



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

BRAXTON C. DAVIS
Director

CRC-18-11

March 26, 2018

MEMORANDUM

TO: Coastal Resources Commission

FROM: Mike Lopazanski

SUBJECT: Fiscal Analysis 7H .0308; 7H .1704 & 7H .1705 Temporary erosion Control Structures

At the November 2017 CRC meeting, the Commission approved proposed amendments to the rules governing the use of temporary erosion control structures (sandbags). The most significant proposed changes are as follows:

- Remove the distinction between structures greater or less than 5,000 square feet, setting the time limit at eight years for all structures;
- Remove the “vegetated” requirement for sandbag structures to remain beyond their permitted time when covered by sand;
- Require that only sandbags exposed above grade be removed at the expiration of the permit;
- Modify the “no longer necessary” provisions to require the removal of sandbags that are exposed above grade upon completion of a beach nourishment or inlet relocation/stabilization project.
- Clarify that structures determined by the Division of Coastal Management to be imminently threatened upon the expiration date of permitted temporary erosion control structures may be permitted to remain in place for an additional eight years if they are located in a community pursuing beach nourishment, inlet relocation or stabilization.
- Temporary erosion control structures can be extended beyond the protected structure to address gaps in adjoining sandbag walls.

Staff has prepared the attached fiscal analysis of the proposed amendments in compliance with NC Administrative Procedures Act.

Summary of Fiscal Analysis

The groups most affected by these changes will be oceanfront property owners within the Ocean Eroding (OEA) and Inlet Hazard Areas (IHA) Areas of Environmental Concern (AECs), including private property owners and governments. The NC Department of Transportation will also be affected.

DCM estimates that there will be **cost savings** to property owners from this action of ranging from \$379 - \$3,003 per individual, and to NCDOT ranging from \$1,211 to \$5,878. These cost savings are derived from the delayed costs associated with the removal of sandbags, and the elimination of the requirement to plant vegetation on top of covered bags. Additional, unquantified benefits would

accrue to property owners in the future who would no longer have had to comply with the existing two- or five-year limit. Given all the unknowns related to future benefits, it would be difficult for DCM to estimate this savings. Other unquantified savings include the value of being able to use sandbags more than once to stabilize an imminently threatened structure (sandbags are the only erosion control structures available for individual oceanfront property by law). There are additional changes to other parts of the rules that are merely clarifications, and have no impact. These proposed rule changes are in the public interest, will reduce cost to coastal land owners and conform to the principles of G.S. 150B-19.1 and Executive Order 70.

The fiscal analysis has been approved by DEQ and is currently being reviewed by OSBM. Staff recommends Commission approval of the fiscal analysis conditioned on OSBM approval if it is not received in time for the meeting in Manteo. DCM anticipates the effective date of these rule amendments to be September 1, 2018.

Fiscal Analysis

Temporary Erosion Control Structures

15A NCAC 07H .0308

15A NCAC 07H .1704

15A NCAC 07H .1705

Prepared by

Tancred Miller

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Mike Lopazanski

Policy & Planning Section

NC Division of Coastal Management

(252) 808-2808, ext. 223

March 13, 2018

Summary

Agency	DENR, Division of Coastal Management (DCM) Coastal Resources Commission (CRC)
Title of the Proposed Rule	Specific Use Standards for Ocean Hazard Areas
Citation	15A NCAC 07H .0308 15A NCAC 07H .1704 15A NCAC 07H .1705
Description of the Proposed Rule	7H .0308 contains the CRC's guidelines for the permitting and use of temporary erosion control structures in Ocean Hazard Area of Environmental Concern. 7H .1704 and 7H .1705 rules contain the "General" and "Specific" use standards for emergency work requiring Coastal Area Management Act and/or Dredge and Fill permits to use sandbags for temporary erosion control.
Agency Contact	Tancred Miller Coastal and Ocean Policy Manager Tancred.Miller@ncdenr.gov (252) 808-2808
Authority	G.S. 113-229(c); G.S. 113A-107; 113A-113; 113A-115; 113A-118; 113A-124
Necessity	The Coastal Resources Commission proposes to amend its administrative rules in order to comply with a recent legislative mandate (S.L. 2015-241) related to the management of temporary erosion control structures (sandbags) along oceanfront and estuarine shorelines. The amendments also include changes requested by local government and agency stakeholders, and recommended by the CRC and the Coastal Resources Advisory Council. The amendments will provide uniformity in administration of the sandbag rules while still serving to protect life and property from the hazardous forces indigenous to the Atlantic shoreline.
Impact Summary	State government: Yes Local government: No Substantial impact: No Federal government: No Private citizens: Yes

Introduction and Purpose

The 2015 Appropriations Act (S.L. 2015-241) Section 14.6(p) directed the Coastal Resources Commission (CRC) to amend its rules governing temporary erosion control structures (sandbags), in order to give property owners greater flexibility in their elective use of sandbags for emergency erosion control. The CRC was instructed to adopt temporary rules no later than December 31, 2015, followed by permanent rules in 2016. The time available between the legislative directive and deadline, along with the CRC's meeting schedule and G.S. 150B requirements, prevented the CRC from being able to comply

with the legislative deadline for adopting the temporary rules. While the CRC adopted the proposed amendment on February 10, 2016, the Rules Review Commission objected to the rule on February 18, 2016, stating that the CRC lacked statutory authority because the legislative deadline had passed.

The General Assembly indicated their desire to see the amendments adopted by inserting them into House Bill 593 in 2016, although the bill did not become law that year. During the 2017 legislative session, the General Assembly's most recent action, S.L. 2017-10 (Senate Bill 131), which contained further directives for the Commission regarding temporary erosion control structures. SECTION 3.14.(a) of S.L. 2017-10 **repeals** Sections 14.6(p) and 14.6(q) of S.L. 2015-241 which directed the CRC to adopt rules that:

- (1) Allow the placement of temporary erosion control structures on a property that is experiencing coastal erosion even if there are no imminently threatened structures on the property if the property is adjacent to a property where temporary erosion control structures have been placed.
- (2) Allow the placement of contiguous temporary erosion control structures from one shoreline boundary of a property to the other shoreline boundary, regardless of proximity to an imminently threatened structure.
- (3) The termination date of all permits for contiguous temporary erosion control structures on the same property shall be the same and shall be the latest termination date for any of the permits.
- (4) The replacement, repair, or modification of damaged temporary erosion control structures that are either legally placed with a current permit or legally placed with an expired permit, but the status of the permit is being litigated by the property owner.

S.L. 2017-10 Section 3.14.(b) further states *“Notwithstanding G.S. 150B-21.1A(a), the Coastal Resources Commission may adopt an emergency rule for the use of temporary erosion control structures consistent with the amendments to the temporary erosion control structure rules adopted by the Commission as agenda item CRC-16-23 on May 11, 2016, with any further modifications in the Commission's discretion. The Commission shall also adopt temporary and permanent rules to implement this section.”*

The CRC, therefore, is again proposing to amend its rules governing sandbags minus the four specific changes that were identified under S.L. 2015-241. The CRC is proposing changes as a result of discussions with local government and agency stakeholders, and with the Coastal Resources Advisory Council. The most significant proposed changes are as follows:

- Remove the distinction between structures greater or less than 5,000 square feet, setting the time limit at eight years for all structures;
- Remove the “vegetated” requirement for sandbag structures to remain beyond their permitted time when covered by sand;
- Require that only sandbags exposed above grade be removed at the expiration of the permit;
- Modify the “no longer necessary” provisions to require the removal of sandbags that are exposed above grade upon completion of a beach nourishment or inlet relocation/stabilization project.
- Clarify that structures determined by the Division of Coastal Management to be imminently threatened upon the expiration date of permitted temporary erosion control structures may be permitted to remain in place for an additional eight years if they are located in a community pursuing beach nourishment, inlet relocation or stabilization.
- Temporary erosion control structures can be extended beyond the protected structure to address gaps in adjoining sandbag walls.

The groups most affected by these changes will be oceanfront property owners within the Ocean Erodible (OEA) and Inlet Hazard Areas (IHA) Areas of Environmental Concern (AECs), including private property owners and governments. The NC Department of Transportation will also be affected.

DCM estimates that there will be **cost savings** to property owners from this action of ranging from \$379 - \$3,003 per individual, and to NCDOT ranging from \$1,211 to \$5,878. These cost savings are derived from the delayed costs associated with the removal of sandbags, and the elimination of the requirement to plant vegetation on top of covered bags. Additional, unquantified benefits would accrue to property owners in the future who would no longer have had to comply with the existing two- or five-year limit. Given all the unknowns related to future benefits, it would be difficult for DCM to estimate this savings. Other unquantified savings include the value of being able to use sandbags more than once to stabilize an imminently threatened structure (sandbags are the only erosion control structures available for individual oceanfront property by law). There are additional changes to other parts of the rules that are merely clarifications, and have no impact. These proposed rule changes are in the public interest, will reduce cost to coastal land owners and conform to the principles of G.S. 150B-19.1 and Executive Order 70.

DCM anticipates the effective date of these rule amendments to be September 1, 2018.

Description of the Proposed Rules

DCM currently issues permits for temporary erosion control structures under 15A NCAC 7H .0308(a)(2) and 15A NCAC 7H .1700, which are limited to sandbags used to protect imminently threatened structures (buildings, roads and septic systems). Currently, sandbag structures may remain in place for up to two years if protecting a structure that is less than 5,000 square feet or up to five years for larger structures. Sandbag structures may also remain in place for up to five years, regardless of structure size, if the structure is located in a community that is considered to be actively pursuing a beach nourishment project. If a structure is located in an Inlet Hazard Area of Environmental Concern (AEC) and in a community pursuing an inlet relocation project, the sandbags may remain in place for up to eight years. The use of sandbags for temporary erosion control is allowed only once during the life of a structure on the oceanfront, regardless of ownership, but may be used multiple times if it is located in a community that is actively pursuing a beach nourishment, inlet relocation or inlet stabilization project.

The CRC is proposing the following amendments, based upon a prior legislative mandate, and discussions with stakeholders:

- (1) ***Allow the placement of contiguous temporary erosion control structures from one shoreline boundary of a property to the other shoreline boundary, regardless of proximity to an imminently threatened structure.***
Currently, the landward edge of a sandbag structure cannot be located more than 20 feet waterward of the structure or right of way being protected, and may not extend more than 20 feet past the sides of the structure being protected.
- (2) ***Increase the allowable time for permitted sandbags to eight years, regardless of location, or the size or type of property being protected.***
Currently, sandbags may be permitted for two, five or eight years, depending on the size and location of the structure being protected.
- (3) ***Allow sandbags to remain past their permitted time if they are covered with sand.***
Currently, sandbags can remain past their permitted time only if they are covered with sand and vegetation. The proposed change removes the vegetation requirement.
- (4) ***When sandbags are no longer needed, only bags exposed above grade be removed.***
Currently, all sandbags that are not covered and vegetated must be removed when they are no longer needed, which could necessitate excavation to remove settled bags. The proposed change allows buried bags to remain, reducing cost and disturbance.
- (5) ***Allow sandbags to remain until the completion of a beach nourishment, inlet relocation or inlet stabilization project.*** Currently, sandbags must be removed prior to the completion of beach and inlet erosion mitigation projects.

Allowing sandbag placement across the entire width of a lot will give property owners the ability to connect their sandbag structures, eliminating gaps that can undermine the effectiveness of adjacent sandbag structures.

The most significant change being proposed by the CRC, that was not included in the legislation, is a change to the permitted time period for sandbag structures. Currently, sandbags may be permitted for two, five or eight years, depending on the size and location of the structure being protected. The proposed amendments standardize the maximum time period that sandbags can be utilized for temporary erosion control to eight years for any size structure, in all locations. The initial eight-year timeframe will apply as well to properties located in communities that are not actively pursuing long-term actions to address beach erosion. This eight-year, across-the-board permit duration is expected to account for the time it takes to complete a beach or inlet project, including project design, permitting, construction, and typical delays. There is some potential that property owners will need sandbags longer than eight years in the event that a planned nourishment project does not happen within that timeframe, or fails.

One of the anticipated effects of this proposed rule change will be consistent application of temporary erosion control measures along all oceanfront and inlet shorelines. Synchronizing the use of temporary erosion control measures with long-term actions to address chronic erosion will prevent property owners from prematurely exposing their structures to hazards associated with the Atlantic shoreline and endangering their structures.

The CRC is also proposing a minor modification to the conditions under which sandbags would need to be removed. Currently, sandbags must be removed when the permit expires, or when they are no longer necessary because the structure they are protecting is no longer imminently threatened due to a beach fill, inlet relocation or stabilization project; however, removal is not required if the bags are covered with sand and vegetation. Under the proposed amendment, sandbags can remain when they are no longer necessary, provided they are covered with sand; the vegetated requirement is being removed, so that only uncovered sandbags above grade must be removed. This provision will result in cost savings to property owners by allowing them to delay or avoid the costs of sandbag removal and dune planting. These cost savings are estimated in the Benefits section below.

COSTS OR NEUTRAL IMPACTS

The CRC offers property owners who wish to do so, the ability to install sandbags for temporary erosion control once their structure becomes imminently threatened, which is defined as the foundation or septic system being located less than 20 feet away from the erosion scarp (steep ridge). In the 20-year period from 1996-2015, DCM permitted 435 sandbag structures, an average of 22 structures per year (rounded up). Excluding 1998, which was a true outlier, DCM issued 354 permits over 19 years, for an average of 19 permits per year. Over the most recent 10-year period from 2006 to 2015, DCM issued 117 permits, an average of 12 per year. The cost to install a sandbag structure is approximately \$425 per linear foot. Assuming the typical width of an oceanfront lot to be 50 feet, and with sandbag structures able to span the entire width of the lot, the typical installation cost will be about \$21,250. Under normal conditions, sandbag structures are durable and stable enough to easily outlast the eight-year permit duration without deterioration or displacement. Storm events and vandalism can damage or shift sandbags, requiring property owners to spend money on maintenance or repairs, but these events are unpredictable and may not occur at all during the lifespan of a sandbag structure.

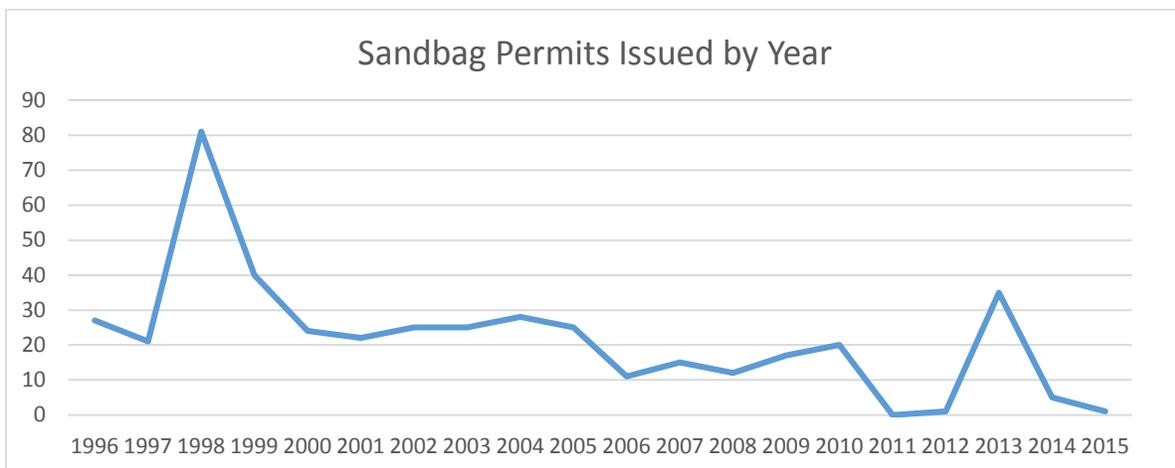
289 of the 435 permitted structures from 1996 to 2015 still remained on the beach in 2015, meaning that 146 sandbag structures had been removed, or an average of seven sandbag structures removed per year. DCM estimates that the cumulative length of all sandbag structures currently on the beach is approximately six miles. With the extension of permit duration to eight years, the number of sandbag structures removed can be expected to fall initially, but the return to historic levels as the longer-term permits begin to expire, and regular nourishment projects diminish the need for sandbags. It is also possible that removal could trend downward over the longer term if property owners elect to cover their bags with sand instead of removing them. The removal of the requirement to keep bags covered *and* vegetated may provide some additional incentive to keep expired bags instead of removing them; DCM estimates the cost of vegetating a 50-foot sandbag structure at \$1,000, based on 1,500 plants at about \$0.60 per plant, plus tools and fertilizer. Sandbags that can successfully retain vegetation, typically

because they are not regularly overwashed, do not generally require manual plantings. Sandbag structures that require manual plantings tend to experience periodic overwash, and it is difficult or impossible to keep them covered with sand or vegetated. For the purpose of this analysis; therefore, we will assume that removing the vegetation requirement will not have any meaningful impact on removal rates, and the average number of structures removed over the next 10 years will be the same as the average over the last 10 years; i.e., seven structures per year. The cost to remove a sandbag structure ranges from \$4,000 - \$8,000 depending upon whether bags are buried or exposed, the number of bags, the equipment required, and other factors.

With the exception of a couple outlier years that followed unpredictable major storms that affected the state, the trend of new permits for sandbags has been declining. One possible explanation other than the low incidence of major storms in recent years, is that the vast majority of structures that qualify for sandbags, already have them. Since the proposed amendments will not make more properties eligible for sandbags, the number of permits issued/miles protected is not expected to increase. For the purpose of this analysis, we will assume that the average for new permits issued over the next 10 years will be the same as the average over the last 10 years; i.e., 12 permits per year. Since sandbags can be used more than once on properties located in communities that are actively pursuing a beach or inlet project, some of the “new” permit applications could be to allow existing sandbag structures to remain in place for another eight years. The application fee for a sandbag permit \$400, Based on the average number of permits issued over the past 10 years, DCM receives \$4,800 per year in sandbag permit fees, on average.

DCM has heard claims that the entire value of property behind sandbags would be lost if the bags were removed, but it is not valid to assume that all 289 remaining structures would be destroyed if their sandbag protection were to be removed. While sandbags are effective in mitigating hazards that can cause erosion and destroy structures, there are other factors that affect a property’s ability to withstand coastal hazards (e.g., setbacks, freeboard, topography, shoreline orientation, and the property’s proximity to an inlet). In addition, chronic erosion produces different effects than episodic events. Sandbags may perform well against chronic erosion, but may be significantly less effective in storm events. DCM regularly calculates average annual rates of chronic erosion and uses them to determine development setbacks, but storm frequency and intensity, which can have larger impacts than chronic erosion, are impossible to predict.

<http://deq.nc.gov/about/divisions/coastal-management/coastal-management-data/oceanfront-sandbags>)



Other potential costs that might result from the proposed changes include the aesthetic impacts of sandbags on the beach, the potential for refracted wave energy to increase erosion on adjacent properties and the public beach, public and emergency access obstructions, and ecological impacts. These types of costs are not readily quantifiable, but are to some degree mitigated by regulatory standards on sandbag color and location, and restricting the use of sandbags until a structure becomes imminently threatened.

Pursuant to G.S. 150B-21.4, the agency reports that the proposed amendments to 7H.0308(a)(2) and 7H.1700 will not affect environmental permitting for the NC Department of Transportation (NCDOT). The primary change applicable to NCDOT is the longer duration of sandbag permits however, the majority of NCDOT projects (roads) fall into the greater than 5,000 square foot structure category and are already eligible for the eight-year permit duration. NCDOT therefore is not expected to experience any negative fiscal impacts associated with the proposed rule amendments.

Local Government

Local governments do not typically apply for General Permits for sandbag structures; local government sandbag applications are usually at the scale where Major Permits are required and similar to NCDOT, the structures are generally larger than 5,000 square feet. As such, the proposed amendments are not expected to affect local government revenues or expenditures in a significant or measurable way.

Division of Coastal Management

DCM does not anticipate that the proposed action will significantly increase operating cost over what is currently required for permitting, inspecting, and ensuring compliance of sandbag structures. The adoption of a uniform approach to managing sandbags for temporary erosion control will increase the efficiency in which this activity is permitted as permit expiration dates will not be dependent upon the location of the structure other than being present in a community pursuing beach nourishment, inlet relocation or inlet stabilization. Extended time limits on sandbags will provide some relief to DCM staff from the current situation as property owners have increasingly sought variances once sandbag permits expire. Only about 12 of the existing sandbag structures are located in communities that are not actively pursuing a beach or inlet project, meaning that the vast majority of sandbags are eligible for new permits to allow them to remain in place for an additional eight years. In addition, sandbags will not need to be removed after their permit expires if they are covered with sand. DCM expects this flexibility to increase the compliance rate with the new rules and decrease the enforcement burden on DCM. Property owners may be less likely to contest the removal of sandbags after a beach nourishment, inlet relocation or inlet stabilization project if they know sandbags would once again be permitted should their structure again become imminently threatened.

DCM does not anticipate any change in permitting receipts due to the proposed action. Any potential increase in the number of permits issued would likely be offset by a decrease in the number of permits needed due to a beach nourishment project or an inlet relocation/stabilization project. Virtually all of the developed beaches in the state that have erosion problems have either been recently nourished, or have plans to be nourished. The frequency of renourishment varies but is typically tied to need, and can be as frequent as annually or as infrequently as once per decade or more.

BENEFITS

Private Property Owners

New permits upon the effective date of the rule would have an eight-year expiration, a benefit that would be realized through the deferred cost from having to remove sandbags at an earlier date. The costs associated with the removal of sandbags varies from \$4,000 - \$8,000 depending on the length of the sandbag structure and other factors as described previously.

Instead of spending the money to remove sandbags in the current timeframe, property owners would have an additional three to six years of time before incurring this expense. Benefits are calculated as the amount of investment income that a property owner could earn during this period assuming a return ranging between 3% and 7%. Cost savings also include \$1,000 as an estimate of the amount of money it

would have cost to purchase and plant vegetation on top of a sandbag structure. Application of 3% and 7% investment rates of return to the \$5,000 - \$9,000 cost savings range associated with removal of sandbags and plantings is utilized to estimate the net present value (NPV) for delayed sandbag removal. For a 3% investment return, the NPV to a property owner ranges from \$379 - \$1,163. For a 7% investment return, the NPV to a property owner ranges from \$918 - \$3,003. Table 1 depicts the investment return afforded by the number of years of additional permit duration.

Table 1. Estimate of Benefits to Property Owners for Delayed Sandbag Removal

Years of investment	Cost savings	Investment income at 3 percent	NPV at 3% return	Investment income at 7 percent	NPV at 7% return
3	\$5,000	\$464	\$379	\$1,125	\$918
	\$9,000	\$935	\$763	\$2,025	\$1,653
6	\$5,000	\$970	\$646	\$2,504	\$1,669
	\$9,000	\$1,746	\$1,163	\$4,507	\$3,003

While these properties will benefit from the ability to protect their structures for an increased time period, it is not possible to calculate the number that may become condemned, relocated, damaged/destroyed or otherwise unusable as these factors depend on unknown natural events and owner decisions. It is also not possible to predict whether or not a community will be successful in completing a beach nourishment, inlet relocation or stabilization project as financing of these projects involve the local, state and federal entities outside DCM's control. DCM therefore cannot say with any certainty that the value of these properties will be preserved at some future time even with the extended sandbag permit duration.

NC Department of Transportation

Pursuant to G.S. 150B-21.4, the agency reports that the proposed amendments to 7H.0308(a)(2) and 7H.1705 will not affect environmental permitting for NCDOT. The changes primarily lengthen the duration of sandbag permits for NCDOT projects from five years to eight. NCDOT's sandbag structures are typically bigger than sandbag structures on individual properties, since they are typically used to protect bridges and sections of imminently threatened roadways. Consequently, removal costs for NCDOT's sandbags are higher than for individual property owners. One recent estimate for removing a typical NCDOT sandbag structure was between \$16,000 and \$32,000. If this range is assumed to be average, the NPV of NCDOT's additional three years of permit duration ranges between \$1,211 and \$5,878. Table 2 depicts the investment return afforded by the three years of additional permit duration.

Table 2. Estimate of Benefits to NCDOT for Delayed Sandbag Removal

Years of investment	Cost to remove bags	Investment income at 3 percent	NPV at 3% return	Investment income at 7 percent	NPV at 7% return
3	\$16,000	\$1,484	\$1,211	\$3,601	\$2,939
	\$32,000	\$2,967	\$2,422	\$7,201	\$5,878

Division of Coastal Management

If the expected increase in compliance and decrease in enforcement actions prove true, DCM would benefit by the ability to spend less time on sandbag compliance and enforcement, and more time on other agency tasks. Enforcement actions on sandbags do not follow a regular timeline, because permit expiration dates and violations are not uniform. It is not feasible to estimate the total amount of time that

DCM staff has spent on sandbag enforcement in recent years, nor to predict how much time might be required in future years. The fiscal benefit of this rule change to DCM cannot be quantified.

COST/BENEFIT SUMMARY

The greatest benefit of the proposed rule changes will be the ability of property owners to maintain sandbags structures for a period of time more closely aligned with the timeframes associated with a community completing a beach nourishment, inlet relocation or inlet stabilization project. In the near term, property owners will realize a benefit associated with the delayed removal of sandbags ranging from \$379-\$3,003. Additional, unquantified benefits would accrue to property owners in the future who would have had to comply with the existing two- or five-year limit. Given all the unknowns, it is difficult for the Division of Coastal management to estimate this savings.

There will also be a decrease in the enforcement burden on DCM as property owners may be less likely to contest the removal of sandbags after a beach nourishment, inlet relocation or inlet stabilization project if they know sandbags would once again be permitted should their structure again become imminently threatened.

The quantified costs and benefits from these proposed rule changes do not exceed \$500,000 annually. Table 3 summarizes the range of estimated costs and benefits of this action. Benefits arise from the ability to keep sandbags in place for an additional three or six years (amendment allows for eight years instead of two or five). Dollar amounts in the table represent the net present value (NPV) of investing the money that would otherwise have been spent on removal at 3% and 7% rates of return. The calculations assume that seven sandbag structures (six private and one NCDOT) will be removed each year, consistent with the historical average.

Table 3. Cost/Benefit Summary

	Benefit (NPV)	Cost	Substantial Impact
Private Citizens	\$2,274-18,018	0	No
Local Government	0	0	No
NCDOT	\$1,211-5,878	0	No
State Government	0	0	No
Federal Government	0	0	No
TOTAL	\$3,485-23,896	0	No

PROPOSED AMENDMENTS 15A NCAC 7H .0308; .1704; .1705

15A NCAC 07H .0308 SPECIFIC USE STANDARDS FOR OCEAN HAZARD AREAS

(a) Ocean Shoreline Erosion Control Activities:

(1) Use Standards Applicable to all Erosion Control Activities:

- (A) All oceanfront erosion response activities shall be consistent with the general policy statements in 15A NCAC 07M .0200.
- (B) Permanent erosion control structures may cause significant adverse impacts on the value and enjoyment of adjacent properties or public access to and use of the ocean beach, and, therefore, **unless specifically authorized under the Coastal Area Management Act**, are prohibited. Such structures include bulkheads, seawalls, grovetments, jetties, groins and breakwaters.
- (C) Rules concerning the use of oceanfront erosion response measures apply to all oceanfront properties without regard to the size of the structure on the property or the date of its construction.
- ~~(D)~~ **All permitted oceanfront erosion response projects, other than beach bulldozing and temporary placement of sandbag structures, shall demonstrate sound engineering for their planned purpose.**
- ~~(E)~~(D) Shoreline erosion response projects shall not be constructed in beach or estuarine areas that sustain substantial habitat for fish and wildlife species, as identified by natural resource agencies during project review, unless mitigation measures are incorporated into project design, as set forth in Rule ~~.0306(i)~~ **.0306(h)** of this Section.
- ~~(F)~~(E) Project construction shall be timed to minimize adverse effects on biological activity.
- ~~(G)~~(F) Prior to completing any erosion response project, all exposed remnants of or debris from failed erosion control structures must be removed by the permittee.
- ~~(H)~~(G) **Erosion Permanent erosion** control structures that would otherwise be prohibited by these standards may be permitted on finding by the Division that:
 - (i) the erosion control structure is necessary to protect a bridge which provides the only existing road access on a barrier island, that is vital to public safety, and is imminently threatened by erosion as defined in ~~provision~~Part (a)(2)(B) of this Rule;
 - (ii) the erosion response measures of relocation, beach nourishment or temporary stabilization are not adequate to protect public health and safety; and
 - (iii) the proposed erosion control structure will have no adverse impacts on adjacent properties in private ownership or on public use of the beach.
- ~~(I)~~(H) Structures that would otherwise be prohibited by these standards may also be permitted on finding by the Division that:
 - (i) the structure is necessary to protect a state or federally registered historic site that is imminently threatened by shoreline erosion as defined in provision (a)(2)(B) of this Rule;
 - (ii) the erosion response measures of relocation, beach nourishment or temporary stabilization are not adequate and practicable to protect the site;
 - (iii) the structure is limited in extent and scope to that necessary to protect the site; and
 - (iv) **any a** permit for a structure under this Part ~~(I)~~ may be issued only to a sponsoring public agency for projects where the public benefits outweigh the **short or long range significant** adverse impacts. Additionally, the permit shall include conditions providing for mitigation or minimization by that agency of **any unavoidable significant** adverse impacts on adjoining properties and on public access to and use of the beach.
- ~~(J)~~(I) Structures that would otherwise be prohibited by these standards may also be permitted on finding by the Division that:
 - (i) the structure is necessary to maintain an existing commercial navigation channel of regional significance within federally authorized limits;
 - (ii) dredging alone is not practicable to maintain safe access to the affected channel;
 - (iii) the structure is limited in extent and scope to that necessary to maintain the channel;
 - (iv) the structure shall not **adversely impact have significant adverse impacts on** fisheries or other public trust resources; and
 - (v) any permit for a structure under this Part (J) may be issued only to a sponsoring public agency for projects where the public benefits outweigh the **short or long range significant** adverse impacts. Additionally, the permit shall include conditions providing for mitigation or minimization by that agency of any **unavoidable significant** adverse impacts on adjoining properties and on public access to and use of the beach.
- ~~(K)~~(J) The Commission may renew a permit for an erosion control structure issued pursuant to a variance granted by the Commission prior to 1 July 1995. The Commission may authorize the replacement

of a permanent erosion control structure that was permitted by the Commission pursuant to a variance granted by the Commission prior to 1 July 1995 if the Commission finds that:

- (i) the structure will not be enlarged beyond the dimensions set out in the permit;
- (ii) there is no practical alternative to replacing the structure that will provide the same or similar benefits; and
- (iii) the replacement structure will comply with all applicable laws and with all rules, other than the rule or rules with respect to which the Commission granted the variance, that are in effect at the time the structure is replaced.

~~(L)~~(K) Proposed erosion response measures using innovative technology or design shall be considered as experimental and shall be evaluated on a case-by-case basis to determine consistency with 15A NCAC 7M .0200 and general and specific use standards within this Section.

(2) Temporary Erosion Control Structures:

- (A) Permittable temporary erosion control structures shall be limited to sandbags placed landward of mean high water and parallel to the shore.
- (B) Temporary erosion control structures as defined in Part ~~(2)~~(A) of this Subparagraph shall ~~shall~~ may be used to protect only imminently threatened roads and associated right of ways, and buildings and their associated septic systems. A structure is considered imminently threatened if its foundation, septic system, or right-of-way in the case of roads, is less than 20 feet away from the erosion scarp. Buildings and roads located more than 20 feet from the erosion scarp or in areas where there is no obvious erosion scarp may also be found to be imminently threatened when site conditions, such as a flat beach profile or accelerated erosion, increase the risk of imminent damage to the structure.
- (C) Temporary erosion control structures shall be used to protect only the principal structure—and its associated septic system, but not appurtenances such as pools, gazebos, decks or any amenity that is allowed under 15A NCAC 07H .0309 as an exception to the erosion setback requirement.
- (D) Temporary erosion control structures may be placed seaward waterward of a septic system when there is no alternative to relocate it on the same or adjoining lot so that it is landward of or in line with the structure being protected.
- (E) Temporary erosion control structures shall not extend more than 20 feet past the sides of the structure to be ~~protected.~~ protected except to align with temporary erosion control structures on adjacent properties, where the Division has determined that gaps between adjacent erosion control structures may result in an increased risk of damage to the structure being protected. The landward side of such temporary erosion control structures shall not be located more than 20 feet seaward waterward of the structure to be ~~protected~~ protected, or the right-of-way in the case of roads. If a building or road is found to be imminently threatened and at an increased risk of imminent damage due to site conditions such as a flat beach profile or accelerated erosion, temporary erosion control structures may be located more than 20 feet seaward waterward of the structure being protected. In cases of increased risk of imminent damage, the location of the temporary erosion control structures shall be determined by the Director of the Division of Coastal Management or ~~their~~ the Director's designee in accordance with Part ~~(2)~~(A) of this Subparagraph.
- (F) Temporary erosion control structures may remain in place for up ~~to two years after the date of approval if they are protecting a building with a total floor area of 5000 sq. ft. or less and its associated septic system, or, for up to five~~ eight years for a building with a total floor area of more than 5000 sq. ft. and its associated septic ~~system, system.~~ system. Temporary erosion control structures may remain in place for up to five years if they are protecting a bridge or a road. The property owner shall be responsible for removal of any portion of the temporary erosion control structure exposed above grade ~~the temporary structure~~ within 30 days of the end of the allowable time period.
- (G) An imminently threatened structure or property may be protected only once, regardless of ownership, unless the threatened structure or property is located in a community that is actively pursuing a beach nourishment project, or an inlet relocation or stabilization project in accordance with Part (H) of this Subparagraph. Existing temporary erosion control structures may be permitted for additional eight-year periods provided that the structure or property being protected is still imminently threatened, the temporary erosion control structure is in compliance with requirements of this Subchapter, and the community in which it is located is actively pursuing a beach nourishment or an inlet relocation or stabilization project in accordance with Part (H) of this Subparagraph. In the case of a building, a temporary erosion control structure may be extended, or new segments constructed, if additional areas of the building become imminently threatened. Where temporary structures are installed or extended incrementally, the time period for removal under Part (F) or (H) of this Subparagraph shall begin at the time the initial erosion control structure was installed. For the purpose of this Rule:
 - (i) a building and its septic system shall be considered separate structures.

(ii) a road or highway may be incrementally protected as sections become imminently threatened. The time period for removal of each contiguous section of temporary erosion control structure shall begin at the time that the initial section was installed, in accordance with Part (F) of this Subparagraph.

~~(G)~~(H) Temporary sandbag erosion control structures may remain in place for up to eight years from the date of approval if they are located in a community that is actively pursuing a beach nourishment project, or if they are located in an Inlet Hazard Area adjacent to an inlet for which a community is actively pursuing an inlet relocation or stabilization project in accordance with G.S. 113A-115.1. For purposes of this Rule, a community is considered to be actively pursuing a beach nourishment, nourishment or an inlet relocation or stabilization project in accordance with G.S. 113A-115.1 if it has:

- (i) has been issued an active CAMA permit, where necessary, approving such project; or
- (ii) been identified by a U.S. Army Corps of Engineers' Beach Nourishment Reconnaissance Study, General Reevaluation Report, Coastal Storm Damage Reduction Study Study, or an ongoing feasibility study by the U.S. Army Corps of Engineers and a commitment of local or federal money, when necessary; or
- (iii) has received a favorable economic evaluation report on a federal project; or
- (iv) is in the planning stages of a project designed by the U.S. Army Corps of Engineers or persons meeting applicable State occupational licensing requirements and initiated by a local government or community with a commitment of local or state funds to construct the project and or the identification of the financial resources or funding bases necessary to fund the beach nourishment or the inlet relocation or stabilization project.

If beach nourishment or inlet relocation or stabilization is rejected by the sponsoring agency or community, or ceases to be actively planned for a section of shoreline, the time extension is void for that section of beach or community and existing sandbags are subject to all applicable time limits set forth in Part (F) of this Subparagraph.

~~(H)~~(I) Once the a temporary erosion control structure is determined by the Division of Coastal Management to be unnecessary due to relocation or removal of the threatened structure, it shall be removed to the maximum extent practicable by the property owner within 30 days of official notification from the Division of Coastal Management regardless of the time limit placed on the temporary erosion control structure. If the temporary erosion control structure is determined by the Division of Coastal Management to be unnecessary due to the completion of a storm protection project constructed by the U.S. Army Corps of Engineers, a large-scale beach nourishment project, project, or an inlet relocation or stabilization project, any portion of the temporary erosion control structure exposed above grade # shall be removed by the property owner within 30 days of official notification from the Division of Coastal Management Management regardless of the time limit placed on the temporary erosion control structure.

~~(I)~~(J) Removal of temporary erosion control structures is not required if they are covered by dunes sand, with stable and natural vegetation. Any portion of the temporary erosion control structure that becomes exposed above grade after the expiration of the permitted time period shall be removed by the property owner within 30 days of official notification from the Division of Coastal Management.

~~(J)~~(K) The property owner shall be responsible for the removal of remnants of all portions of any damaged temporary erosion control structure.

~~(K)~~(L) Sandbags used to construct temporary erosion control structures shall be tan in color and three to five feet wide and seven to 15 feet long when measured flat. Base width of the temporary erosion control structure shall not exceed 20 feet, and the total height shall not exceed six feet. feet, as measured from the bottom of the lowest bag.

~~(L)~~(M) Soldier pilings and other types of devices to anchor sandbags shall not be allowed. An imminently threatened structure may be protected only once, regardless of ownership, unless the threatened structure is located in a community that is actively pursuing a beach nourishment project, or in an Inlet Hazard Area and in a community that is actively pursuing an inlet relocation or stabilization project in accordance with Part (G)(H) of this Subparagraph. Existing temporary erosion control structures located in Inlet Hazard Areas may be eligible for an additional eight year permit extension provided that the structure being protected is still imminently threatened, the temporary erosion control structure is in compliance with requirements of this Subchapter, and the community in which it is located is actively pursuing a beach nourishment, inlet relocation or stabilization project in accordance with Part (G) of this Subparagraph. In the case of a building, a temporary erosion control structure may be extended, or new segments constructed, if additional areas of the building become imminently threatened. Where temporary structures are installed or

~~extended incrementally, the time period for removal under Part (F) or (G) of this Subparagraph shall begin at the time the initial erosion control structure is installed. For the purpose of this Rule:~~

- ~~(i) a building and septic system shall be considered as separate structures.~~
- ~~(ii) a road or highway shall be allowed to be incrementally protected as sections become imminently threatened. The time period for removal of each section of sandbags shall begin at the time that section is installed in accordance with Part (F) or (G) of this Subparagraph.~~

- (N) Existing sandbag structures may be repaired or replaced within their originally permitted dimensions during the time period allowed under Part (F) or (G) of this Subparagraph.

15A NCAC 07H .1704 GENERAL CONDITIONS

(a) Work permitted by means of an emergency general permit shall be subject to the following limitations:

- (1) No work shall begin until an onsite meeting is held with the applicant and a Division of Coastal Management representative so that the proposed emergency work can be delineated. Written authorization to proceed with the proposed development may be issued during this visit.
- (2) No work shall be permitted other than that which is necessary to reasonably protect against or reduce the imminent danger caused by the emergency, to restore the damaged property to its condition immediately before the emergency, or to re-establish necessary public facilities or transportation corridors.
- (3) Any permitted temporary erosion control projects shall be located no more than 20 feet waterward of the imminently threatened structure or the right-of way in the case ~~of roads, roads,~~ except as provided under 15A NCAC 07H .0308. If a building or road is found to be imminently threatened and at increased risk of imminent damage due to site conditions such as a flat beach profile or accelerated erosion, temporary erosion control structures may be located more than 20 feet ~~seaward~~ waterward of the structure being protected. In cases of increased risk of imminent damage, the location of the temporary erosion control structures shall be determined by the Director of the Division of Coastal Management or the Director's designee.
- (4) Fill materials used in conjunction with emergency work for storm or erosion control shall be obtained from an upland source. Excavation below MHW in the Ocean Hazard AEC may be allowed to obtain material to fill sandbags used for emergency protection.
- (5) Structural work shall meet sound engineering practices.
- (6) This permit allows the use of oceanfront erosion control measures for all oceanfront properties without regard to the size of the existing structure on the property or the date of construction.

(b) Individuals shall allow authorized representatives of the Department of Environment and Natural Resources Environmental Quality to make inspections at any time deemed necessary to be sure that the activity being performed under authority of this general permit is in accordance with the terms and conditions in these Rules.

(c) Development shall not jeopardize the use of the waters for navigation or for other public trust rights in public trust areas including estuarine waters.

(d) This permit shall not be applicable to proposed construction where the Department has determined, based on an initial review of the application, that notice and review pursuant to G.S. 113A-119 is necessary because there are unresolved questions concerning the proposed activity's impact on adjoining properties or on water quality, air quality, coastal wetlands, cultural or historic sites, wildlife, fisheries resources, or public trust rights.

(e) This permit does not eliminate the need to obtain any other state, local, or federal authorization.

(f) Development carried out under this permit must be consistent with all local requirements, CAMA rules, and local land use plans, storm hazard mitigation, and post-disaster recovery plans current at the time of authorization.

History Note: Authority G.S. 113-229(c); 113A-107(a),(b); 113A-113(b); 113A-118.1; Eff. November 1, 1985; Amended Eff. December 1, 1991; May 1, 1990; RRC Objection due to ambiguity Eff. May 19, 1994; Amended Eff. May 1, 2010; August 1, 1998; July 1, 1994;

15A NCAC 07H .1705 SPECIFIC CONDITIONS

(a) Temporary Erosion Control Structures in the Ocean Hazard AEC.

- (1) Permittable temporary erosion control structures shall be limited to sandbags placed landward of mean high water and parallel to the shore.
- (2) Temporary erosion control structures as defined in Subparagraph (1) of this Paragraph shall may be used to protect only imminently threatened roads and associated right of ways, and buildings and their associated septic systems. A structure is considered imminently threatened if its foundation, septic system, ~~or, or~~ right-of-way in the case of ~~roads, roads~~ is less than 20 feet away from the erosion scarp. Buildings and roads located more than 20 feet from the erosion scarp or in areas where there is no obvious erosion scarp

- may also be found to be imminently threatened when the Division determines that site conditions, such as a flat beach profile or accelerated erosion, increase the risk of imminent damage to the structure.
- (3) Temporary erosion control structures shall be used to protect only the principal structure and its associated septic system, but not appurtenances such as pools, gazebos, decks or any amenity that is allowed under 15A NCAC 07H .0309 as an exception to the erosion setback requirement.
 - (4) Temporary erosion control structures may be placed seaward waterward of a septic system when there is no alternative to relocate it on the same or adjoining lot so that it is landward of or in line with the structure being protected.
 - (5) Temporary erosion control structures shall not extend more than 20 feet past the sides of the structure to be ~~protected~~ protected except to align with temporary erosion control structures on adjacent properties, where the Division has determined that gaps between adjacent erosion control structures may result in an increased risk of damage to the structure being protected. The landward side of such temporary erosion control structures shall not be located more than 20 feet seaward waterward of the structure to be protected or the right-of-way in the case of roads. If a building or road is found to be imminently threatened and at increased risk of imminent damage due to site conditions such as a flat beach profile or accelerated erosion, temporary erosion control structures may be located more than 20 feet seaward waterward of the structure being protected. In cases of increased risk of imminent damage, the location of the temporary erosion control structures shall be determined by the Director of the Division of Coastal Management or the Director's designee in accordance with Subparagraph (1) of this Paragraph.
 - (6) Temporary erosion control structures may remain in place for up to ~~two years after the date of approval if they are protecting a building with a total floor area of 5,000 square feet or less and its associated septic system, or for up to five eight years for a building with a total floor area of more than 5,000 square feet and its associated septic system.~~ Temporary erosion control structures may remain in place for up to five eight years if they are protecting a bridge or a road. The property owner shall be responsible for removal of any portion of the temporary erosion control structure exposed above grade the temporary structure within 30 days of the end of the allowable time period.
 - (7) ~~Temporary sandbag erosion control structures may remain in place for up to eight years from the date of approval if they are located in a community that is actively pursuing a beach nourishment project, or if they are located in an Inlet Hazard Area adjacent to an inlet for which a community is actively pursuing an inlet relocation or stabilization project in accordance with G.S. 113A-115.1.~~ For purposes of this Rule, a community is considered to be actively pursuing a beach ~~nourishment,~~ nourishment or an inlet relocation or stabilization project if it has:
 - (A) has an active CAMA permit, where necessary, approving such project; or
 - (B) has been identified by a U.S. Army Corps of Engineers' Beach Nourishment Reconnaissance Study, General Reevaluation Report, Coastal Storm Damage Reduction Study, or an ongoing feasibility study by the U.S. Army Corps of Engineers and a commitment of local or federal money, when necessary; or
 - (C) has received a favorable economic evaluation report on a federal project; or
 - (D) is in the planning stages of a project designed by the U.S. Army Corps of Engineers or persons meeting applicable State occupational licensing requirements and initiated by a local government or community with a commitment of local or state funds to construct the project ~~and or~~ the identification of the financial resources or funding bases necessary to fund the beach ~~nourishment,~~ nourishment or inlet relocation or stabilization project.

If beach nourishment, inlet relocation or stabilization is rejected by the sponsoring agency or community, or ceases to be actively planned for a section of shoreline, the time extension is void for that section of beach or community and existing sandbags are subject to all applicable time limits set forth in Subparagraph (6) of this Paragraph.
 - (8) Once ~~the a~~ temporary erosion control structure is determined by the Division of Coastal Management to be unnecessary due to relocation or removal of the threatened structure, it shall be removed by the property owner to maximum extent practicable within 30 days of official notification from the Division of Coastal Management regardless of the time limit placed on the temporary erosion control structure. If the temporary erosion control structure is determined by the Division of Coastal Management to be unnecessary due to the completion of a storm protection project constructed by the U.S. Army Corps of Engineers, a large scale beach nourishment project, or an inlet relocation or stabilization project, any portion of the temporary erosion control structure exposed above grade ~~it~~ shall be removed by the permittee within 30 days of official notification by the Division of Coastal Management, regardless of the time limit placed on the temporary erosion control structure.
 - (9) Removal of temporary erosion control structures is not required if they are covered by dunes sand with stable and natural vegetation. Any portion of a temporary erosion control structure that becomes exposed

after the expiration of the permitted time period shall be removed by the property owner within 30 days of official notification from the Division of Coastal Management.

- (10) The property owner shall be responsible for the removal of remnants of all portions of any damaged temporary erosion control structure.
 - (11) Sandbags used to construct temporary erosion control structures shall be tan in color and 3 to 5 feet wide and 7 to 15 feet long when measured flat. Base width of the structure shall not exceed 20 feet, and the total height shall not exceed 6 feet, as measured from the bottom of the lowest bag.
 - (12) Soldier pilings and other types of devices to anchor sandbags shall not be allowed.
 - (13) Excavation below mean high water in the Ocean Hazard AEC may be allowed to obtain material to fill sandbags used for emergency protection.
 - (14) An imminently threatened structure may be protected only once regardless of ownership, unless the threatened structure is located in a community that is actively pursuing a beach nourishment project, or in an Inlet Hazard Area and in a community that is actively pursuing an inlet relocation or stabilization project in accordance with Subparagraph (7). Existing temporary erosion control structures may be permitted eligible for an additional eight-year permit extension provided that the structure being protected is still imminently threatened, the temporary erosion control structure is in compliance with requirements of this Subparagraph Subparagraph, and the community in which it is located is actively pursuing a beach nourishment, nourishment or an inlet relocation or stabilization project in accordance with Subparagraph (7) of this Paragraph.- In the case of a building, a temporary erosion control structure may be extended, or new segments constructed, if additional areas of the building become imminently threatened. Where temporary structures are installed or extended incrementally, the time period for removal under Subparagraph (6) or (7) shall begin at the time the initial erosion control structure is installed. For the purpose of this Rule:
 - (A) a building and its associated septic system shall be considered as separate structures.
 - (B) a road or highway shall be allowed to be incrementally protected as sections become imminently threatened. The time period for removal of each contiguous section of sandbags shall begin at the time that section is installed in accordance with Subparagraph (6) or (7) of this Rule.
 - (15) Existing sandbag temporary erosion control structures may be repaired or replaced within their originally permitted dimensions during the time period allowed under Subparagraph (6) or (7) of this Rule. Paragraph.
- (b) Erosion Control Structures in the Estuarine Shoreline, Estuarine Waters, and Public Trust AECs. Work permitted by this general permit shall be subject to the following limitations:
- (1) No work shall be permitted other than that which is necessary to reasonably protect against or reduce the imminent danger caused by the emergency or to restore the damaged property to its condition immediately before the emergency;
 - (2) The erosion control structure shall be located no more than 20 feet waterward of the imminently threatened structure. If a building or road is found to be imminently threatened and at increased risk of imminent damage due to site conditions such as a flat shore profile or accelerated erosion, temporary erosion control structures may be located more than 20 feet seaward waterward of the structure being protected. In cases of increased risk of imminent damage, the location of the temporary erosion control structures shall be determined by the Director of the Division of Coastal Management or the Director's designee.
 - (3) Fill material used in conjunction with emergency work for storm or erosion control in the Estuarine Shoreline, Estuarine Waters and Public Trust AECs shall be obtained from an upland source.
- (c) Protection, Rehabilitation, or Temporary Relocation of Public Facilities or Transportation Corridors.
- (1) Work permitted by this general permit shall be subject to the following limitations:
 - (A) no work shall be permitted other than that which is necessary to protect against or reduce the imminent danger caused by the emergency or to restore the damaged property to its condition immediately before the emergency;
 - (B) the erosion control structure shall be located no more than 20 feet waterward of the imminently threatened structure or the right-of-way in the case of roads. If a public facility or transportation corridor is found to be imminently threatened and at increased risk of imminent damage due to site conditions such as a flat shore profile or accelerated erosion, temporary erosion control structures may be located more than 20 feet seaward waterward of the facility or corridor being protected. In cases of increased risk of imminent damage, the location of the temporary erosion control structures shall be determined by the Director of the Division of Coastal Management or the Director's designee in accordance with Subparagraph (a)(1) of this Rule;
 - (C) any fill materials used in conjunction with emergency work for storm or erosion control shall be obtained from an upland source except that dredging for fill material to protect public facilities or transportation corridors shall be considered in accordance with standards in 15A NCAC 7H .0208; 7H .0208; and

- (D) all fill materials or structures associated with temporary relocations which are located within Coastal Wetlands, Estuarine Water, or Public Trust AECs shall be removed after the emergency event has ended and the area restored to pre-disturbed conditions.
- (2) This permit authorizes only the immediate protection or temporary rehabilitation or relocation of existing public facilities. Long-term stabilization or relocation of public facilities shall be consistent with local governments' post-disaster recovery plans and policies which are part of their Land Use Plans.

History Note: Authority G.S. 113-229(c); 113A-107(a),(b); 113A-113(b); 113A-115.1; 113A-118.1;
Eff. November 1, 1985;
Amended Eff. April 1, 1999; February 1, 1996; June 1, 1995;
Temporary Amendment Eff. July 3, 2000; May 22, 2000;
Amended Eff. May 1, 2013; May 1, 2010; August 1, 2002. Temporary Amendment Eff. July 3, 2000;

