a low-profile bulkhead where the top of the bulkhead is constructed at an elevation below the spring high water line, or a building over

wetlands or water shall be measured in three dimensions, that is, length, width, and height; and

ii. The size of any dock, wharf, pier or bulkhead, or building not identified at (d)6i above shall be measured in two dimensions, that is, length and width;

7. The repair, replacement, renovation, or reconstruction, in the same location and size, as measured in [three] **two** dimensions [(] **that is,** length[,] **and** width [and height)], of the preexisting structure, of any legally existing floating dock, mooring raft or similar temporary or seasonal improvement or structure, legally existing prior to January 1, 1981, that appears on the applicable Tidelands Map adopted by the Tidelands Resource Council (base map photography dated 1977/1978), or that appears on the applicable New Jersey Coastal Wetlands photographs promulgated by the Department pursuant to the Wetlands Act of 1970 (base map photography dated 1971, 1972), or received a Waterfront Development permit subsequent to the date of the photograph provided that the repair, replacement, renovation, or reconstruction is in the same location and size [of] **as** the preexisting structure, and does not exceed in length the waterfront frontage of the parcel of real property to which it is attached and is used solely for the docking of servicing of pleasure vessels; and

8. (No change.)

(e) – (h) (No change.)

SUBCHAPTER 7. GENERAL PERMITS AND PERMITS-BY-RULE

7:7-7.2 [Permits-By Rule] **Permits-by-rule**

(a) This section details the activities authorized by a [Permit-By-Rule] **permit-by-rule**.

1. – 6. (No change.)

7. [Voluntary Reconstruction:] **Other than reconstruction within the CAFRA area that meets the exemption from a CAFRA permit at N.J.A.C. 7:7-2.1(c)3**, [The voluntary] **the** reconstruction**, within the same footprint,** of a [non-damaged] legally constructed, [currently habitable] residential or commercial development [within the same footprint] **that has been or could have been legally occupied in the most recent five-year period**, provided that such reconstruction is in compliance with existing requirements or codes of municipal, State and Federal law and provided:

i. – iii. (No change.)

iv. The construction meets the requirements of N.J.A.C. 7:7E-3.25;[and]

v. The reconstruction does not increase the area covered by buildings and/or asphalt or concrete pavement[.]**; and**

vi. (No change.)

8. The expansion or relocation (with or without expansion) landward or parallel to the mean high water line of the footprint of a legally constructed residential development, including accessory development such as sheds, garages, pools and driveways, or commercial development that has been or could have been legally occupied in the most recent five-year period, provided:

i. The expansion or relocation is in compliance with the applicable requirements or codes of municipal, State and Federal law;

ii. Except as provided in viii below, the expansion or relocation is not proposed on a beach, dune or wetland;

iii. In the case of residential development, the expansion does not result in an increase in the number of dwelling units;

iv. In the case of commercial development, the expansion does not result in an increase in the number of parking spaces or equivalent parking area associated with the development;

v. Except as provided in viii below, the expansion or relocation does not result in additional impacts to special areas as defined at N.J.A.C. 7:7E-3;

vi. The expansion or relocation meets the requirements of N.J.A.C. 7:7E-3.25 and 3.26; and

vii. The expansion does not increase the surface area of the footprint of the development by a cumulative total of more than 400 square feet on the property constructed after July 19, 1994. For an example of how the cumulative total limitation would apply, see (a)1iii above.

viii. Where the expansion includes structures such as stairs or an ADA-compliant ramp, which are constructed only for access to a residential or commercial development required to be elevated pursuant to the New Jersey Uniform Construction Code, N.J.A.C. 5:23, in accordance with the Flood Hazard Area Control Act rules, N.J.A.C. 7:13, there is

no feasible alternative location for these structures outside of a beach, dune, wetland, or other special areas as defined at N.J.A.C. 7:7E-3. ADA means the Americans with Disabilities Act of 1990 (42 USC sect. 1201 et seq.).

Recodify existing 8. through 13. as 9. through 14. (No change in text.)

15. The reconfiguration of any legally existing dock, wharf, or pier located at a legally existing marina, provided the marina is not located within shellfish habitat, submerged vegetation habitat, or a wetland. Activities that qualify for this permit-by-rule also qualify for a water quality certificate pursuant to Section 401 of the Federal Clean Water , 33 U.S.C. §§1251 et seq. The proposed reconfiguration shall:

i. Not extend outside of the area covered by an existing Tidelands instrument;

ii. Not result in an increase in the number of boat slips;

iii. Not hinder navigation;

iv. Not increase the total linear footage of docks or piers within the marina;

v. Minimize the water area covered by structures by:

(1) Providing a minimum of eight feet of open water between any docks if the combined width of the docks over water exceeds eight feet; and

(2) For sites which have existing dock or pier structures exceeding eight feet in width over water areas and/or wetlands, which were constructed prior to September 1978 and for which the applicant proposes to relocate, the existing oversized structures must be reduced to a maximum of eight feet in width over water areas and six feet in width over wetlands and intertidal flats.

vi. Provide a minimum of four feet from all property lines, for docks which are perpendicular to the adjacent bulkhead or shoreline;

16. The placement of sand fencing to create or sustain a dune, provided the sand fencing complies with (a)16i through iii below. This permit-by-rule does not authorize the excavation or grading of a dune. The sand fencing shall:

i. Be placed on the landward side of the dune;

ii. Be placed parallel to the mean high water line; and

iii. Not prevent perpendicular public access to the beach.

17. The placement of land-based upwellers and raceways, including intakes and discharges, for aquaculture activities. Activities that qualify for this permit-by-rule also qualify for a water quality certificate pursuant to Section 401 of the Federal Clean Water Act, 33 U.S.C. §§1251 et seq. The aquaculture activities shall comply with the following:

i. The structures are located on the upland portion of a lot with a legally existing, functioning bulkhead;

ii. No grading, excavation, filling, or placement of a structure(s) is undertaken on a beach, dune, or wetland; and

iii. The discharge from the aquaculture activities is to a water body and not directly into a wetland.

18. The placement of predator screens and oyster spat attraction devices in an area subject to a valid shellfish lease pursuant to N.J.S.A. 50:1-23. Upon expiration or termination of the shellfish lease, or the cessation of the use of predator screens and oyster

spat attraction devices, whichever occurs first, within five days the permittee shall remove all predator screens and oyster spat attraction devices placed within the lease area. This permit-by-rule does not authorize the placement of shell within a shellfish lease area. Activities that qualify for this permit-by-rule also qualify for a water quality certificate pursuant to Section 401 of the Federal Clean Water Act, 33 U.S.C. §§1251 et seq. The placement of predator screens and oyster spat attraction devices shall comply with the following:

i. So as not to pose a hazard to navigation, predator screens shall not extend more than six inches above the substrate and oyster spat attraction devices shall not extend more than 24 inches above the substrate; and

ii. No activity undertaken pursuant to this permit-by-rule shall prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner pursuant to N.J.S.A. 50:1-33.

19. The placement of shellfish cages in an area subject to a valid shellfish lease pursuant to N.J.S.A. 50:1-23. Upon expiration or termination of the shellfish lease, or the cessation of the use of shellfish cages, whichever occurs first, within five days the permittee shall remove all shellfish cages placed within the lease area. Activities that qualify for this permit-by-rule also qualify for a water quality certificate pursuant to Section 401 of the Federal Clean Water Act, 33 U.S.C. §§1251 et seq. The placement of shellfish cages shall comply with the following:

i. There shall be a minimum of four feet of water between the top of any cage and the water surface at mean low water;

ii. The cages shall be continuously checked and repaired to ensure that they are not displaced off the lease area;

iii. The cages shall be constructed of non-polluting materials; and

iv. No activity undertaken pursuant to the permit-by-rule shall prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner pursuant to N.J.S.A. 50:1-33.

20. The construction and/or installation of a pumpout facility and/or pumpout support facilities in the circumstances set forth at i and ii below. The construction and/or installation of a pumpout facility or pumpout support facility shall have no adverse impacts to any special areas described at N.J.A.C. 7:7E-3.

i. At a marina, boat yard, boat sales facility, yacht club, restaurant, boat ramp or other waterfront facility, the construction and/or installation of a pumpout facility and/or the construction of pumpout support facilities, such as stanchions, hydrants, piping, pumps, holding tanks, a concrete pad for a holding tank (not to exceed a surface area of 100 square feet), a platform to elevate a pump above flood level, macerator pumps or other equipment necessary to transfer sewage from the holding tank on a boat to a sanitary sewer line or holding tank, provided the pumpout discharges to:

(1) A municipal or regional treatment plant where practicable;

(2) A subsurface sewage disposal system; or

(3) A holding tank with waste being removed by a licensed septage hauler.

(A) Any facility using a holding tank for the pumpout discharge shall maintain a record of removal of the waste.

ii. A sewer line connecting a pumpout facility and/or pumpout support facility into an existing sewer line located on-site or located immediately adjacent to the site, provided:

(1) The sewer line and the area of the connection into the existing sewer are located within areas of non-porous cover;

(2) For a sewer line that connects from a pumpout facility and/or pumpout support facility that is located on an existing dock, the sewer line does not extend below the stringers of the dock; and

(3) The sewer line receives a Treatment Works Approval as required in accordance with the Department's rules at N.J.A.C. 7:14A from the Department's Division of Water Quality.

21. The implementation of a sediment sampling plan for sampling in a water area as part of a dredging or dredged material management activity or as part of a remedial investigation of a contaminated site. The Department has prepared a dredging technical manual, titled "The Management and Regulation of Dredging Activities and Dredged Material Disposal in New Jersey's Tidal Waters," October 1997, which provides guidance on dredged material sampling. Activities that qualify for this permit-by-rule also qualify for a water quality certificate pursuant to Section 401 of the Federal Clean Water Act, 33 §§ 1251 et seq. This permit-by-rule authorizes the implementation of a sediment sampling

plan for sampling to be conducted within a water area described at N.J.A.C. 7:7E-4.1, as part of a dredging or dredged material management activity or as part of a remedial investigation, provided:

i. If the sampling is part of a dredging or dredged material management activity, the sediment sampling plan shall be approved in writing by the Department's Office of Dredging and Sediment Technology; or

ii. If the sampling is part of a remedial investigation of a contaminated site, the sediment sampling plan shall be prepared in accordance with the Technical Requirements for Site Remediation, N.J.A.C 7:26E, and approved by the Department or certified by a Licensed Site Remediation Professional in accordance with the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS), N.J.A.C. 7:26C.

7:7-7.13 Coastal general permit for the construction of support facilities at legally existing and operating marinas

(a) (No change.)

(b) The construction of the following support facilities listed at (b)1 through [7]**6** below is acceptable provided they comply with the specific conditions for each facility and also with (c) below:

1. Construction of boat rack systems/marina support buildings including, but not limited to, showroom, maintenance/repair, marine supplies, bait/tackle, boat sales, dock masters office buildings, sheds, **storage,** excluding residential development provided:

i. (No change.)

ii. The building(s) shall be set back a minimum of [100]**15** feet from **a shore protection structure and 25 feet from** the mean high water line **where no shore protection structures are present**;

iii. -v. (No change.)

vi. Marinas with dockage for 25 or more vessels or any one vessel with live aboard arrangement must provide for adequate and conveniently located pumpout [stations] **facilities**.

2. Construction of restroom facilities provided:

i. – ii. (No change.)

iii. The restroom building shall be set back a minimum of [100]**15** feet from **a shore protection structure and 25 feet from** the mean high water line **where no shore protection structures are present** [unless the Department determines that there is no alternate location]; and

[iv.]**iii.** (No change in text.)

3. [Construction of pumpout facilities (marine sanitation devices) provided:

i. Discharge from the facility shall either be to a municipal or regional treatment plant where practicable or to a subsurface sewage disposal system; or

ii. Discharge to a holding tank with waste being removed by a licensed septage hauler. A marina employing this method shall maintain a record of waste removal.

4.] Construction of fences, water lines and new sewer lines to connect restrooms**,** [and] pumpout[s] **facilities, and/or pumpout support facilities** to existing sewer lines provided:

i. - iii. (No change.)

iv. For sewer lines only:

(1) The sewer line receives a Treatment Works Approval **as required in accordance with the Department's rules at N.J.A.C. 7:7-14A,** from the Department's [Bureau of Connection and Construction Permits;]**Division of Water Quality**;

(2) - (3) (No change.)

[5.]**4.** Construction of a gasoline pump(s) and associated pipes and tanks on the upland portion of the marina provided:

i.-ii. (No change.)

iii. [Any other required] **All necessary** approvals for the construction of underground or above ground storage tanks are obtained.

[6.]**5.** Construction of boat handling facilities including, but not limited to, winches, gantries, railways, platforms and lifts, hoists, cranes, fork lifts and ramps provided:

i. (No change.)

ii. The boat handling facility is not located in a wetland area[.]**;**

[7.]**6.** (No change in text.)

(c) The construction of support facilities listed at (b)1 through [7]**6** above shall also comply with the following:

1. – 4. (No change.)

5. The development shall meet the requirements of N.J.A.C. 7:7E-3.25 [and 3.26].

(d) (No change.)

7:7-7.29 Coastal general permit for habitat creation [and]**, restoration,** enhancement, **and living shoreline** activities

(a) This coastal general permit authorizes habitat creation**, restoration,** [and] enhancement, **and living shoreline** activities necessary to implement a plan for the restoration, creation, [or] enhancement**, or protection** of the habitat, water quality functions and values of wetlands, wetland buffers, and open water areas, which is sponsored [or substantially funded] by a Federal or State agency or other entity described in (b) below. For the purposes of this general permit, a "sponsor" shall [be an active participant in or substantial financial contributor to the activities, and shall] endorse the activities in writing.

(b) The following habitat creation**,** [and] **restoration,** enhancement**, and living shoreline** plans are acceptable provided they demonstrate compliance with (c) through (g) below:

1. – 4. (No change.)

5. A mitigation project required [by and]**or** approved by a government agency, such as the U.S. Army Corps of Engineers;

6. A habitat creation**, restoration** or enhancement plan carried out by one of the Federal or State agencies at (b)1 through 5 above or by a government resource protection agency such as a parks commission; [or]

7. A habitat creation**, restoration** or enhancement plan carried out by a charitable conservancy, as defined at N.J.A.C. 7:7-1.3, provided that the plan is part of a program listed at (b)2 through 5 above[.]**;**

8. A living shoreline plan designed and/or sponsored by the Department, the U.S. Fish and Wildlife Service, the Natural Resource Conservation Services, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, or the National Oceanic Atmospheric Administration's Restoration Center; or

9. A living shoreline plan implemented by a college or university for the purpose of research.

(c) Habitat creation**, restoration,** [and] enhancement**, and living shoreline** activities that are authorized by this coastal general permit include but are not limited to the following:

1. - 3. (No change.)

4. Regrading to provide proper elevation or topography for wetlands restoration, creation, or enhancement; [and]

5. Cutting, burning or otherwise managing vegetation in order to increase habitat diversity or control nuisance flora[.]**; or**

6. Establishing a living shoreline to protect, restore, or enhance a habitat.

(d) To be eligible for authorization under this coastal general permit, an applicant shall demonstrate that the proposed project:

1. Is part of a [comprehensive] plan for the restoration, creation or enhancement of the habitat and water quality functions and values of wetlands, wetland buffers, and/or State open waters;

2. [Is sponsored or partially funded by an appropriate entity in accordance with (b) above;

3.] Is consistent with the requirements of the Wetlands Act of 1970, the Waterfront Development Law, the Coastal Area Facility Review Act and the Coastal Zone Management rules;

[4.] **3.** Will improve **or maintain** the values and functions of the ecosystem; and

[5.] **4.** Will have a reasonable likelihood of success**, or, if performed by a college or university, in accordance with (b)9 above, will advance the level of knowledge regarding living shorelines in the State.**

(e) Activities under this coastal general permit **except for living shoreline activities, which are subject to the requirements of (f) below,** shall comply with the following:

1. If the proposed habitat creation**, restoration** or enhancement activity is to take place in Special Areas, as defined at N.J.A.C. 7:7E-3, the coastal general permit authorization shall be

issued only if the Department finds that there are no practicable alternatives that would involve less or no disturbance or destruction of Special Areas;

2. (No change.)

3. The activities shall not decrease the total combined area of Special Areas on a site. However, the Department may approve a decrease if the Department determines that the activities causing the decrease are sufficiently environmentally beneficial to outweigh the negative environmental effects of the decrease. In addition, the Department may approve conversion of one Special Area to another Special Area if the Department determines that such conversion is environmentally beneficial; **and**

4. If the activities involve the removal of a dam, the activities shall be conducted in accordance with a permit issued pursuant to N.J.A.C. 7:20 by the Department's Dam Safety Section in the Division of Engineering and Construction[; and]**.**

[5. A conservation restriction for the habitat creation or enhancement area is recorded in accordance with N.J.A.C. 7:7-1.5(b)18.]

(f) Living shoreline activities shall comply with the following:

1. The project area below the mean high water line is one acre in size or less, unless the applicant is a county, State or Federal agency that demonstrates that a larger project size is necessary to satisfy the goals of the project;

2. The project shall disturb the minimum amount of special areas, as defined at N.J.A.C. 7:7E-3, necessary to successfully implement the project plan. The Department

may approve a reduction in the size of a particular special area in order to allow an increase in a different special area if the Department determines that the activities causing the reduction are sufficiently environmentally beneficial to outweigh the negative environmental effects of the reduction; and

3. Where the living shoreline is intended to restore an existing shoreline to a previous location, the living shoreline, including all associated fill, shall not exceed the footprint of the shoreline as it appeared on the applicable Tidelands Map adopted by the Tidelands Resource Council (base map photography dated 1977/1978), except for a structural component of the project intended to reduce wave energy.

[(f)]**(g)** (No change in text.)

[(g)]**(h)** This coastal general permit does not authorize an activity unless the sole purpose of the activity is habitat creation**,** [or]**restoration,** enhancement**, or a living shoreline**. For example, this coastal general permit does not authorize construction of a detention basin in wetlands for stormwater management, even if the detention basin or the project of which the basin is a part will also result in habitat creation or enhancement.

[(h)]**(i)** In addition to the application and information required under N.J.A.C 7:7-7.3, the following information shall be submitted:

1. (No change.)

2. If a living shoreline activity includes the placement of fill, the applicant shall identify the footprint of the shoreline as it appeared on the applicable Tidelands Map adopted by the Tidelands Resource Council (base map photography dated 1977/1978).

Recodify existing 2. as **3.** (No change in text.)

7:7-7.32 Coastal general permit for the dredging of sand from a man-made lagoon deposited as a result of a storm event for which the Governor declared a State of Emergency

(a) This coastal general permit authorizes the dredging of sand from a man - made lagoon that was deposited as a result of a storm event for which the Governor declared a State of Emergency, provided (a)1 through 6 below are met. Sand means, for the purposes of this section, a material consisting of 90 percent or greater of particles by weight retained on a 0.0625 mm sieve.

1. The volume of sand to be dredged is limited to that which was deposited as a result of the storm event;

2. The area to be dredged is limited to that where the sand was deposited as a result of the storm event;

3. The sand removed by dredging is placed on an upland site, dewatered as necessary within a temporary dewatering area, and capped with a six-inch layer of clean fill and stabilized;

4. No wetlands are present within 25 feet of the area to be dredged. A 25 foot buffer shall be provided from any wetlands to the nearest edge of the area to be dredged; and

5. Any debris contained within the dredged sand shall be removed and disposed of properly.

(b) An application that meets the requirements of N.J.A.C. 7:7-7.3 for authorization under this general permit shall be received by the Department no later than 24 months after the date the Governor declared a State of Emergency.

(c) An authorization of dredging issued under this general permit shall not be considered in determining whether a future dredging activity constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6 at the same site.

(d) In addition to the application information required under N.J.A.C. 7:7-7.3, the following information shall be submitted:

1. One copy of a site plan(s) showing the following:

i. The mean high and mean low water lines of the tidal waters at the site;

ii. The upper and lower limits of wetlands on site and on adjacent lagoonfront properties;

iii. If available, pre- and post-storm bathymetry of the area to be dredged;

iv. The method of dredging;

v. The location of the dredged material disposal site; and

vi. The method of stabilization of dredged material;

2. A grain size analysis of the material to be dredged. The Department's technical manual, titled, "The Management and Regulation of Dredging Activities and Dredged Material Disposal in New Jersey's Tidal water's;" October 1997 provides guidance on performing a grain size analysis; and

3. A Compliance Statement prepared in accordance with N.J.A.C. 7:7-6, demonstrating how the proposed dredging complies with (a) above, including supplemental documents as appropriate, such as maps or surveys.

7:7-7.33 Coastal general permit for the dredging of material from a waterway at a residential or commercial development deposited as a result of the failure of a bulkhead as a consequence of a storm event for which the Governor declared a State of Emergency

(a) This coastal general permit authorizes the dredging of material from a waterway at a residential or commercial lot that was deposited as a result of the failure of a legally existing bulkhead that was damaged as a result of a storm event for which the Governor declared a State of Emergency, provided:

1. The volume of the material to be dredged is limited to that which resulted from the failure of the bulkhead;

2. The area to be dredged is limited to that where the material was deposited as a result of the failure of the bulkhead;

3. The dredged material is placed on an upland portion of the lot, dewatered as necessary within a temporary dewatering area, and capped with a six-inch layer of clean fill and stabilized;

4. A 25 foot buffer shall be provided from any wetlands to the nearest edge of the area to be dredged; and

5. Any debris contained within the dredged material shall be removed and disposed of properly.

(b) An application that meets the requirements of N.J.A.C. 7:7-7.3 for authorization under this general permit shall be received by the Department no later than 24 months after the date the Governor declared a State of Emergency.

(c) An authorization of dredging issued under this general permit shall not be considered in determining whether a future dredging activity constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6 at the same site.

(d) In addition to the application information required under N.J.A.C. 7:7-7.3, the following information shall be submitted:

1. One copy of a site plan(s) showing the following:

i. The mean high and mean low water lines of the tidal waters at the site;

ii. The upper and lower limits of wetlands on site and on adjacent properties;

iii. The alignment of the bulkhead that failed;

iv. If available, the pre- and post-storm bathymetry of the area to be dredged;

v. The method of dredging;

vi. The location of the dredged material disposal site; and

vii. The method of stabilization of the dredged material;

2. A Compliance Statement prepared in accordance with N.J.A.C. 7:7-6, demonstrating how the proposed dredging complies with (a) above, including supplemental documents as appropriate, such as maps or surveys.

7:7-7.34 Coastal general permit for dredging and management of material from a marina deposited as a result of a storm event for which the Governor declared a State of Emergency

(a) This coastal general permit authorizes the dredging and management of material from a marina that was deposited as a result of a storm event for which the Governor declared a State of Emergency, provided (a)1 and 2 below are met. Sand means, for the purposes of this section, a material consisting of 90 percent or greater of particles by weight retained on a 0.0625 mm sieve.

1. The dredged material is sand; or

2. If the dredged material is not sand, the material is temporarily disposed of in an existing upland confined disposal facility located on the marina property until a final placement site is determined in accordance with (e) below.

(b) Dredging activities under this general permit shall comply with the following:

1. The depth in the area after the proposed dredging is completed shall not exceed the depth in that area prior to the storm event;

2. The area to be dredged is limited to the area in which material was deposited as a result of the storm event; and

3. A 25 foot buffer shall be provided from any wetlands to the nearest edge of the area to be dredged, unless the area to be dredged is within an existing maintained navigation channel or basin. In such cases, the area to be dredged shall be limited to the existing channel or basin.

(c) An application that meets the requirements of N.J.A.C. 7:7-7.3 for authorization under this general permit shall be received by the Department no later than 24 months after the date the Governor declared a State of Emergency.

(d) Material determined to be sand shall be placed at either an on-site or off-site location that has been approved by the Department. The beneficial use of this dredged sand is encouraged.

(e) Material determined not to be sand shall be disposed of in an existing upland confined disposal facility located on the marina property, until beneficially used at an on-

or off-site location. The dredged material shall remain within the confined disposal facility until a determination of an acceptable final placement site is issued by the Department. Additional testing of the material may be required as part of the Department's assessment of a final placement site. The upland confined disposal facility shall:

i. Be large enough to contain and dewater the dredged material, considering any bulking that occurs during dredging;

ii. Not be located within wetlands or wetlands buffers; and

iii. Be operated and maintained in a manner to minimize the discharge of dredged material into the adjacent surface waters and wetlands.

(f) An authorization of dredging issued under this general permit shall not be considered in determining whether a future dredging activity constitutes maintenance dredging as defined at N.J.A.C. 7:7E-4.6 at the same site.

(g) In addition to the application information required under N.J.A.C. 7:7-7.3, the following information shall be submitted:

1. One copy of a site(s) plan showing the following:

i. The mean high, mean low and spring high water lines of the tidal waters at the site;

ii. The upper and lower limits of wetlands on site and on adjacent properties;

iii. If available, the pre- and post-storm bathymetry of the area to be dredged;

iv. The method of dredging;

v. The location and areal dimensions of the existing on-site disposal area, including inflow and weir discharge points; and

vi. Cross sections showing the heights of the berms of the existing on-site disposal area;

2. A grain size analysis of the material to be dredged. The Department's technical manual, titled, "The Management and Regulation of Dredging Activities and Dredged Material Disposal in New Jersey's Tidal water's;" October 1997 provides guidance on performing a grain size analysis;

3. Calculations demonstrating the available capacity of the upland confined disposal facility located on the marina site; and

4. A Compliance Statement prepared in accordance with N.J.A.C. 7:7-6, demonstrating how the proposed dredging and dredged material management activities comply with (a) through (e) above, including supplemental documents as appropriate, such as maps or surveys.

7:7-7.35 Coastal general permit for commercial shellfish aquaculture activities

(a) This coastal general permit authorizes the construction and/or placement and maintenance of shellfish aquaculture equipment, including floating upwellers, shellfish rafts, racks and bags, lantern nets, and cages, provided:

1. The structures are located in an area with a valid shellfish lease authorized under N.J.S.A. 50:1-23;

2. The structures are not located within submerged infrastructure routes, N.J.A.C. 7:7E-3.12, shipwreck and artificial reef habitat, N.J.A.C. 7:7E-3.13, or wetlands, N.J.A.C. 7:7E-3.27;

3. The structures are not located within 50 feet of any designated navigation channel, unless it is demonstrated that the proposed structure will not hinder navigation. The placement of structures within designated navigation channels is prohibited;

4. The boundaries of the area where the structures are placed are clearly marked in accordance with US Coast Guard requirements for regulatory and informational markers ((*US Coast Guard "U.S. Aids to Navigation System"* *http://www.uscgboating.org/ATON/index.htm*). Specifically, the corners of the footprint of the area where the structures are placed must be marked with buoys or stakes;

5. The structures are constructed of non-polluting materials:

6. The structures are properly secured; and

7. No activity undertaken pursuant to this general permit shall prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner, pursuant to N.J.S.A. 50:1-33.

(b) Upon expiration or termination of the shellfish lease, or the cessation of shellfish aquaculture activities, whichever occurs first, within five days the permittee shall remove all structures placed within the lease area.

(c) Prior to the commencement of activities authorized by this general permit, the permittee shall notify the Department's Bureau of Shellfisheries in writing:

1. For Atlantic Coast Shellfish Leases:

Nacote Creek Shellfish Office

PO Box 418

Port Republic, NJ 08241

2. For Delaware Bay Shellfish Leases:

Delaware Bay Shellfish Office

1672 East Buckshutem Road

Millville, NJ 08332

(d) The notification under (c) above shall contain the following information:

1. A copy of the permit and associated plans;

2. The shellfish lease number;

3. The shellfish species to be cultured; and

4. The estimated date of commencement of activities.

(e) In addition to the application information required under N.J.A.C. 7:7-7.3, the following information shall be submitted:

1. Once copy of a site(s) plan showing the following:

i. The mean high, mean low and spring high water lines of the tidal waters at the site, any wetlands and navigation channels;

ii. The area covered by the shellfish lease;

iii. Existing waters depths in the area where the structures will be located; and

iv. The location of the proposed structures;

2. A Compliance Statement prepared in accordance with N.J.A.C. 7:7-6, demonstrating how the proposed commercial shellfish aquaculture equipment complies with (a) through (b) above, including supplemental documents as appropriate, such as maps or surveys.

7:7-7.36 Coastal general permit for the placement of shell within shellfish lease areas

(a) This coastal general permit authorizes the placement of shell in an area with a valid shellfish lease authorized under N.J.S.A. 50:1-23, provided:

1. The shell to be planted is comprised of processed oyster, surf clam and/or ocean quahog shell or other shell material approved by the Department;

2. The height of the shell material placed on the bottom of the water body does not exceed six inches above the substrate;

3. The placement of shell does not pose a hazard to navigation; and

4. All shell is clean and free of contaminants.

(b) This coastal general permit does not authorize the stockpiling of shell or dredging activities.

(c) In addition to the application information required under N.J.A.C. 7:7-7.3, the following information shall be submitted:

1. Once copy of a site(s) plan showing the following:

i. The mean high, mean low and spring high water lines of the tidal waters at the site, any wetlands and navigation channels;

ii. The area covered by the shellfish lease; and

iii. Existing waters depths in the area where the shell will be located;

2. The type and quantity of shell to be used, and the source of the shell; and

3. A Compliance Statement prepared in accordance with N.J.A.C. 7:7-6, demonstrating how the proposed shell planting complies with (a) through (b) above, including supplemental documents as appropriate, such as maps or surveys.

CHAPTER 7E

COASTAL ZONE MANAGEMENT RULES

SUBCHAPTER 1. INTRODUCTION

7:7E-1.7 Correspondence with the Department

Correspondence related to this chapter may be submitted to the Department at the following address:

[Land Use Regulation Program

New Jersey Department of environmental Protection

501 East State Street

PO Box 439

Trenton, New Jersey 08625-0439]

New Jersey Department of Environmental Protection

Division of Land Use Regulation

Mail code 501-02A, P.O. Box 420

Trenton, NJ 08625

7:7E-1.8 Definitions

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise

…

"Engineered beach" means a beach built in accordance with either (1) a Federally authorized beach berm design template for shore protection and/or storm damage reduction purposes for which the Department has issued a Federal consistency determination under this chapter; or (2) a beach berm design template for shore protection and/or storm damage reduction purposes that has been funded through the New Jersey Shore Protection Program and for which the Department has issued a permit under this chapter. For purposes of this definition, the beach berm design template is the height, width, slope and length of the engineered beach.

"Engineered dune" means a dune built in accordance with either (1) a Federally authorized dune design template for shore protection and/or storm damage reduction purposes for which the Department has issued a Federal consistency determination under this chapter; or (2) a dune design template for shore protection and/or storm damage reduction purposes that has been funded through the New Jersey Shore Protection Program and for which the Department has issued a permit under this chapter. For purposes of this definition, the dune design template is the height, width, slope and length of the engineered dune.

…

"Living shoreline" means a shoreline management practice that addresses the loss of vegetated shorelines, beaches, and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This is accomplished through the

strategic placement of plants, stone, sand, or other structural and organic materials. There are three types of living shorelines: natural, hybrid, and structural. Natural living shorelines include natural vegetation, submerged aquatic vegetation, fill, and biodegradable organic materials. Hybrid living shorelines incorporate natural vegetation, submerged aquatic vegetation, fill, biodegradable organic materials, and low-profile rock structures such as segmented sills, stone containment, and living breakwaters seeded with native shellfish. Structural living shorelines include, but are not limited to, revetments, breakwaters, and groins.

…

"Non-polluting material" means a material such as plastic, natural cedar or other untreated wood, polymer coated pressure-treated wood, concrete, steel or other inert products. Creosote and pressure-treated lumber (that is, treated with preservatives such as CCA-C, ACZA, CC, and ACQ) which is susceptible to leaching is not considered "non-polluting material."

…

"Pumpout facility" means a facility intended to receive the discharge of wastewater from a marine sanitation device. Pumpout facilities include, but are not limited to, fixed pumpout stations, dockside pumpouts, portable pumpouts, pumpout boats, and dump stations.

…

"State aid agreement" means a binding agreement between the Department and a municipality or county for the construction of a shore protection project funded through the State Shore Protection Fund. The State Aid Agreement for Federally funded projects contains the project agreement between the Department and the United States Army Corps of Engineers which defines the project design template.

…

SUBCHAPTER 3. SPECIAL AREAS

7:7E-3.2 Shellfish habitat

(a) – (b) (No change.)

(c) The water located under any boat mooring facility (including docks and associated structures) is automatically condemned and reduced to "prohibited" status pursuant to N.J.A.C. 7:12-2.1(a)1ii. Development which would result in the destruction, condemnation (downgrading of the shellfish growing water classification) or contamination of shellfish habitat is prohibited, unless the proposed development is a dock, pier, or boat mooring, **dredging, living shoreline or a development required for national security** constructed in accordance with (d)**1 and 3, (e), (f), (g), (h) and (k)** below. **In addition, the construction of a dock or pier or the one-time replacement or reconstruction of a legally existing functioning bulkhead outshore of the existing bulkhead when located in waters that have been classified as prohibited for the purpose of harvesting shellfish is acceptable in accordance with (d)2 and (i) below.**

1. The term "destruction" includes actions of filling to create fast land, overboard dumping or disposal of solids or [spoils] **dredged materials** which would smother shellfish populations, or create unsuitable conditions for shellfish colonization or the creation of bottom depressions with anoxic conditions.

(d) Construction of a dock, pier or boat moorings in shellfish habitat is prohibited, except for the following:

1. – 2. (No change.)

3. A single noncommercial dock, pier, or boat mooring associated with a single family dwelling provided the proposed dock, pier, or boat mooring meets the requirements of (d)3i through v below. If a lot has frontage on both a natural waterway and a man-made lagoon, as defined at N.J.A.C. 7:7-1.3, the dock, pier, or boat mooring shall be located within the lagoon, unless locating the dock, pier or boat mooring on the lagoon would not otherwise comply with the recreational docks and piers rule at N.J.A.C. 7:7E-4.5 or any other provisions of this chapter.

i. The proposed dock, pier, or boat mooring is:

(1) Constructed of non-polluting [or other inert] material**s** [such as natural lumber or other untreated wood, concrete, plastic or vinyl]; and

(2) (No change.)

ii. – vi. (No change.)

(e) - (g) (No change.)

(h) The establishment of a living shoreline in shellfish habitat to address the loss of vegetated shorelines and habitat in the littoral zone is conditionally acceptable provided the living shoreline complies with N.J.A.C. 7:7E-4.23.

(i) The one-time replacement or reconstruction of a legally existing functioning bulkhead outshore of the existing bulkhead is conditionally acceptable in waters that are classified as prohibited for the purpose of harvesting shellfish, provided:

1. The replacement or reconstructed bulkhead is made of a non-polluting material;

2. The replacement or reconstructed bulkhead is located within 18 inches outshore of the existing bulkhead, except in accordance with (i)2i below;

i. Where the replacement bulkhead is constructed of a corrugated material, the replacement bulkhead is located no more than 24 inches outshore of the existing bulkhead, and the replacement bulkhead is located as close as possible to the face of the existing bulkhead; and

3. A conservation restriction is placed on the bulkheaded property requiring that any future replacement bulkhead be located in the same location as the bulkhead replaced or reconstructed under this subsection.

Recodify existing (h) - (j) as (j) - (l) (No change in text.)

[(k)]**(m)** Rationale: Estuarine shellfish are harvested by both commercial and recreational shellfishermen [, with sport group concentrating on hard clams]. **Hard clams are the most sought after species harvested as they occur in all estuarine waters.** Oysters, bay scallops[,] **and** soft clams [and hard clams] are predominantly **harvested by** commercial [species] **fishermen**. [Commercial landing values in New Jersey for 1988 were $6.03 million for estuarine mollusks.] **In 2008, the commercial dockside landings for estuarine shellfish in New Jersey were valued at approximately $6.63 million (United States Department of Agriculture). Shellfish are typically worth about six times the dockside value to the State's economy through processing, distribution and retail.** [As with commercial species, processing and distribution considerably increase the value of this fishery to the State's economy. The commercial harvest is estimated to support employment of 1,500 persons in fishing, distribution, processing and retail. Recreational clammers purchased 13,179 licenses in 1988. Furthermore, it is estimated that there are approximately 10,000 senior citizen recreational clammers.] In addition [to direct human consumption] **to being a harvestable resource**, shellfish play an important role in the overall ecology of the estuary[. Young clams] **and** are **an** important forage food **source** for a variety of **finfish** species [such as winter founder], crabs**,** and migratory waterfowl[, especially the diving species].

There is an inherent conflict between shellfish habitat and water quality protection and boating related activities, such as mooring and dredging, though both are important water-dependent activities in New Jersey. **Boating related activities may affect shellfish habitat and the harvestability of shellfish.** Mooring facilities **can be** [are] a source of pollution with a high

potential for improper disposal of human waste. Shellfish that occur in or near marinas and docks are unsafe for human consumption due to the potential health threats associated with the pollution generated as a result of leaching of toxic chemicals and heavy metals from waterfront construction materials and boat-related antifouling paints and fuels, and human waste disposed in close proximity to these marinas and docks. [Shellfish (bivalve mollusks)]**Bivalve shellfish** readily bioaccumulate and concentrate toxic substances and pathogenic microorganisms within their tissue**,** which poses a human health risk **when contaminated shellfish is consumed**. Due to the potential health threats associated with shellfish grown in polluted waters, shellfish are prohibited from being harvested for human consumption near mooring facilities. Dredging activities typically disturb and degrade the habitat environment.

Dredging activities have a negative effect on the recruitment of shellfish by changing the composition of the substrate. Dredging disturbs and degrades shellfish habitat by adversely altering the water quality, salinity regime, substrate characteristics, natural water circulation pattern and natural functioning of the shellfish habitat.

Motor fuels can be released into the aquatic environment via the operation of boat engines, [fuel spills]fueling operations and bilge pumping. The effects of petroleum hydrocarbons on fish and shellfish include direct lethal toxicity, sublethal disruption of physiology, behavior, bioaccumulation, and development of an unpleasant taste to edible species. Motor fuels and exhaust often contain lead, cadmium, zinc and other heavy metals. Heavy metals have been shown to cause suppression of growth or death of eggs, embryos and larvae of hard clams. In addition, such contaminants are known to cause a variety of sublethal effects, including inhibited

feeding behavior, retarded shell growth, and depression of cardiovascular function and respiration in various species of shellfish.

Boat maintenance operations **may** [can] also have adverse impacts to estuarine organisms. **Some** [Detergents] **detergents** used to wash boats can be toxic to fish and invertebrates and may contribute to elevated nutrient levels, particularly phosphorous. Toxins from various antifouling paints are harmful to shellfish and other invertebrates.

[Dredging disturbs and degrades shellfish habitat by adversely altering the water quality, salinity regime, substrate characteristics, natural water circulation pattern and natural functioning of the shellfish habitat.]

This rule intends to strike a balance between [resource] protection of **shellfish habitat** and recreational boating-related uses, by allowing maintenance dredging in shellfish habitats where an area has already been previously dredged**,** and new dredging at existing public boat launching facilities and [major mooring/docking facilities and] major mooring/docking facilities with 25 or more dockage units**.** The dredging of larger marinas and boat launching facilities will allow the greatest number of boaters access to the water areas with the least amount of habitat disturbances and degradation. This is partly because the larger marinas are more likely than smaller ones to generate sufficient demand for a full service marina, and are required to provide restrooms, **and** a[marine sanitation disposal device and] pumpout [station]**facility**, as a condition for the dredging approval if they did not already have them. Dredging is allowed at larger marinas and boat launching facilities because their highly concentrated use pattern minimizes the overall physical space required for dockage/mooring area and channel maintenance. Additionally, direct

disposal of human waste into the water is expected to be reduced [at]**when** these marina facilities are equipped with pumpout facilities. [The]**Therefore,** maintenance of these facilities is [therefore] considered acceptable [and would be positive to the extent that it leads to less pollution from current boaters].

Living shorelines are a shoreline management practice that addresses the loss of vegetated shorelines by providing protection, restoration or enhancement of these habitats. The establishment of living shorelines is conditionally acceptable provided the living shoreline activities disturb the minimum amount of special areas necessary to successfully implement the restoration, creation, enhancement or protection of habitat, water quality functions and values of wetlands, wetland buffers and open water areas. This may include a decrease in the existing special area or the conversion of one special area to another where it is determined that such changes are environmentally beneficial.

The one-time replacement, reconstruction or renovation of a legally existing bulkhead outshore of the existing bulkhead within waters classified as prohibited for harvesting shellfish is conditionally acceptable where the bulkhead is constructed of non-polluting materials and is located within 18 inches of the existing bulkhead, except where the replacement bulkhead is constructed of a corrugated material in which case it shall be located no more than 24 inches from the existing bulkhead. Non-polluting materials are required to minimize impacts to water quality. These requirements minimize impacts to water quality and the amount of substrate impacted by the bulkhead. The replacement or reconstruction of a bulkhead outshore of the existing bulkhead is allowed within shellfish

habitat in order to encourage the elimination of any polluting material in shellfish habitat and the correction or prevention of erosion, and because, in some cases, replacement in kind (requiring the removal of the existing bulkhead which in most, if not all, instances will be constructed of a treated material that is not considered to be non-polluting) will have a detrimental impact to water quality through the sloughing of soil that has been in contact with the bulkhead sheathing that is being replaced. The replacement or reconstruction is limited to one time only in order to limit the encroachment into shellfish habitat.

The Navesink River, Shrewsbury River and Manasquan River (upstream of the Route 35 Bridge), and St. George's Thorofare [are important areas for]**contain highly productive** shellfish habitat. The Navesink and Shrewsbury Rivers are unique in that only three estuaries within the State have commercial soft clam densities. St. [Georges]**George's** Thorofare is **a** commercially and recreationally valuable area that contains a high hard clam density according to the 1985 Shellfish inventory conducted by the Division of Fish, Game and Wildlife. [It is]**In 1985, this 107 acre area was** estimated to contain 6.2 million hard clams [in a 107 acre area]. The high abundance of hard clams, together with the fact that this waterbody is poorly flushed makes St. George's Thorofare a critical area that is sensitive to any potential pollution activities. These circumstances led to a moratorium being placed on this waterway against the construction of any new docks. Since then the moratorium has been lifted, however, the circumstances continue to render recommendations of denial for the construction of new docks.

Federal, State and local officials have recognized the importance of these rivers as shellfish habitat and the need to protect their water quality. As a result, pollution control programs have

been formed to protect these rivers. For example, the Navesink River Shellfish Protection Program represents a multi-agency pollution control program. On August 21, 1986, a Memorandum of Understanding was signed by the New Jersey [Department's] **Departments** of Environmental Protection [and Energy] and Agriculture**,** [and]**the** United States Department of Agriculture and United States Environmental Protection Agency. The memorandum serves to "...formalize our commitment to the Navesink River Water Control Shellfish Protection Program, its primary goal of improving water quality in the Navesink River watershed to a point at which the river's full shellfishery and recreational potential may be attained." Water quality monitoring during 6 years of implementation of pollution controls (1987-93) has shown significant reductions in bacterial contamination of the Navesink River, to the point where the potential now exists for upgrading the shellfish classification of the river to seasonally approved. The Shrewsbury River is a unique shellfish habitat in that it is only one of the three estuaries in New Jersey to have commercial densities of soft clams. Studies indicate that the Shrewsbury River is hydrologically connected to the Navesink River. As such, the Shrewsbury River has been included as part of the "Navesink River Shellfish Protection Program". In addition, the Monmouth/Ocean Alliance to Enhance the Manasquan River["] was formed by Monmouth and Ocean Counties and the New Jersey Department of Environmental Protection to identify causes of shellfish water degradation and plan solutions for improved water quality and uses in the Manasquan River.

7:7E-3.6 Submerged vegetation habitat

(a) (No change.)

(b) Development in submerged vegetation habitat is prohibited except for the following:

1. – 5. (No change.)

6. Construction of a single noncommercial dock or pier provided that:

i. –vi. (No change.)

vii. There is no alternative mooring area at the site that would have less impact on the submerged aquatic vegetation; [and]

7. The extension of existing piers or floating docks through submerged vegetation habitat to water at least four feet deep at mean low water, for the purpose of eliminating dredging or boating through submerged vegetation habitat, provided the width of the extended portion of the pier does not exceed four feet (except for the portion of the pier adjacent to the mooring area where the width shall not exceed six feet), there will be no increase in the number of boat moorings, and no dredging will be performed in conjunction with the use of the structure[.]**; and**

8. The establishment of a living shoreline in submerged vegetation habitat to address the loss of vegetated shorelines and habitat in the littoral zone is conditionally acceptable provided the living shoreline complies with N.J.A.C. 7:7E-4.23.

(c) – (d) (No change.)

(e) Rationale: New Jersey's estuarine waters are relatively shallow, rich in nutrients and highly productive. The submerged vegetation of these shallow habitats serve important functions as suspended sediment traps, important winter forage for migratory waterfowl, nursery areas for juvenile fin fish, bay scallops and blue crabs, and by nourishing fishery resources through primary biological productivity (synthesis of basic organic material) through detrial food webs in a similar manner to salt marsh emergent Spartina cord grasses. In addition, seagrasses absorb wave energy and root networks help stabilize silty bay bottoms. The value of seagrasses was dramatically illustrated during the 1930's when a disease epidemic virtually eliminated eelgrass from the eastern U.S. Atlantic ocean coastline. The number of finfish, shellfish, and waterfowl drastically decreased, threatening their survival. The oyster industry of the Atlantic coast was ruined. Bays became choked with silt and new mudflats were formed.

Most of the submerged vegetation species, in particular the eelgrass and widgeon grass, grow in patches which often cluster together forming a vegetative community and migrate from year to year about shoal areas. Disturbances to the substrate such as dredging usually result in permanent habitat destruction and loss. In shallow areas, propeller action may severely damage the roots and churn up the substrate and increase turbidity, damaging or destroying the plants and reducing their productivity. Other activities that can also have a negative impact on the plants and/or [or] habitat include wake actions, upland runoff and shading from structures.

This rule aims to protect the submerged vegetation as a resource. Areas where submerged aquatic vegetation grows or has been known to grow are identified as habitat areas which currently or potentially could support the submerged vegetation plant communities. Dredging of

the habitat area is permitted for maintaining the depth of existing State and Federal channels since the navigability of these channels is essential to commerce and navigation. New and maintenance dredging to existing large marinas and public launching facilities provides the greatest number of boaters access to the water areas with the least amount of disturbance to the habitat area. Limited boating related uses are also permitted in habitat areas with greater than four feet of water depth, where impacts from boating are not likely to be destructive to the plants or their habitat environment.

New Jersey's coastal environment is dynamic, and shaped by natural forces such as wind, waves, and storms. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. This erosion results in the degradation of the coastal environment through impacts to natural habitats, such as tidal wetlands and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. Living shorelines are a shoreline management practice that addresses erosion by providing protection, restoration or enhancement of vegetated shoreline habitats. The establishment of living shorelines is conditionally acceptable provided the living shoreline activities disturb the minimum amount of special areas necessary to successfully implement the restoration, creation, enhancement or protection of habitat, water quality functions and values of wetlands, wetland buffers and open water areas. This may include a decrease in the existing special area or the conversion of one special area to another where it is

determined that such changes are environmentally beneficial.

7:7E-3.15 Intertidal and subtidal shallows

(a) (No change.)

(b) Development, filling, new dredging or other disturbance is discouraged but may be permitted in accordance with (c), (d), (e)**,** [and] (f)**, (g), and (h)** below and with N.J.A.C. 7:7E-4.2 through [4.22]**4.23**.

(c) – (f) (No change.)

(g) The establishment of a living shoreline in intertidal and subtidal shallows to address the loss of vegetated shorelines and habitat in the littoral zone is conditionally acceptable provided the living shoreline complies with N.J.A.C. 7:7E-4.23.

(h) The construction and/or replacement of a bulkhead within intertidal and subtidal shallows is conditionally acceptable provided the bulkhead meets the requirements of the filling rule at N.J.A.C. 7:7E-4.11(f) and the coastal engineering rule at N.J.A.C. 7:7E-7.11(d).

[(g)]**(i)** Mitigation shall be required for the destruction of intertidal and subtidal shallows in accordance with [(h)]**(j)** below. Mitigation shall not be required for the following:

1. Filling in accordance with N.J.A.C. 7:7E-4.10(c) and [(e)]**(f)**1, 2 and 3;

2. (No change.)

3. Beach nourishment in accordance with N.J.A.C. 7:7E-7.11[(d)]**(f)**;

4. New dredging in accordance with N.J.A.C. 7:7E-4.7 to a depth not to exceed four feet below mean low water; [and]

5. Construction of a replacement bulkhead in accordance with N.J.A.C. 7:7E-7.11[(e)]**(d)**2i or ii[.]**; and**

6. The establishment of a living shoreline to address the loss of vegetated shorelines and habitat in the littoral zone.

[(h)]**(j)** (No change in text.)

[(i)]**(k)** Rationale: Intertidal and subtidal shallows play a critical role in estuarine ecosystems. They are a land-water ecotone, or ecological edge where many material and energy exchanges between land and water take place. They are critical habitats for many benthic organisms and are critical forage areas for fishes and many migrant waterfowl. The sediments laid down in intertidal and subtidal flats contain much organic detritus from decaying land and water's edge vegetation, and the food webs in these areas are an important link in the maintenance of estuarine productivity. Preservation is, therefore, the intent of these rules, with

limited exceptions to allow for needed water-dependent uses and submerged infrastructure. In most cases, mitigation is required to offset habitat losses where new disturbance of intertidal and subtidal shallows is permitted.

New Jersey's coastal environment is dynamic and shaped by natural forces such as wind, waves, and storms. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. This results in the degradation of the coastal environment through impacts to natural habitats, such as tidal wetlands, intertidal and subtidal shallows, and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. Living shorelines are a shoreline management practice that addresses erosion by providing protection, restoration or enhancement of vegetated shoreline habitats.

7:7E-3.16 Dunes

(a) – (c) (No change.)

(d) The maintenance of an engineered dune to the dune design template through alteration of the dune is conditionally acceptable provided:

1. It is demonstrated through pre- and post- construction surveys overlaid on the dune design template, that:

i. The existing dune is not consistent with the design template; and

ii. The proposed alteration of the dune will not result in the reduction of any portion of the dune below the design template;

2. A New Jersey licensed professional engineer certifies that alteration of the dune will not compromise the beach and dune system;

3. The activity:

i. Is conducted in accordance with the State Aid Agreement between the Department and municipality or county; and

ii. Complies with the management plan for the protection of State and Federally listed threatened and endangered species, as approved by the Department's Division of Fish and Wildlife and the U.S. Fish and Wildlife Service;

4. All existing public accessways are maintained;

5. Any existing vegetation disturbed during the maintenance activities shall, at a minimum, be restored in accordance with the dune construction planting specifications in the Federal consistency determination or Department permit for the engineered dune, as applicable; and

6. Any sand transferred as part of the maintenance of the dune design template shall be moved only within the shore protection project and shall be placed within the existing dune system, or within the engineered beach berm in accordance with the beach rule, N.J.A.C. 7:7E-3.22(b).

[(d)] **(e)** Rationale: Ocean and bayfront dunes are an irreplaceable physical feature of the natural environment possessing outstanding geological, recreational, scenic and protective value. Protection and preservation in a natural state is vital to this and succeeding generations of citizens of the State and the Nation. The dunes are a dynamic migrating natural phenomenon that helps protect lives and property in adjacent landward areas, and buffers barrier islands and barrier beach spits from the effects of major natural coastal hazards such as hurricanes, storms, flooding and erosion. Natural dune systems also help promote wide sandy beaches and provide important habitats for wildlife species.

Extensive destruction of dunes has taken place in this century along much of the coast. This disruption of the natural processes of the beach and dune system has led to severe erosion of some beach areas; jeopardized the safety of existing structures on and behind the remaining dunes and upland of the beaches; increased the need to manage development in shorefront areas no longer protected by dunes; interfered with the sand balance that is so essential for recreational beaches and the coastal resort economy; necessitated increased public expenditures by citizens of the entire State for shore protection structures and programs; and increased the likelihood of major losses of life and property from flooding and storm surges.

The rule encourages the natural functioning of the dune system and encourages restoration of destroyed dunes, to protect and enhance the coastal beach dune areas, and to devote these precious areas to only those limited land uses which preserve, protect and enhance the natural environment of the dynamic dune system.

The Department strongly supports the creation, enhancement and maintenance of coastal sand dunes as cost-effective shore protection. The value of dunes in protecting the densely developed oceanfront from coastal storm hazards has been well documented by the Department, the Federal Emergency Management Agency, the Army Corps of Engineers, and others. In fact, the New Jersey Hazard Mitigation Plan (Section 406) specifically identifies dune creation and enhancement as a primary storm hazard mitigation strategy.

In addition to the benefits that dunes provide as a natural form of shore protection, dunes often provide important habitat for numerous species of plants and wildlife. Moreover, dunes are important aesthetic resources that complement and promote tourism along the New Jersey shore. With large quantities of sand being placed on New Jersey beaches as part of the State-Federal shore protection program, opportunities to restore beach and dune habitats and associated biodiversity have increased tremendously. Beach nourishment provides the basis for restoration of coastal landforms (beaches and dunes) and biota, and rediscovery of lost environmental heritage. A large variety of species inhabit coastal dune environments, including plants (beachgrass, beach plum, beach pea, goldenrod, bayberry, juniper, cedar, virginia creeper) and animals (sparrows, warblers, waxwings, kinglets, tanagers, tiger beetles, burrowing spiders, grasshoppers, butterflies).

The natural and aesthetic values of habitat restoration are an important byproduct of the State’s beach and dune restoration efforts. Dunes can evolve as natural dynamic landforms that restore an important component of New Jersey’s coastal heritage, while providing significant areas of vegetated habitat for coastal biota. The restoration of the natural and beneficial functions

of beaches and dunes has become the cornerstone of New Jersey's shore protection program. These benefits are described in Nordstrom and Mauriello (2001), Restoring and Maintaining Naturally Functioning Landforms and Biota on Intensively Developed Barrier Islands under a No-Retreat Scenario. In addition, dune restoration for the purpose of providing wildlife habitat and scenic amenities is consistent with the goals of CAFRA to preserve and enhance the unique environmental and aesthetic resources of the coastal area.

Typically, beach nourishment projects include the construction of dunes for shore protection and/or storm damage reduction purposes. These engineered dunes are designed to a specific height, width, slope, and length, in accordance with a dune design template. In some instances, the engineered dunes may capture sand and grow beyond their design template. In these cases, maintenance of the dune to its design template may be necessary to minimize the effects that an influx of sand can have on infrastructure, access, and public safety. This excess sand can then be utilized along sections of dune or upper beach berm that are below the design template. Engineered dunes are designed to provide storm damage reduction in addition to the beach berm, and are subject to the influx of wind blown sand from the beach berm as well as erosion from wave and tidal current activity. Engineered dunes may be supplemented during periodic renourishment cycles to replenish lost material to maintain the overall design template. Maintenance activities between renourishment cycles can potentially reduce the volume of material needed when accreted sand is transferred from areas that have expanded above the design template to areas that

have experienced increased erosion. However, maintenance of the engineered dune must not reduce any part of the dune to less than the dune design template.

7:7E-3.22 Beaches

(a) (No change.)

(b) Development is prohibited on beaches, except for development that has no prudent or feasible alternative in an area other than a beach, and that will not cause significant adverse long-term impacts to the natural functioning of the beach and dune system, either individually or in combination with other existing or proposed structures, land disturbances or activities. Examples of acceptable activities are:

1. – 4. (No change.)

5. Shore protection structures which meet the use conditions of N.J.A.C. 7:7E-7.11**[**(e)]**(g)**;

6. – 7. (No change.)

8. Post-storm beach restoration activities involving the placement of clean fill material on beaches, and the mechanical redistribution of sand along the beach profile from the lower to the upper beach. These post-storm activities, which are different than routine beach maintenance activities, must be carried out in accordance with the standards found at N.J.A.C. 7:7E-3A; [and]

9. The following development in Atlantic City provided it meets the standards of N.J.A.C. 7:7E-3.49:

i.- ii. (No change.)

iii. Development on or over the Boardwalk[.]**; and**

10. The maintenance of an engineered beach to the beach berm design template through the transfer of sand from the upper beach berm to the lower beach berm, from the lower beach berm to the upper beach berm, and/or alongshore provided:

i. It is demonstrated through pre- and post- construction surveys overlaid on the beach berm design template, that:

(1) The existing beach berm is not consistent with the beach berm design template; and

(2) The proposed transfer of sand will not result in the grading any portion of the beach below the beach berm design template;

ii. A New Jersey licensed professional engineer certifies that sand transfer will not compromise the beach system;

iii. The sand transfer:

(1) Is conducted in accordance with the State Aid Agreement between the Department and a municipality or county; and

(2) Complies with the management plan for the protection of State and Federally listed threatened and endangered species, as approved by the Department's Division of Fish and Wildlife and the U.S. Fish and Wildlife Service;

iv. The sand transfer does not impact any existing dunes, unless the transfer complies with the dune rule, N.J.A.C. 7:7E-3.16; and

v. Any sand transferred as part of the maintenance of the beach berm design template shall be moved only within the shore protection project and shall be placed within the existing engineered dune in accordance with N.J.A.C. 7:7E-3.16(d).

(c) (No change.)

(d) Rationale: Undeveloped beaches are vital to the New Jersey resort economy. Unrestricted access for recreational purposes is desirable so that the beaches can be enjoyed by all residents and visitors of the [state]**State**. Public access will be required for any beaches obtaining [state]**State** funds for shore protection purposes. Beaches are subject to coastal storms and erosion from wave action and offshore currents. Public health and safety considerations require that structures be excluded from beaches to prevent or minimize loss of life or property from storms and floods, except for some shore protection structures and linear facilities, such as pipelines, when non-beach locations are not prudent or feasible.

Many of New Jersey's beaches, especially those along the Atlantic Ocean, have been nourished through the State's Shore Protection Program. These engineered beaches are designed to a specific height, width, slope, and length, in accordance with a beach berm design template. Engineered beaches are subject to erosive forces of waves, winds, and tidal currents; in many instances, eroded material is moved and deposited in areas within the project area in such a way that the beach grows beyond the design template and thus the beach no longer conforms to the shore protection project design. For engineered

beaches to provide the storm damage reduction and shore protection for which they were designed, the beach berm design template must be maintained throughout the entire project area. Municipalities are encouraged to maintain the project design to the maximum extent feasible between project renourishment cycles. However, maintenance of the engineered beach must not reduce any portion of the beach to less than the beach berm design template.

7:7E-3.27 Wetlands

(a) – (c) (No change.)

(d) The establishment of a living shoreline in wetlands to address the loss of vegetated shorelines and habitat in the littoral zone is conditionally acceptable provided the living shoreline complies with N.J.A.C. 7:7E-4.23. Where the Department finds the establishment of a living shoreline acceptable, mitigation shall not be required.

Recodify existing (d) – (h) as (e) – (i) (No change in text.)

[(i)]**(j)** Rationale: The environmental values and fragility of wetlands have been officially recognized in New Jersey since the passage of the Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq.) and the passage of the Freshwater Wetlands Protection Act of 1987 (N.J.S.A. 13:9B-1 et seq.). Tidal and freshwater wetlands[,] are the most environmentally valuable land areas within the coastal zone.

Wetlands contribute to the physical stability of the coastal zone by serving as (i) a transitional area between forces of the open sea and upland areas that absorb and dissipate wind-driven storm waves and storm surges, (ii) a flood water storage area, and[,] (iii) a sediment and pollution trap.

Also, wetlands naturally perform the wastewater treatment process of removing phosphorous, nitrogenous and other water pollutants, unless the wetlands are stressed.

The biological productivity of New Jersey's wetlands is enormous and critical to the functioning of estuarine and marine ecosystems. The emergent cord grasses and associated algal mats convert inorganic nutrients into organic plant material through the process of photosynthesis. In this way, the primary base for estuarine and marine food webs is provided. The principal direct dietary beneficiaries of organic wetland detritus are bacteria and protozoan, which are in turn fed upon by larger invertebrates. Important finfish, shellfish, and other resources feed upon these invertebrates. New Jersey's wetlands are prime wintering habitat annually for hundreds of thousands of migratory waterfowl. Approximately two-thirds of marine finfish and shellfish are known to be estuarine, and, therefore, wetlands dependent.

Inland herbaceous wetlands, such as bogs and marshes, play an important role in regulating the quality of the water in streams that flow to the estuaries. They retard runoff and store storm waters. They are important areas for primary productivity for estuarine systems. They are critical habitats and movement corridors for several species of plants and animals that are endangered or threatened.

They are productive habitats for other game and non-game animals, such as fur bearers and song birds. These wetlands also serve as fire breaks[,] and may limit the spread of forest, brush, or grass fires. They are inappropriate development sites due to poor drainage and load bearing capacity of the underlying soils.

Forested wetlands play a critical role in coastal and other ecosystems. Roots and trunks stabilize shorelines and trap sediment. They are physical and biochemical water filter areas maintaining stream water quality. High productivity, high water availability and high edge to area ratio make these areas especially productive wildlife areas.

White cedar stands, as well as other lowland swamp forests, play an important role in purifying water in coastal streams, retarding runoff, providing scenic value, and serving as a rich habitat for many [and]endangered plant and animal species, as well as game species, such as deer. White cedars also act as forest fire breaks. White cedar stands most commonly occur in flood plains and in the fringe areas of drainage ways and bogs, which are frequently underlain with saturated organic peat deposits. This material is particularly unsuited for development.

White cedar is New Jersey's most valuable timber species and grows in discrete stands. The wood has a long tradition of maritime and local craft uses. Unfortunately, white cedars have been eliminated from much of their previous range in New Jersey.

New Jersey’s coastal environment is dynamic, and shaped by natural forces such as wind, waves, and storms. To protect development from these forces, shorelines are typically armored with hard structures such as bulkheads, gabions or revetments. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease

the amount of organic matter necessary to maintain tidal wetlands. This erosion results in the degradation of the coastal environment through impacts to natural habitats, such as tidal wetlands, intertidal and subtidal shallows and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. Living shorelines are a shoreline management practice that addresses erosion by providing protection, restoration or enhancement of vegetated shoreline habitats.

SUBCHAPTER 3A**.** STANDARDS FOR BEACH AND DUNE ACTIVITIES

7:7E-3A.1 Purpose and scope

(a) This subchapter sets forth the standards applicable to routine beach maintenance, emergency post-storm restoration, dune creation and maintenance, and construction of boardwalks. These standards are referenced at N.J.A.C. 7:7E-3.16, Dunes; N.J.A.C. 7:7E- 3.17, Overwash areas; N.J.A.C. 7:7E-3.19, Erosion hazard areas; N.J.A.C. 7:7E-3.22, Beaches; and N.J.A.C. 7:7E-7.11, Coastal engineering. In addition, N.J.A.C. 7:7E-3A.2, 3A.3 and 3A.4 are the standards for the coastal general permit for beach and dune maintenance activities, N.J.A.C. 7:7-7.6.

1. – 4. (No change.)

(b) Beach and dune maintenance activities subject to this subchapter shall comply with any applicable management plan for protection of State and Federally listed threatened

and endangered species, as approved by the Department and the U.S. Fish and Wildlife Service.

7:7E-3A.2 Standards applicable to routine beach maintenance

(a) Routine beach maintenance includes debris removal and clean-up; mechanical sifting and raking; maintenance of accessways; **removal of sand accumulated beneath a boardwalk;** removal of sand from street ends, boardwalks/promenades and residential properties; the repair or reconstruction of existing boardwalks, gazebos and dune walkover structures; and limited sand transfers from the lower beach to the upper beach or alongshore (shore parallel). Sand transfers from the lower beach profile to the upper beach profile are specifically designed to restore berm width and elevation, to establish/enhance dunes and to repair dune scarps. Activities which preclude the development of a stable dune along the back beach are not considered to be routine beach maintenance activities, pursuant to this section. Specifically, the bulldozing of sand from the upper beach (berm) to the lower beach (beach face), for the purpose of increasing the berm width or flattening the beach profile, is not considered to be routine maintenance**, except as provided at (a)9 below**.

1. All routine beach maintenance activities shall be conducted in a manner that does not destroy, jeopardize, or adversely modify endangered or threatened wildlife or plant species habitat; and shall not jeopardize the continued existence of any local population of an endangered or threatened wildlife or plant species.

[1.]**2.** (No change in text.)

[2.]**3.** All guidelines and specifications of this section must be incorporated into any contract documents or work orders related to proposed beach and dune activities, as described in this section. The [Land Use Regulation Program]**Division of Land Use Regulation** is available to assist in the development of specific maintenance plans for oceanfront locations, upon request.

[3]**4**. In areas documented by the Department as habitat for threatened or endangered beach nesting shorebirds such as Piping Plovers (*Charadrius melodus*), Least Terns ([*Sterna albifrons*] ***Sternula antillarum***), **and Black Skimmers (*Rynchops niger*),** no beach raking, [or] other mechanical manipulation [or]**of** the beach**, or use of non-emergency vehicles**, shall take place between [April 1 and August 15]**March 15 and August 31**.

i. The Department's Division of Fish and Wildlife shall develop a list of specific areas where this restriction shall apply, based on documented habitat during the most recent nesting season**s**. The list of restricted areas shall be updated annually by the Division of Fish and Wildlife, at the end of each nesting season and **will** be available upon request from the Department's **Division of** Land Use Regulation [Program at PO Box 439, Trenton, New Jersey 08625-0439 (609) 292-0060]**at the address set forth at N.J.A.C. 7:7E-1.7**. The updated list shall be provided by the Department to each permittee prior to [April]**March** 1 of each year.

ii. If a particular beach area is identified on the updated list as described in (a)[3]**4**i above as habitat for threatened or endangered beach nesting shorebirds, regardless of the habitat classification of the previous nesting season, no beach raking, [or]other mechanical

manipulation of the beach**, or the use of non-emergency vehicles** shall take place between [April 1 and August 15]**March 15 and August 31** in those areas.

iii. If a particular beach area is not identified on the updated list as described in (a)[3]**4**i above, but is subsequently found to contain a nest **or unflighted chick** of a threatened or endangered beach nesting shorebird, the Department shall notify the permittee and no beach raking [or] **other** mechanical manipulation of the beach**, or use of non-emergency vehicles** shall take place between [April 1 and August 15] **March 15 and August 31** in those areas.

iv. The restrictions contained in (a)[3]**4** above may be waived if the Department's Division of Fish and Wildlife determines that the identified areas do not represent suitable threatened or endangered beach nesting shorebird habitat, due to beach erosion or other causes**.** Requests for such a waiver shall be made in writing to the **Division of** Land Use Regulation [Program, PO Box 439, Trenton, New Jersey, 08625-0439; and] **at the address set forth at N.J.A.C. 7:7E-1.7.**

5. In areas documented by the Department as supporting known occurrences of Federally listed endangered or threatened plant species such as seabeach amaranth (*Amaranthus pumilus*), or known occurrences of State listed endangered plant species, such as sea-beach knotweed (*Polygonum glaucum*) no beach raking, other mechanical manipulation of the beach, or use of non-emergency vehicles shall take place between May 15 and November 30.

i. The Department, in cooperation with the U.S. Fish and Wildlife Service, shall develop a list of present and documented habitat areas where this restriction shall apply based on occurrence locations during the previous seasons. The list of restricted areas shall

be updated annually and will be available from the Department's Division of Land Use Regulation at the address set forth at N.J.A.C. 7:7E-1.7. The updated list shall be provided by the Department to each permittee prior to May 1 of each year.

ii. If a particular beach area is not identified on the updated list as described above, but is subsequently found to contain an occurrence of a Federally listed endangered or threatened plant species, or a State listed endangered plant species, the Department shall notify the permittee and no beach raking, other mechanical manipulation of the beach, or use of non-emergency vehicles, shall take place between May 15 and November 30 in those areas.

iii. The restrictions contained in (a)5i may be waived if the Department determines that the identified areas do not support occurrences of Federally listed endangered or threatened plant species, or occurrences of State listed endangered plant species. Requests for such a waiver shall be made in writing to the Division of Land Use Regulation at the address set forth at N.J.A.C. 7:7E-1.7.

[4.]**6.** (No change in text.)

7. The excavation of sand accumulated beneath a boardwalk is conditionally acceptable provided:

i. The elevation of the area after the excavation is completed is not lower than either the upper beach berm design template for an engineered beach, or, for a non-engineered beach, the elevation of the existing beach berm;

ii. The excavated sand is relocated to the seaward toe of the existing dune, if present, or on the upper beach berm;

iii. Where breaching of an existing dune is necessary to allow for sand excavation, the following apply:

(1) The area of the dune breached shall be minimized; and

(2) The dune shall be restored to pre-existing conditions immediately upon excavation of the sand;

iv. Where sand is excavation from the landward slope of the dune, the slope shall be:

(1) Restored to the preexisting conditions and in no case be steeper than three horizontal to one vertical; and

(2) Revegetated in accordance with N.J.A.C. 7:7E-3A.4(b) and (c).

8. Any sand excavated from boardwalks, street ends, and single family lots shall be placed on the seaward toe of the existing dune, if present, or on the upper beach berm.

9. Placement of temporary sand fencing during the winter months, which results in the accumulation of sand that is later redistributed on the beach berm, is conditionally acceptable, provided:

i. The sand fencing is:

(1) Placed a minimum of 15 feet waterward of the seaward toe of any existing dune or, if no dune is present, from the waterward side of any structure;

(2) Installed no earlier than October 15 and removed prior to the Memorial Day weekend, unless threatened and endangered species timing restrictions apply;

(3) Installed in a manner that does not prevent public access along the tidal water and does not restrict public access to the beach from existing public access points; and

ii. The accumulated sand that is redistributed:

(1) Is placed on the beach;

(2) Does not result in the grading of the beach below the beach berm design template for an engineered beach or, for a non-engineered beach, below the elevation of the beach berm elevation existing prior to the redistribution; and

(3) Where feasible, does not result in the grading of the beach face to a slope steeper than 10 horizontal to one vertical.

(b) Projects involving the [mechanical redistribution] **transfer** of sand from the lower beach profile to the upper beach profile, or alongshore, are acceptable, in accordance with the following standards:

1. All sand transfer activities shall be conducted in a manner that does not destroy, jeopardize, or adversely modify endangered or threatened wildlife or plant species habitat; and shall not jeopardize the continued existence of any local population of an endangered or threatened wildlife or plant species.

Recodify 1. and 2. as **2. and 3.** (No change in text.)

[3.]**4.** If the purpose of the sand transfers is to repair eroded dunes (dune scarps), all filled areas shall be stabilized with sand fencing and planted with beach grass in accordance with [DEP and/or SCS]**Department or Soil Conservation Service** standards. Fencing shall be in place within 30 **calendar** days of the transfer operation, while the vegetative plantings may be installed during the appropriate seasonal planting period (October 15 through March 31, anytime the sand is not frozen).

[4.]**5.** (No change in text.)

[5.]**6.** In areas of documented habitat for threatened or endangered beach nesting shorebirds such as Piping Plovers (*Charadrius melodus*)**,** [and] Least Terns ([*Sterna albifrons*]***Sternula antillarum***)**, and Black Skimmers** (***Rynchops niger***) no sand transfers shall take place between [April 1 and August 15]**March 15 and August 31.**

i. The Department's Division of Fish and Wildlife shall develop a list of specific areas where this restriction shall apply based on documented habitat during the most recent nesting seasons. The list of restricted areas shall be updated annually by the Division of Fish and Wildlife, at the end of each nesting season and **will** be available upon request from the Department's **Division of** Land Use Regulation [Program at PO Box 439, Trenton, New Jersey 08625-0439 (609) 292-0060]**at the address set forth at N.J.A.C. 7:7E-1.7** The updated list shall be provided by the Department to each permitee prior to [April]**March** 1 of each year.

ii. If a particular beach area is identified on the updated list as described in (b)[5]**6**i above as habitat for threatened or endangered beach nesting shorebirds, regardless of the habitat

classification of the previous nesting season, no sand transfers shall take place between [April 1 and August 15]**March 15 and August 31** in those areas.

iii. If a particular beach area is not identified on the updated list as described in (b)[5]**6**i above, but is subsequently found to contain a nest **or unflighted chick** of a threatened or endangered beach nesting shorebird, the Department shall notify the permittee and no sand transfers shall take place between [April 1 and August 15]**March 15 and August 31** in those areas.

iv. The restrictions contained in (b)[5]**6** above may be waived if the Department's Division of Fish and Wildlife determines that the identified areas do not represent suitable threatened or endangered beach nesting shorebird habitat[,] due to beach erosion or other causes. Requests for such a waiver shall be made in writing to the **Division of** Land Use Regulation [Program, PO Box 439, Trenton, New Jersey, 08625-0439; and]**at the address set forth at N.J.A.C. 7:7E-1.7.**

7. In areas documented by the Department as supporting known occurrences of Federally listed endangered or threatened plant species, or known occurrences of State listed endangered plant species, no sand transfers shall take place between May 15 and November 30.

i. The Department, in cooperation with the U.S. Fish and Wildlife Service, shall develop a list of present and documented habitat areas where this restriction shall apply, based on occurrence locations during the previous seasons. The list of restricted areas shall be updated annually and will be available from the Department's Division of Land Use

Regulation at the address set forth at N.J.A.C. 7:7E-1.7. The updated list shall be provided by the Department to each permittee prior to May 1 of each year.

ii. If a particular beach area is not identified on the updated list as described above but is subsequently found to contain an occurrence of a Federally listed endangered or threatened plant species, or an occurrence of a State listed endangered plant species, the Department shall notify the permittee and no sand transfer on the beach shall take place between May 15 and November 30 in those areas.

iii. The restrictions contained in (b)7i above may be waived if the Department determines that the identified areas do not support occurrences of a Federally listed endangered or threatened plant species, or occurrences of State listed endangered plant species. Requests for such a waiver shall be made in writing to the Division of Land Use Regulation at the address set forth at N.J.A.C. 7:7E-1.7.

Recodify 6. and 7. as **8. and 9.** (No change in text.)

7:7E-3A.3 Standards applicable to emergency post-storm beach restoration

(a) (No change.)

(b) Beach restoration activities, as part of an emergency post-storm recovery, include: the placement of clean fill material with grain size compatible with (or larger than) the existing beach material; the bulldozing of sand from the lower beach profile to the upper beach profile; the alongshore transfer of sand on a beach; the placement of concrete**,** [or] rubble **or rock**; and

the placement of sand filled geotextile bags or tubes. [The placement of sand filled geotextile bags or tubes is preferred to the placement of concrete, rubble or other material.]

(c) - (d) (No change.)

(e) The **a**longshore transfer of sand from one beach area to another, as part of an emergency post-storm beach restoration plan, is acceptable, in accordance with the following standards:

1. - 4. (No change.)

(f) The placement of sand filled geotextile bags or geotubes, as part of an emergency post-storm beach restoration plan, is acceptable, in accordance with the following standards:

1.-5. (No change.)

6. Fill material for the geotextile bags or geotubes shall be from an upland source excluding the beach and dune **or from suitable dredged material**; [and]

7. The geotextile bag or geotube shall be installed parallel to the shoreline[.]**; and**

8. The geotextile bag or geotube shall be installed with the manufacturer's recommended scour apron.

(g) The placement of sand, gravel, rubble, concrete, **rock,** or other inert material, as part of an emergency post-storm beach restoration plan, is acceptable, in accordance with the following standards:

1. All material shall be non-toxic sand, gravel, concrete, rubble, **rock,** or other inert material;

2. The placement of concrete**,** [or]rubble**, or rock** shall be temporary in nature, and is not to be used as permanent protection, unless it is part of a Department-approved, engineered design for permanent shore protection;

3. All concrete**,** [and]rubble**, or rock** placed on the beach shall be removed within 90 **calendar** days, unless **an application is filed within 90 calendar days of** the placement **of the material for** [is part of a]Department [approved,]**approval of an** engineered design for permanent shore protection**. If a permit application is filed within this period, the material may remain on the beach until a determination is made on the application;** and

4. (No change.)

7:7E-3A.4 Standards applicable to dune creation and maintenance

(a) - (b) (No change.)

(c) All proposed dune vegetation **shall be native to New Jersey and** should be limited to the following coastal species**, to the maximum extent practicable**: American Beachgrass (*Ammophila breviligulata*), Coastal Panicgrass (*Panicum amarulum*), Bayberry [Myrica pennsylvanica)] (***Myrica pensylvanica***), Beach Plum (*Prunus maritima*), [and Shore Juniper (Juniperus conferta)**.** Although they may not be currently available from commercial nurseries at this time, the following plant species are also well suited to the dune environment:]Seaside Goldenrod (*Solidago sempervirens*), Beach Pea (*Lathyrus japonicus*), [Sea Oats (Uniola

paniculata),]Bitter Panicgrass (*Panicum amarum*), **Switchgrass (*Panicum virgatum*), Partridge Pea (*Chamaecrista fasiculata*), Eastern red cedar (*Juniperus virginiana*), Groundsel tree (*Baccharis halimifolia*),** and [even]Saltmeadow [C]**c**ordgrass (*Spartina patens*).

1. (No change.)

2. Dune vegetation should be diversified [as much as possible]**to the maximum extent practicable**, in an effort to provide continuous stabilization in the event that pathogens reduce or eliminate the effectiveness of one species. A complex of associated grasses, herbaceous species and woody species is preferred to the planting of one species.

3. A landscape plan is required as part of any dune creation activity. The landscape plan shall depict the proposed vegetative community on the dune and include:

i. Species and quantity to be planted;

ii. Spacing of all plantings;

iii. Stock type (plugs, potted, seed); and

iv. Source of the plant material.

(d) The construction of elevated timber dune walkover structures shall be in accordance with the standards and specifications (or similar specifications) described in Beach Dune Walkover Structures (Florida Sea Grant, 1981). The construction of elevated dune walkover structures, particularly at municipal street-ends and other heavily used beach access points[,] is preferred to the construction of pathways or walkways through the dunes.

1. Copies of the DEP and Florida Sea Grant reports are available from the [DEP]**Department at the address set forth at N.J.A.C. 7:7E-1.7.** [Land Use Regulation Program, PO Box 439, Trenton, NJ 08625-0439. Copies of the Soil Conservation Service report are available directly from the Soil Conservation Service, Plant Materials Center, 1536 Route 9 North, Cape May Court House, NJ 08210.]

(e)- (f) (No change.)

SUBCHAPTER 4. GENERAL WATER AREAS

7:7E-4.2 [Aquaculture] **Shellfish aquaculture**

(a) [Aquaculture is the use of permanently inundated water areas, whether saline or fresh, for the purposes of growing and harvesting plants or animals in a way to promote more rapid growth, reduce predation, and increase harvest rate. Oyster farming in Delaware Bay is a form of aquaculture] **Shellfish aquaculture means the propagation, rearing, and subsequent harvesting of shellfish in controlled or selected environments, and the processing, packaging and marketing of the harvested shellfish. Shellfish aquaculture includes activities that intervene in the rearing process to increase production such as stocking, feeding, transplanting, and providing for protection from predators. For the purposes of this section, shellfish means any species of benthic mollusks including hard clams (*Mercenaria mercenaria*), soft clams (*Mya arenaria*), surf clams (*Spisula solidissma*), bay**

scallops (*Aequipectin irradians*), and oysters (*Crassostrea virginica*). Shellfish shall not include conch, specifically, knobbed whelks (*Busycon carica*), lightning whelks (*Busycon contrarium*), and channeled whelks (*Busycotypus canaliculatus*).

(b) **Shellfish** [A]**a**quaculture is encouraged in all [General Water Areas]**general water areas** as defined at N.J.A.C. 7:7E-4.1, provided **the activity**:

1. [It does]**Does** not unreasonably conflict with [resort or recreation uses]**other marine uses**;

2. [It does]**Does** not cause [significant] adverse [off-site]environmental impacts; and

3. [It does]**Does** not present a hazard to navigation. A hazard to navigation includes all potential impediments to navigation, including access to adjacent moorings, water areas and docks and piers[.]**;**

4. Does not prevent the catching and taking of free swimming fish from the tidal waters of the State in any lawful manner, in accordance with N.J.S.A. 50:1-33; and

5. Is located in an area for which the person conducting the activity holds a valid shellfish lease pursuant to N.J.S.A. 50:1-23.

(c) Upon expiration or termination of a shellfish lease, or the cessation of aquaculture activities, whichever occurs first, the permittee shall within five days remove all structures relating to the aquaculture activity placed within the lease area.

[(c)]**(d)** Rationale: Aquaculture is a means of food production which can be at least as efficient as land-based agriculture. It is, therefore, encouraged provided that it does not unreasonably affect the coastal recreational economy, the coastal ecosystem or navigation. **Aquaculture is considered one the fastest growing food-producing sectors and in 2011, it accounted for nearly 50 percent of the worldwide production of aquatic food products. In 2011, there were 189 shellfish leaseholders who held 775 individual leases which occupied 2,154 acres and 30,137 linear feet of bottom in New Jersey's Atlantic coastal bays and rivers. Additionally, there were 86 leaseholders who held 920 shellfish leases occupying 32,124 acres in Delaware Bay. The predominant species of shellfish produced are hard clams and oysters. Shellfish aquaculture is vital to the economy in the coastal communities of New Jersey as it was worth $4.50 million dockside in 2007 (USDA 2008) for hard clams and oysters. In addition, New Jersey shellfish are shipped throughout the United States and sold at retail locally.**

7:7E-4.10 Filling

(a) – (c) (No change.)

(d) Filling to establish a living shoreline to protect, restore or enhance a habitat area is conditionally acceptable provided the living shoreline complies with N.J.A.C. 7:7E-4.23.

[(d)]**(e)** Except as provided in (b) [and (c)]**through (d)** above, filling is discouraged in all other water areas. In cases where there is no alternative to filling, filling is conditionally acceptable provided:

1. – 7. (No change.)

[(e)]**(f)** Mitigation shall be required for the filling of tidal water areas at a ratio of one acre created to one acre lost in the same estuary. The mitigation standards for the filling of intertidal and subtidal shallows are found at N.J.A.C. 7:7E-3.15[(g)]**(i)** and [(h)]**(j)**. Mitigation shall not be required for the following:

1. (No change.)

2. Beach nourishment in accordance with N.J.A.C. 7:7E-7.11[(d)]**(f)**; [and]

3. Construction of a replacement bulkhead in accordance with N.J.A.C. 7:7E-7.11[(e)]**(d)**2i or ii[.];

4. Establishment of living shorelines in accordance with N.J.A.C. 7:7E-4.23; and

5. Construction of a boat ramp in accordance with N.J.A.C. 7:7E-4.3.

[(f)]**(g)** (No change in text.)

[(g)]**(h)** Filling using clean sediment of suitable particle size and composition**, or dredged material for which the Department has issued a determination of acceptable use,** is acceptable for beach nourishment **and living shoreline** projects provided it meets the standards

of the coastal engineering rule, N.J.A.C. 7:7E-7.11[(d)]**(f) or the living shoreline rule, N.J.A.C. 7:7E-4.23, respectively**.

[(h)]**(i)** (No change in text.)

[(i)]**(j)** Rationale: In general, filling is discouraged because it results in: loss of aquatic habitat including nursery areas for commercially or recreationally important species; loss of estuarine productivity since shallow estuarine water frequently has a higher biological value and is more important than deeper water; loss of habitat important for certain wading birds and waterfowl; and loss of dissolved oxygen in the water body since the shallows facilitate oxygen transfer from air to water.

Lagoons, as a result of limited freshwater inflow, multiple dead-end branches, and deeper bottoms than adjacent bay waters, have poor circulation which causes anoxic (devoid of oxygen) and stagnant bottoms. However, the shallow water edges of lagoons have been shown by the Department (1984) to support a wide variety of finfishes and shrimp. The above rules are intended to conserve this aquatic productivity found along shallow lagoon edges, while allowing use by the property owners.

New Jersey's coastal environment is dynamic, and shaped by natural forces such as wind, waves, and storms. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. This erosion results in the degradation of the coastal environment

through impacts to natural habitats, such as tidal wetlands, intertidal and subtidal shallows and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. Living shorelines are a shoreline management practice that addresses erosion by providing protection, restoration or enhancement of vegetated shoreline habitats.

The use of dredged material of appropriate grain size and chemical composition in beach nourishment and living shoreline projects promotes the State's long-standing policy of treating dredged material as a resource.

7:7E-4.19 [Breakwaters] **Vertical wake or wave attenuation structures**

(a) [Breakwaters]**Vertical wake or wave attenuation structures**, [including, but not limited to, those constructed of concrete, rubble mound and timber,]are structures designed to protect [shoreline areas or]boat moorings**, including those at marinas,** by intercepting **wakes or** waves and reducing the **wake or** wave[s] energy which would normally impact the adjacent [shoreline areas or]boat mooring areas. Typically, timber**, metal or vinyl**[breakwaters] **wake or wave attenuation structures** are designed and utilized to protect boat moorings. [In most cases concrete or rubble mound breakwaters are designed and utilized to protect shoreline areas which are subject to storm waves and associated erosion.]**For the purposes of this rule, a vertical wake or wave attenuation structure does not include a breakwater constructed of concrete or rubble mound. Breakwaters designed to protect shoreline areas shall comply with the**

filling rule, N.J.A.C. 7:7E-4.10 and the coastal engineering rule, N.J.A.C. 7:7E-7.11.

(b) Construction of a vertical wake or wave attenuation structure is conditionally acceptable. The porosity of a wake or wave attenuation structure, including spacing of planking and the distance between the structure and the bottom of the water body, shall be determined on a case-by-case basis, taking into consideration vessel traffic, water depth, and tidal flow.

(c) A vertical wake or wave attenuation structure may be designed as follows.

1. High wake or wave energy areas: Boat mooring areas in or near deep water that are exposed to port, harbor, and/or ferry traffic, such as the Hudson River between New Jersey and New York, are subject to high wake or wave energy. In this case, the structure may be designed to have no spacing between planking and extend to a depth of between 30 and 40 feet, or to the bottom of the water body, whichever is less, to intercept almost all wave energy. The distance between the structure and the bottom of the waterbody will be dependent upon the water depth of the area in which the structure will be located.

2. Medium wake or wave energy areas: Boat mooring areas adjacent to or near navigation channels, such as boat moorings located in Cape May Harbor, are subject to medium wake or wave energy. In this case, the structure may be designed to provide approximately one inch spacing between planking, and extend to the bottom of the water body.

3. Minor wake or wave energy areas: Boat mooring areas that do not meet the criteria of (b)1 or 2 above, such as boat moorings located in the Upper Manasquan River, are subject to minor wake or wave energy In this case, the structure may be designed to provide approximately three inch spacing between planks to ensure flushing, and the distance between the structure and bottom of the water body shall be determined on a case-by-case basis taking into account the potential wake or wave energy at that mooring location. In areas of low tidal flow, that is, where the tidal range is less than two feet, the distance between the structure and the bottom of the water body shall be at least 18 inches.

[(b)]**(d)** [Construction of breakwaters is conditionally acceptable provided:

1. Timber, vinyl or plastic breakwaters shall be at least 18 inches above the bottom of the waterway and shall provide a minimum of three inch spacing between planks except as provided at (b)3 below. The individual plank width shall not exceed six inches;

2. For detached breakwaters]**Detached vertical wake or wave attenuation structures** which are not fixed directly to a dock or pier structure[, marking] **shall be marked** with photocell lights and/or reflectors**.**[is required; and

3. The construction of breakwater structures other than those which comply with (b)1 above shall be consistent with the acceptability conditions for filling, N.J.A.C. 7:7E-4.10 and structural shore protection N.J.A.C. 7:7E-7.11.]

[(c)]**(e)** Rationale: [Breakwaters]**Vertical wake or wave attenuation structures** are designed to protect boat moorings**, including those at marinas.**[and may be suitable as shore protection structures. Breakwaters] **These structures** may be fixed or floating, attached or detached, depending on the water depth, tidal range and wave climate. The design of a [breakwater]**vertical wake or wave attenuation** structure must consider location, height **and** porosity [and purpose], in order for the [breakwater]**structure** to function without adversely affecting the movement of sediment and marine organisms **and**[or adversely affecting] water circulation patterns.

7:7E-4.23 Living shorelines

(a) Living shorelines are a shoreline management practice that addresses the loss of vegetated shorelines and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This is accomplished through the strategic placement of vegetation, sand or other structural and organic materials.

(b) The establishment of a living shoreline to protect, restore or enhance a habitat area is conditionally acceptable provided:

1. It is demonstrated that the project:

i. Is part of a plan for the restoration, creation or enhancement of the habitat and water quality functions and values of waters of the State or waters of the United States;

ii. Is consistent with the requirements of the Wetlands Act of 1970, the Waterfront Development Law, and this chapter;

iii. Will improve or maintain the values and functions of the ecosystem; and

iv. Will have a reasonable likelihood of success, or, if performed by a college or university, will advance the level of knowledge regarding living shorelines in the State; and

2. The living shoreline complies with the following:

i. It disturbs the minimum amount of special areas, as defined at N.J.A.C. 7:7E-3, necessary to successfully implement the project plan. The Department may approve a reduction in the size of a particular special area in order to allow an increase in a different special area if the Department determines that the activities causing the reduction are sufficiently environmentally beneficial to outweigh the negative environmental effects of the reduction; and

ii. It does not include placement of fill beyond the footprint of the shoreline as it appeared on the applicable Tidelands Map (baseline photography dated 1977/1978), except for a structural component of the project intended to reduce wave energy.

(c) The beneficial use of dredged material is acceptable in the establishment of a living shoreline provided it is determined by the Department that the material is acceptable for use in a living shoreline.

(d) Rationale: New Jersey's coastal environment is dynamic, and shaped by natural forces such as wind, waves, and storms. Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. This erosion results in the degradation of the coastal environment through impacts to natural habitats, such as tidal wetlands and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address the loss of vegetated shoreline habitat as an alternative that adds diversity to other shore protection measures. The establishment of living shorelines is conditionally acceptable provided the living shoreline activities disturb the minimum amount of special areas necessary to successfully implement the restoration, creation, enhancement, or protection of habitat, water quality functions and values of waters of the State and waters of the United States. This may include a reduction in the size of a particular special area in order to allow an increase in a different special area where the Department determines that the activities causing the reduction are sufficiently environmentally beneficial to outweigh the negative environmental effects of the reduction.

The use of dredged material of appropriate grain size and chemical composition in the establishment of a living shoreline promotes the State's long-standing policy of treating dredged material as a resource.

SUBCHAPTER 7. USE RULES

7:7E-7.3 Resort/recreational use

(a) – (c) (No change.)

(d) Standards relevant to marinas are as follows:

1. (No change.)

2. New marinas or expansion or renovation (including, but not limited to, dredging, bulkhead construction and reconstruction, and relocation of docks) of existing marinas for recreational boating are conditionally acceptable if:

i. [The marina includes the development of an appropriate mix of dry storage areas, public launching facilities, berthing spaces, repair and maintenance facilities, and boating and hardware supply facilities, depending upon site conditions.

ii.] The marina posts prominent signs indicating discharges shall not be allowed within the basin and provides restrooms and marine septic disposal facilities for wastewater disposal from boats. For marinas with dockage for 25 or more vessels or any on vessel with live-aboard arrangement, adequate and conveniently located pumpout [stations]**facility** shall be provided.

[iii.] **ii.** Restrooms and at least one portable toilet emptying receptacle shall be provided at a marina. The portable toilet emptying receptacle requirement may be satisfied either by the installation of a receptacle device or by the designation of either a pumpout **facility** or restroom facility for this use; and

(1) – (3) (No change.)

[iv.] **iii.** (No change in text.)

3. –9. (No change.)

10. In addition to complying with all other applicable portions of these rules, all new, expanded and renovated boat mooring facilities with five or more slips which are located on any portion of the Navesink River, Shrewsbury River or Manasquan River (upstream of the Route 35 Bridge) or the St. George's Thorofare shall meet the conditions in (d)[10]**8**i through iii below. Renovation shall include complete or partial alteration of any portion of a structure, including construction, reconstruction of or relocation of existing docks, piers, moorings and bulkheads and dredging. The conditions are:

i. (No change.)

ii. [No pressure treated lumber or other lumber treated with any other substance shall be used in any portion of the project. This restriction applies only to bulkhead sheathing and planking, and dock planking, and does not apply to pilings.] **With the exception of pilings, bulkhead sheathing and planking, and dock planking, shall be constructed of non-polluting materials.** In addition, this requirement does not apply to any construction upland of the mean high water line; and

iii. (No change.)

11. (No change.)

(e) (No change.)

7:7E-7.11 Coastal Engineering

(a) Coastal engineering measures include a variety of non-structural, hybrid, and structural shore protection and storm damage reduction measures to manage water areas and protect the shoreline from the effects of erosion, storms, and sediment and sand movement. Beach nourishment, sand fences, pedestrian crossing of dunes, stabilization of dunes, dune restoration projects, dredged material management, living shorelines, and the construction of retaining structures such as bulkheads, gabions, revetments, and seawalls are all examples of coastal engineering measures.

(b) Nonstructural, hybrid, and structural shore protection and/or storm damage reduction measures shall be used according to the following hierarchy:

1. Non-structural shore protection and/or storm damage reduction measures that allow for the growth of vegetation shall be used unless it is demonstrated that use of non-structural measures is not feasible or practicable. Factors considered in determining whether use of a non-structural measure is feasible include the type of waterway on which the site is located, the distance to the navigation channel, the width of waterway, water depth at the toe of bank, the bank orientation, shoreline slope, fetch, erosion rate, the amount of sunlight the site receives, substrate composition, and presence of shellfish habitat, submerged vegetation and wetlands at the site. For guidance on measures that may be appropriate depending upon factors impacting a site, see Guidance for Appropriate Shoreline Protection and/or Storm Damage Reduction Measures for a Site available from the Division of Land Use Regulation's website at www.state.nj.us/dep/landuse. **This**

guidance follows N.J.S.A 52:14B-3a and does not impose any new or added requirements nor can it be used for enforcement purposes.

2. Where the use of non-structural shore protection and/or storm damage reduction measures under (b)1 above is demonstrated to be not feasible or practicable, then hybrid shore protection and/or storm damage reduction measures that allow for the growth of vegetation, such as stone, rip-rap, sloped concrete articulated blocks or similar structures, or gabion revetments, shall be used. Factors considered in determining whether use of a non-structural measure is feasible include the type of waterway on which the site is located, the distance to the navigation channel, the width of waterway, water depth at the toe of bank, the bank orientation, shoreline slope, fetch, erosion rate, the amount of sunlight the site receives, substrate composition, and presence of shellfish habitat

3. Where the use of hybrid shore protection and/or storm damage reduction measures under (b)2 above is demonstrated to be not feasible or practicable, then structural shore protection and/or storm damage reduction measures such as bulkheads, revetments, sea walls, or other retaining structures shall be used. Factors considered in determining whether use of a hybrid shore protection measure is feasible include the type of waterway on which the site is located, the distance to the navigation channel, the width of waterway, water depth at the toe of bank, the bank orientation, shoreline slope, fetch, erosion rate, the amount of sunlight the site receives, substrate composition, and presence of shellfish habitat.

(c) The hierarchy set forth at (b) above does not apply to water dependent uses within existing ports.

(d) The construction, maintenance, or reconstruction of a bulkhead shall comply with the following:

1. A bulkhead that is subject to wave runup forces, specifically, a bulkhead in a V-Zone as described at N.J.A.C. 7:7E-3.18, shall be designed and certified by a professional engineer to withstand the forces of wave runup, and shall include a splash pad on the landward side. The splash pad shall have a minimum width of 10 feet, and may be constructed of concrete, asphalt or other erosion resistant material. If a cobblestone or similar splash pad is used, an appropriate sub-base and filter cloth shall be incorporated into the design. The use of rip-rap along the seaward toe of the bulkhead structure may be required on a case-by-case basis as a means to limit the scour potential;

2. Maintenance or reconstruction of an existing bulkhead is conditionally acceptable provided that it meets (d)2i, ii, or iii below. All measurements specified below shall be made from the waterward face of the original bulkhead alignment of the existing bulkhead to the waterward face of the replacement bulkhead.

i. The replacement bulkhead is located within 18 inches outshore of the existing bulkhead, except in accordance with (d)2ii or iii below;

ii. The replacement bulkhead is located no more than 24 inches outshore of the existing bulkhead when the replacement bulkhead is constructed of a corrugated material, and the replacement bulkhead is located as close as possible to the face of the existing bulkhead; or

iii. Maintenance or reconstruction of an existing bulkhead that does not meet (d)2i or ii above shall be considered new construction, unless it can be demonstrated that the existing bulkhead cannot physically accommodate a replacement in accordance with (d)2i or ii above. In that case, the replacement bulkhead shall be as close as physically possible to the original bulkhead alignment.

(e) Dune restoration, creation and maintenance projects as non-structural shore protection and/or storm damage reduction measures are encouraged. These projects, including sand fencing, revegetation, additions of non-toxic appropriately sized material, and measures to control pedestrian and vehicular traffic, shall comply with N.J.A.C. 7:7E-3A, standards for beach and dune activities.

(f) Beach nourishment projects as non-structural shore protection and/or storm damage reduction measures are encouraged, provided:

i. The particle size and type of the fill material is compatible with the existing beach material to ensure that the new material will not be removed to a greater extent than the existing material would be by normal tidal fluctuations;

ii. The elevation, width, slope, and form of the proposed beach nourishment projects are compatible with the characteristics of the existing beach;

iii. The sediment deposition will not cause unacceptable shoaling in downdrift inlets and navigation channels;

iv. Public access to the nourished beach is provided in accordance with the lands and waters subject to the public trust rights rule, N.J.A.C. 7:7E-3.50, and the public access rule, N.J.A.C. 7:7E-8.11.

(g) Structural shore protection and/or storm damage reduction measures that are conducted using monies from the Shore Protection Fund established by N.J.S.A. 13:19-16 and/or any other Department monies shall comply with (g)1 and 2 below.

1. The construction of new shore protection structures or expansion or fortification of existing shore protection structures, including, but not limited to, jetties, groins, seawalls, bulkheads, gabions and other retaining structures to retard longshore transport and/or to prevent tidal waters from reaching erodible material, is acceptable only if the structure meets the following conditions:

i. The structure is essential to protect water dependent uses or heavily used public recreation beach areas in danger from tidal waters or erosion, or the structure is essential to protect existing structures and infrastructure in developed shorefront areas threatened by erosion, or the structure, for example, a retained earthen berm, is essential to mitigate the projected erosion in an erosion hazard area along a headland and provide erosion protection for a development that is otherwise acceptable under this chapter;

ii. The structure will not cause significant adverse impacts on local shoreline sand supply;

iii. The structure will not create net adverse shoreline sand movement downdrift, including erosion or shoaling;

iv. The structure will cause minimum feasible adverse impact to living marine and estuarine resources;

v. The structure is consistent with the State's Shore Protection Master Plan; and

vi. If the proposed project requires filling of a water area, the filling is consistent with filling rule, N.J.A.C. 7:7E-4.10, and all other applicable rules in this chapter; and

2. Public access to the shore protection project shall be provided in accordance with the lands and waters subject to public trust rights rule, N.J.A.C. 7:7E-3.50 and the public access rule, N.J.A.C. 7:7E-8.11.

(h) Rationale: New Jersey's coastal environment is dynamic, and shaped by natural forces such as wind, waves and storms. To manage the effects of these forces on development, water areas, and the shoreline, non-structural and structural shoreline stabilization measures and shore protection and storm damage reduction measures are employed. These measures, collectively known as coastal engineering, include living shorelines, rip-rap and gabion hybrid structures, bulkheads, revetments, seawalls, and dune restoration and beach nourishment projects.

Vegetated or living shorelines are a shore protection and/or storm damage reduction measure that addresses the loss of vegetated shorelines and habitat in the littoral zone by providing for the protection, restoration or enhancement of these habitats. This measure provides "living space" for organisms through the strategic placement of plants, sand or other structural and organic materials.

Structural solutions as shore protection and storm damage reduction measures are appropriate and essential at certain locations, given the existing pattern of urbanization of New Jersey's shoreline. However, the creation, repair, or removal of publicly-funded shore protection structures must serve clear and broad public purposes and must be undertaken only with a clear understanding, on a regional basis, of the consequences to natural shoreline sand systems.

As documented by the Department, the Federal Emergency Management Agency and others, dunes have proven to be very effective in providing protection from coastal storm surges, wave action and flooding. Dunes have been shown to reduce the level of storm damage particularly to boardwalks, gazebos and residential oceanfront structures. Creation, restoration, enhancement, and maintenance of dunes is therefore encouraged.

New Jersey's unique geography places the State in the potential path of hurricanes, tropical storms, and nor'easters. Healthy beaches provide mitigation from these natural disasters by acting as a buffer between the ocean or bay and the homes, businesses, and infrastructure along the coast. Beach nourishment projects consist of the initial placement of sand along a beach that has experienced erosion. Beach nourishment depends upon

adequate quantity and suitable quality of beach nourishment material; otherwise the material may quickly return to the ocean or bay. Sources of sand for such projects can include a local source such as from a neighboring beach or sandbar, a dredged source such as a nearby inlet or waterway, an inland source such as a mining quarry, or, as used most commonly in large-scale projects, an offshore source such as a borrow site along the ocean bottom. This sand can be brought in with trucks or barges, hydraulically pumped or any combination of the above, and is then spread evenly along the beach using a common bulldozer. This completes the initial beach nourishment phase. As nourished beaches undergo erosion, they must be maintained through beach re-nourishment.

The Public Trust Doctrine requires that access be provided to publicly funded shore protection structures and that such structures not impede public access.

The New Jersey Supreme Court in *Borough of Neptune v. Avon-by-The-Sea* 61 N.J. 296(1972) held that:

"…at least where the upland sand area is owned by a municipality - a political subdivision and creature of the state –and dedicated to public beach purposes, a modern court must take the view that the Public Trust Doctrine dictates that the beach and ocean waters must be open to all on equal terms and without preference and that any contrary state or municipal action is impermissible. (61 N.J. at 308-309)."

Shore protection structures, when located on wet sand beaches, tidally flowed or formerly tidally flowed lands, are subject to the Public Trust Doctrine. Once built, most

publicly funded shore protection structures become municipal property and are, therefore, subject to the Public Trust Doctrine in the same manner as municipally owned dry beaches.

7:7E-7.12 Dredged material placement on land

(a) Dredged material placement is the disposal or beneficial use of sediments removed during dredging operations. Beneficial uses of dredged material include, but are not limited to, fill, **capping material,** topsoil, bricks and lightweight aggregate. This rule applies to the placement of dredged material landward of the spring high water line. The standards for dredged material disposal in Water Areas are found at N.J.A.C. 7:7E- 4.8.

(b) (No change.)

(c) Dredged material disposal **and/or construction of a confined disposal facility** is prohibited [on]**in** wetlands unless [the disposal satisfies] the criteria found at N.J.A.C. 7:7E-3.27 **are met**.

(d) The **beneficial** use of dredged material of appropriate quality and particle size for purposes such as restoring landscape, enhancing farming areas, capping and remediating landfills and brownfields, **transportation projects,** beach protection, creating marshes, capping contaminated dredged material disposal areas, and making new wildlife habitats is encouraged.

(e) **Adverse** [Effects]**effects** associated with the transfer of the dredged materials from the dredging site to the **upland confined** disposal **facility** [site]**or upland placement site** shall be minimized to the maximum extent feasible.

(f) - (g) (No change.)

(h) All potential releases of water from confined (diked) disposal [sites] **facilities** and rehandling basins shall meet existing State Surface Water Quality Standards (N.J.A.C. 7:9B) and State [Groundwater]**Ground Water** Quality Standards (N.J.A.C. 7:9**C**).

(i) (No change.)

(j) Rationale: Dredged material disposal **and/or beneficial use** is an essential coastal land and water use that is linked inextricably to the coastal economy. Dredged material placement on land could have serious impacts in the coastal environment. In the past decade, evolving [state] **State** and federal policies for protection of the marine and estuarine coastal environment have sharply limited the designation of new open water dredged material disposal areas. Yet maintenance dredging must continue if inlets and navigation channels are to be maintained. This rule recognizes the importance of this use of coastal resources and the need for sites landward of the spring high water line where this material can be placed.

Dredged material may contain pollutants and thus dredging and dredged material placement must be managed to minimize impacts on water, air and habitat. Further, every precaution should be taken to ensure that the placement of dredged material on land does not endanger the natural coastal resources, human health or the environment. Therefore, due investigation is required prior to approval of dredged material placement on land.

SUBCHAPTER 8. RESOURCE RULES

7:7E-8.2 Marine fish and fisheries

(a) - (b) (No change.)

(c) The following coastal activities are conditionally acceptable provided that the activity complies with the appropriate general water area rule(s) at N.J.A.C. 7:7E-4;

1. – 2. (No change.)

3. The establishment of Aquaculture Development Zones in accordance with N.J.S.A. 4:27-1 et seq. and any regulations developed and adopted pursuant thereto[.]**; and**

4. The establishment of living shorelines to protect, restore or enhance a habitat area, in accordance with N.J.A.C. 7:7E-4.23.

(d) Rationale: Finfish (freshwater, estuarine, and marine) and shellfish resources, and the habitats that support these resources provide significant recreation experiences for residents of New Jersey and interstate visitors. These resources also help the State's economy, by leading to

expenditures of approximately [$747 million]**$1.4 billion** per year ([New Jersey Department of Agriculture, 1995, American Sportsfishing Association, 1996, and Southwick Associates, 1999] **US Department of Commerce, National Marine Fisheries Service, 2008**). The Department also estimates that [944,000]**1.2 million** people participated in marine/estuarine recreational fishing in [1996]**2010** in New Jersey. (US Department of Commerce, National Marine Fisheries Service, [1996]**2011**) The value of and participation in recreational saltwater fishing is underestimated here as these figures only include finfish data and do not include recreational crabbing and clamming, which are important activities in New Jersey. Commercial landings for all finfish and shellfish in New Jersey during [1996]**2010** were [182,859,637]**161,831,909** pounds, valued at [$94.8] **$177** million dockside, according to **US** Department of Commerce statistics ([1996]**2011**). The total ripple effect on the State economy is estimated at [$2.1] **$2.6** billion, with recreational fishing yielding [$1.5]**$1.6** billion and commercial fishing yielding [$590.7 million] **$1.06 billion**. ([Southwick Associates, 1999]**US Department of Commerce, National Marine Fisheries Service, 2008 and 2011**).

Activities which may interfere with marine fish and fisheries include blockage of diadromous finfish spawning runs, reduction in the critical capacity of estuaries to function as finfish nursery or spawning areas, reduction of summer dissolved oxygen level below 4 pm stimulating anoxic phytoplankton blooms, introduction of heavy metals or other toxic agents into coastal water, rise in ambient water temperature regime especially during summer and fall periods, unacceptable increase in turbidity levels, siltation, or resuspension of toxic agents,

excavation of marine substrate to obtain sand resources or to install submarine cables and pipelines, and introduction of effluents from domestic and industrial sources.

Water presently condemned for shellfishing may not be directly or immediately important to human economics although these areas have been used as resource recovery programs, relay and depuration, source areas. These areas however serve for restocking fishable areas through production of motile larvae. Shellfish in condemned waters also are not lost to estuarine ecological food-webs, but serve as a food source to other species of wildlife.

Sand mining for the purpose of beach nourishment has the potential to impact marine fish and fisheries by altering the contours of the water bottom (bathymetry) within borrow areas or by covering fishery resources and/or habitat through the placement of sand, thereby reducing the productivity of these areas. In order to conduct mining activities in a manner that does not adversely affect marine fish and fisheries. Design measures may include, but are not limited to, modifying the location and dimensions of proposed borrow areas, creating and/or enhancing habitat at or near the borrow site, requiring timing restrictions on sand mining activities, limiting frequency of borrow activities, and reducing allowable sand mining volumes.

Shorelines lost due to erosion eliminate intertidal habitat, reduce the amount of sandy beach, and decrease the amount of organic matter necessary to maintain tidal wetlands. This erosion results in the degradation of the coastal environment through impacts to natural habitats, such as tidal wetlands and spawning grounds. Coastal states are seeking natural solutions, such as the creation of living shorelines, to address erosion as an alternative that adds diversity to other shore protection measures. Living shorelines are

a shoreline management practice that addresses the loss of vegetated habitats by providing for their protection, restoration or enhancement.

Fishery Management Plans are developed by the Regional Fisheries Management Councils, National Marine Fisheries Service and Atlantic States Marine Fisheries Commission in accordance with the Federal Fisheries Conservation and Management Act of 1976, P.L. 94-265, as amended or the Federal Atlantic Coastal Fisheries Cooperative Management Act, P.L. 103-206, as amended. Fishery Management Plans are also developed by the Department pursuant to the State's Marine Fisheries Management and Commercial Fisheries Act**,** [pursuant to]N.J.S.A. 23:2B-1 et seq. Fishery Management Plans are intended to prevent overfishing of marine fish and to achieve optimal yield from each fishery on a continuing basis. These Plans are adopted on a regional basis and provide for long-term viability of marine fish and fisheries. This rule provides the Department the ability to ensure that Fishery Management Plans, as well as developmental and other activities, will not adversely affect New Jersey's recreational and commercial marine fisheries.