



North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Michael F. Easley, Governor

James H. Gregson, Director

William G. Ross Jr., Secretary

March 11, 2008

MEMORANDUM

CRC-08-08

TO: Coastal Resources Commission
FROM: Bonnie Bendell
SUBJECT: Estuarine Shoreline Stabilization Draft Rules

You will recall that the Commission has been discussing changes to the rules governing estuarine shoreline stabilization. At the November 2007 meeting, Ted Tyndall informed the I&S Committee that the shoreline stabilization draft rules were still on hold until issues raised by the Division of Water Quality could be resolved between the two agencies. The CHPP Steering Committee will be discussing the estuarine shoreline rules in great detail at their next meeting on April 11th in Washington. DCM staff will report the results of the Steering Committee Meeting at the May CRC Meeting in anticipation of further discussion regarding vertical structures.

The intent of the draft shoreline stabilization rules is to encourage alternatives to vertical structures. While the CHPP Steering Committee, DCM, and other agency staff continue to discuss changes to CRC Rules governing vertical structures, the other draft shoreline stabilization rules (i.e., groins, marsh enhancement breakwaters and riprap for wetland protection) have been through numerous iterations with other agencies. Therefore, staff is recommending to send the proposed rule changes for Groins (.1400), Marsh Enhancement Breakwaters (.2100), and Riprap for Wetland Protection (.2400) to public hearing. The complete General Permit rules, including any proposed changes are attached. The following summarizes the proposed rule changes that have been modified and/or changed from the existing rules.

.1400 – GP for Groin Placement

- Spacing changes on groin placement to 2 times the groin design length (maximum of 50 feet apart) from 2 per 100 feet of shoreline. This is to allow for more flexibility in the rule.
- Clarification changes on where to measure distances and lengths on groins.
- The additional changes are to be consistent with other rules, to correct ambiguous language, or due to rearranging of rules.

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.2100 – GP for Marsh Enhancement Breakwaters

- “Marsh Enhancement Breakwater” has been changed to “Sheetpile Sill.” Because staff is reviewing the possibility of adding a new GP for Breakwaters without wetland vegetation, the terminology should be corrected so there isn’t confusion in the future.
- The additional changes are to be consistent with other rules, to correct ambiguous language, or due to rearranging of rules.

.2400 – GP for Placement of Riprap for Wetland Protection

- “Riprap” has been changed to “riprap revetment” to be consistent with other rules.
- Maximum distance waterward to 6 feet from 5 feet. This was to allow for the maximum slope flatness be used and extend to a height of 2 feet.
- Slope of riprap requirements were added to be a max flatness of 3H:1V and a max steepness of 1.5H:1V.
- The additional changes are to be consistent with other rules, to correct ambiguous language, or due to rearranging of rules.

SECTION .1400 - GENERAL PERMIT FOR CONSTRUCTION OF ~~WOODEN~~ GROINS IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD AREAS

15A NCAC 07H .1401 PURPOSE

A permit under this section shall allow the construction of ~~wooden and riprap~~ groins in the estuarine and public trust waters AECs according to the authority provided in Subchapter 07J .1100 and according to the rules in this Section. This general permit shall not apply to the oceanfront shorelines or to waters and shorelines adjacent to the Ocean Hazard AEC with the exception of those shorelines that feature characteristics of the Estuarine Shoreline AEC. Such features include the presence of wetland vegetation, lower wave energy, and lower erosion rates than the adjacent Ocean Erodible Area.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b); 113A-118.1; 113A-124; Eff. March 1, 1984; Temporary Amendment Eff. December 1, 2002; Amended Eff. [December 1, 2008](#) August 1, 2004; April 1, 2003.

15A NCAC 07H .1402 APPROVAL PROCEDURES

(a) An applicant for a General Permit under this Subchapter shall contact the Division of Coastal Management and request approval for development. The applicant shall provide information on site location, dimensions of the project area, and ~~his~~ [the applicant's](#) name and address.

(b) The applicant shall provide:

(1) confirmation that a written statement has been obtained signed by the adjacent riparian property owners indicating that they have no objections to the proposed work; or

(2) confirmation that the adjacent riparian property owners have been notified by certified mail of the proposed work. The notice shall instruct adjacent property owners to provide written comments on the proposed development to the Division of Coastal Management within ~~40~~ [ten \(10\)](#) days of receipt of the notice. The notice shall also indicate that no response shall be interpreted as no objection. ~~DCM-staff~~ [The Division of Coastal Management](#) shall review all comments and determine, based on their relevance to the potential impacts of the proposed project, if the proposed project can be approved by a General Permit. [If the Division of Coastal Management determines that the project exceeds the guidelines established by the General Permit process, the applicant shall be notified that an application for a major development permit shall be required.](#)

(c) No work shall begin until an on-site meeting is held with the applicant and a Division of Coastal Management representative ~~to review the proposed development so that the proposed groin alignment can be marked.~~ Written authorization to proceed with the proposed development shall be issued ~~if the Division representative finds that the application meets all the requirements of this Subchapter.~~ [during this visit.](#) Construction shall be completed within 120 days of the issuance of the ~~general authorization permit~~ or the authorization shall expire and it shall be necessary to re-examine the ~~proposed development alignment~~ to determine if the general authorization may be reissued.

(d) Any modification or addition to the authorized project shall require prior approval from the Division of Coastal Management.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b); 113A-118.1; 113A-124; Eff. March 1, 1984; Amended Eff. [December 1, 2008](#); October 1, 2007; August 1, 2004; May 1, 1990; January 1, 1990

15A NCAC 07H .1403 PERMIT FEE

The applicant shall pay a permit fee of two hundred dollars (\$200.00) by check or money order payable to the Department.

History Note: Authority G.S. 113A-107; 113A-113(b); 113A-118.1; 113A-119; 113A-119.1; 113A-124; Eff. March 1, 1984; Amended Eff. September 1, 2006; August 1, 2000; March 1, 1991.

15A NCAC 07H .1404 GENERAL CONDITIONS

(a) Structures authorized by a general permit in this Section shall be ~~wooden~~ [timber, sheetpile,](#) or riprap groins conforming to the standards in this Rule.

- (b) Individuals shall allow authorized representatives of the Department of Environment and Natural Resources to make periodic inspections at any time deemed necessary in order to ~~be sure~~ ensure that the activity being performed under authority of this general permit is in accordance with the terms and conditions prescribed herein.
- (c) The placement of ~~wooden or riprap~~ groins authorized in this Rule shall not interfere with the established or traditional rights of navigation of the waters by the public.
- (d) This permit shall not be applicable to proposed construction where the ~~Department~~ Division of Coastal Management 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 shall~~ not eliminate the need to obtain any other required state, local, or federal authorization.
- (f) Development carried out under this permit ~~must shall~~ be consistent with all local requirements, AEC rules, and local land use plans current at the time of authorization.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b); 113A-118.1; 113A-124;
Eff. March 1, 1984;
Amended Eff. May 1, 1990;
RRC Objection due to ambiguity Eff. May 16, 1994;
Amended Eff. August 1, 1998; July 1, 1994;
Temporary Amendment Eff. December 1, 2002;
Amended Eff. December 1, 2008; August 1, 2004.

15A NCAC 07H .1405 SPECIFIC CONDITIONS

- (a) Groins shall be perpendicular to the shoreline and shall not extend more than 25 feet waterward of the normal high water or normal water level.
- (b) Riprap groins shall not exceed a base width of 10 feet.
- (c) Groins shall be set back at least 15 feet from the ~~adjoining property lines.~~ Riparian access dividing line as measured from the closest point of the structure. This setback may be waived by written agreement of the adjacent riparian owner(s) or when two adjoining riparian owners are co-applicants. Should the adjacent property be sold before construction of the groin commences, the applicant shall obtain a written agreement with the new owner waiving the minimum setback and submit it to the ~~permitting agency~~ Division of Coastal Management prior to initiating any development of the groin.
- (d) The height of ~~wooden sheetpile~~ groins shall not exceed ~~±~~ one foot above normal high water or the normal water level and the height of riprap groins shall not exceed ~~±~~ two feet above normal high water or the normal water level.
- (e) ~~Riprap groins shall be constructed of materials~~ Material used for groin construction shall be free from loose dirt or any other pollutant. ~~It~~ Groin material must be of sufficient size to prevent its movement from the site by wave ~~or~~ current action. ~~action or currents.~~
- ~~(f) The riprap material must consist of clean rock or masonry materials such as, but not limited to, granite or broken concrete.~~
- ~~(g) No more than two structures shall be allowed per 100 feet of shoreline unless the applicant can provide evidence that more structures are needed for shoreline stabilization.~~
- (f) Structure spacing shall be two times the groin length as measured from the centerline of the structure. Spacing may be less than two times the groin length around channels, docking facilities, boat lifts, or boat ramps and when positioned to prevent sedimentation or accretion in a particular area.
- ~~(h) (g)~~ "L" and "T" sections shall not be allowed at the end of groins.
- (h) Groins shall be constructed of granite, marl, concrete without exposed rebar, timber, vinyl sheet pile, steel sheet pile or other suitable materials approved by the Division of Coastal Management.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b); 113A-118.1; 113A-124;
Eff. March 1, 1984;
Temporary Amendment Eff. December 1, 2002;
Amended Eff. December 1, 2008; August 1, 2004.

**SECTION .2100 - GENERAL PERMIT FOR CONSTRUCTION OF ~~MARSH ENHANCEMENT~~
~~BREAKWATERS SHEETPILE SILL~~ FOR SHORELINE PROTECTION IN ESTUARINE AND PUBLIC
TRUST WATERS AND OCEAN HAZARD AREAS**

15A NCAC 07H .2101 PURPOSE

A general permit pursuant to this Section shall allow the construction of offshore parallel ~~breakwaters, made sheetpile sills, constructed~~ from ~~wood, plastic lumber, or metal sheet piling~~ timber, vinyl, or steel sheetpiles for shoreline protection in conjunction with existing or created coastal wetlands. This permit shall only be applicable ~~where a shoreline is experiencing erosion~~ in public trust areas and estuarine waters according to authority provided in 15A NCAC 07J .1100 and according to the procedures and conditions outlined in this subchapter. This permit shall not apply to oceanfront shorelines or to waters and shorelines adjacent to the Ocean Hazard AEC with the exception of those shorelines that feature characteristics of Estuarine Shorelines. Such features include the presence of wetland vegetation, lower wave energy, and lower erosion rates than in adjoining Ocean Erodible Area.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. June 1, 1994;
Amended Eff. December 1, 2008; April 1, 2003; August 1, 2000

15A NCAC 07H .2102 APPROVAL PROCEDURES

(a) An applicant for a General Permit under this Subchapter shall contact the Division of Coastal Management and request approval for development. The applicant shall provide information on site location, dimensions of the project area, and ~~his~~ the applicant's name and address.

(b) The applicant shall provide:

- (1) confirmation that a written statement has been obtained signed by the adjacent riparian property owners indicating that they have no objections to the proposed work; or
- (2) confirmation that the adjacent riparian property owners have been notified by certified mail of the proposed work. The notice shall instruct adjacent property owners to provide written comments on the proposed development to the Division of Coastal Management within 10 days of receipt of the notice, and, indicate that no response shall be interpreted as no objection. ~~DCM-staff~~ The Division of Coastal Management shall review all comments and determine, based on their relevance to the potential impacts of the proposed project, if the proposed project can be approved by a General Permit. If ~~DCM-staff~~ the Division of Coastal Management determines that the project exceeds the guidelines established by the General Permit Process, DCM shall notify the applicant that ~~he must submit~~ an application for a major development ~~permit.~~ permit shall be required.

(c) No work shall begin until an on-site meeting is held with the applicant and a Division of Coastal Management representative so that the proposed breakwater sill alignment may be ~~appropriately~~ marked. Written authorization to proceed with the proposed development shall be issued if the Division representative finds that the application meets all the requirements of this Subchapter. Construction of the breakwater sill shall be completed within 120 days of the issuance of the permit or the general authorization ~~or the authorization~~ shall expire and it shall be necessary to re-examine the alignment to determine if the general authorization may be reissued.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. June 1, 1994;
Amended Eff. December 1, 2008; October 1, 2007; September 1, 2006; August 1, 2000

15A NCAC 07H .2103 PERMIT FEE

The applicant shall pay a permit fee of two hundred dollars (\$200.00). This fee shall be paid by check or money order made payable to the Department.

History Note: Authority G.S. 113A-107; 113A-118.1; 113A-119.1;
Eff. June 1, 1994;
Amended Eff. September 1, 2006; August 1, 2000.

15A NCAC 07H .2104 GENERAL CONDITIONS

(a) This permit authorizes only the construction of ~~breakwaters~~ sills conforming to the standards herein.

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

~~(c) There shall be no significant interference with navigation or use of the waters by the public by the existence of the breakwater authorized herein.~~

(c) The placement of sills authorized in this Rule shall not interfere with the established or traditional rights of navigation of the water by the public.

(d) This permit ~~will~~ shall not be applicable to proposed construction where the ~~Department~~ Division of Coastal Management 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~~ shall not eliminate the need to obtain any other required state, local, or federal authorization.

(f) Development carried out under this permit ~~must~~ shall be consistent with all local requirements, AEC rules, and local land use plans current at the time of authorization.

*History Note: Authority G.S. 113A-107; 113A-118.1;
RRC Objection due to ambiguity Eff. May 19, 1994;
Eff. July 1, 1994;
Amended Eff. December 1, 2008; August 1, 1998.*

15A NCAC 07H .2105 SPECIFIC CONDITIONS

(a) The ~~breakwater sill~~ shall be positioned no more than 20 feet waterward of the ~~mean normal~~ high water or normal water level ~~contour (whichever is applicable)~~ or 20 feet waterward of the waterward edge of existing wetlands at any point along its alignment. For narrow waterbodies (canals, creeks, etc.) the ~~breakwater sill~~ alignment shall not be positioned offshore more than one sixth (1/6) the width of the waterbody.

(b) ~~Breakwaters Sills~~ authorized under this General Permit shall be allowed only in waters that average less than three feet in depth along the proposed alignment as measured from the ~~mean normal~~ high water or normal water ~~level contour.~~ level.

(c) Where ~~Department~~ the Division of Coastal Management Staff determine that insufficient wetland habitat exists along the permittee's shoreline to provide adequate shoreline stabilization, the permittee shall be required to plant appropriate wetland species landward of the ~~breakwater sill~~ structure as directed by ~~Department~~ the Division of Coastal Management Staff.

(d) Construction authorized by this general permit ~~will~~ shall be limited to a maximum length of 500 feet.

(e) The ~~breakwater sill~~ shall be constructed with an equal gap between each sheathing board totaling at least one inch of open area every linear foot of ~~breakwater sill.~~ The ~~breakwater sill~~ shall have at least one ~~five-foot~~ five-foot opening at every 100 feet. The ~~breakwater sill~~ sections shall be staggered and overlap as long as the ~~five-foot~~ five-foot separation between sections is maintained. Overlapping sections shall not overlap more than 10 feet.

(f) The height of the ~~breakwater sill~~ shall not exceed six inches above ~~mean normal~~ high water or the normal water level.

(g) Offshore ~~breakwater sill~~ sections shall be set back 15 feet from the ~~adjoining property lines and the~~ riparian access dividing line. The line of division of riparian access shall be established by drawing a line along the channel or deep water in front of the property, then drawing a line perpendicular to the line of the channel so that it intersects with the shore at the point the upland property line meets the water's edge. The set back may be waived by written agreement of the adjacent riparian owner(s) or when the two adjoining riparian owners are co-applicants. Should the adjacent property be sold before construction of the ~~breakwater sill~~ begins, the applicant shall obtain a written agreement with the new owner waiving the minimum setback and submit it to the Division of Coastal Management prior to initiating any construction of the ~~breakwater sill.~~

(h) ~~Breakwaters Sills~~ shall be marked at ~~50-foot~~ 50-foot intervals with yellow reflectors extending at least three feet above mean high water.

(i) No backfill of the ~~breakwater sill~~ or any other fill of wetlands, estuarine waters, public trust areas, or highground is authorized by this general permit.

(j) No excavation of the shallow water bottom, any wetlands, or high ground is authorized by this general permit.

(k) The ~~breakwater sill must be constructed of treated wood, plastic lumber, metal sheet piles or materials approved as similar by Department personnel.~~ Shall be constructed of vinyl or steel sheet pile, formed concrete, timber, or other suitable materials approved by the Division of Coastal Management.

- (l) Perpendicular sections, return walls, or sections ~~which~~ that would enclose estuarine waters or public trust areas shall not be allowed under this permit.
- (m) The permittee will maintain the ~~breakwater sill~~ in good condition and in conformance with the terms and conditions of this permit or the remaining ~~breakwater sill~~ structure shall be removed within 90 days of notification from the Division of Coastal Management.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. June 1, 1994;
Amended Eff. December 1, 2008; August 1, 2000.

SECTION .2400 – GENERAL PERMIT FOR PLACEMENT OF RIPRAP REVETMENTS FOR WETLAND PROTECTION IN ESTUARINE AND PUBLIC TRUST WATERS

15A NCAC 07H .2401 PURPOSE

The general permit for placement of riprap revetments for wetland protection in estuarine and public trust waters shall allow the placement of riprap revetments immediately adjacent to and waterward of ~~wetlands.~~ the wetland toe. This permit shall only be applicable ~~where a shoreline is experiencing erosion~~ in public trust areas and estuarine waters according to authority provided in 15A NCAC 07J .1100 and according to the rules in this Section. This permit shall not apply to oceanfront shorelines or to waters and shorelines adjacent to the Ocean Hazard AEC with the exception of those portions of shoreline that feature characteristics of Estuarine Shorelines. Such features include the presence of wetland vegetation, lower wave energy, and lower erosion rates than in the adjoining Ocean Erodible Area.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. August 1, 2000;
Amended Eff. December 1, 2008; April 1, 2003.

15A NCAC 07H .2402 APPROVAL PROCEDURES

(a) An applicant for a General Permit under this Subchapter shall contact the Division of Coastal Management and request approval for development. The applicant shall provide information on site location, dimensions of the project area, and ~~his~~ the applicant's name and address.

(b) The applicant shall provide:

- (1) confirmation that a written statement has been obtained signed by the adjacent riparian property owners indicating that they have no objections to the proposed work; or
- (2) confirmation that the adjacent riparian property owners have been notified by certified mail of the proposed work. The notice shall instruct adjacent property owners to provide any comments on the proposed development in writing for consideration by permitting officials to the Division of Coastal Management within ~~10~~ ten (10) days of receipt of the notice, and, indicate that no response shall be interpreted as no objection. The Division of Coastal Management shall review all comments and determine, based on their relevance to the potential impacts of the proposed project, if the proposed project can be approved by the General Permit Process, the applicant shall be notified that an application for a major development permit shall be required.

~~(c) DCM staff shall review all comments and determine, based on their relevance to the potential impacts of the proposed project, if the proposed project meets the requirements of the rules in this Section. If DCM staff finds that the comments are worthy of more in-depth review, DCM shall notify the applicant that he must submit an application for a major development permit.~~

~~(d) (c)~~ No work shall begin until an on-site meeting is held with the applicant and a Division of Coastal Management representative so that the ~~wetland protection~~ structure location may can be ~~appropriately~~ marked. Written authorization to proceed with the proposed development shall be issued ~~if the Division representative finds that the application meets all the requirements of this Subchapter.~~ during this visit. Construction of the ~~wetland protection~~ structure shall be completed within 120 days of the issuance of the ~~general authorization permit~~ or the general authorization expires and it shall be necessary to re-examine the alignment to determine if the general authorization may be reissued.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. August 1, 2000;
Amended Eff. December 1, 2008; October 1, 2007.

15A NCAC 07H .2403 PERMIT FEE

The applicant shall pay a permit fee of two hundred dollars (\$200.00). This fee shall be paid by check or money order made payable to the Department.

History Note: Authority G.S. 113A-107; 113A-118.1; 113A-119.1;
Eff. August 1, 2000;
Amended Eff. September 1, 2006.

15A NCAC 07H .2404 GENERAL CONDITIONS

- (a) This permit authorizes only the construction of wetland protection structures conforming to the standards herein.
- (b) Individuals shall allow authorized representatives of the Department of Environment and Natural Resources (~~DENR~~) to make periodic inspections at any time deemed necessary in order to ~~be sure~~ ensure that the activity being performed under authority of this general permit is in accordance with the terms and conditions prescribed herein.
- ~~(c) There shall be no unreasonable interference with navigation or use of the waters by the public by the existence of the riprap structure authorized herein.~~
- (c) The placement of riprap revetments authorized in this Rule shall not interfere with the established or traditional rights of navigation of the waters by the public.
- (d) This permit shall not be applicable to proposed construction where the ~~Department~~ Division of Coastal Management 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~~ shall not eliminate the need to obtain any other required state, local, or federal authorization.
- (f) Development carried out under this permit ~~must~~ shall be consistent with all local requirements, AEC Guidelines, and local land use plans current at the time of authorization.

*History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. August 1, 2000.*

15A NCAC 07H .2405 SPECIFIC CONDITIONS

- (a) This general permit shall only be applicable along shorelines possessing wetlands, ~~and~~ which exhibit an identifiable ~~erosion~~ escarpment.
- (b) The structure shall be constructed of granite, marl, riprap, concrete without exposed rebar, or other suitable materials approved by the Division of Coastal Management.
- ~~(b)~~ (c) The height of the erosion escarpment shall not exceed three feet.
- ~~(c)~~ (d) The riprap shall be placed immediately waterward of the erosion escarpment.
- ~~(d)~~ (e) The riprap revetment ~~must~~ shall be positioned so as not to exceed a maximum of ~~five~~ six feet waterward of the erosion escarpment at any point along its ~~alignment.~~ alignment with a slope no flatter than three feet horizontal per one foot vertical and no steeper than one and one half feet horizontal per one foot vertical.
- ~~(e)~~ (f) The riprap ~~must~~ shall be positioned so as not to exceed a maximum of six inches above the elevation of the adjacent wetland ~~substrate.~~ substrate or escarpment.
- ~~(f)~~ (g) Where ~~Department staff~~ the Division of Coastal Management ~~determine~~ determines that insufficient ~~wetlands or coastal marsh~~ wetland vegetation exists along the permittee's shoreline to provide adequate shoreline stabilization, the permittee shall be required to plant appropriate ~~coastal marsh or wetland species~~ wetland vegetation landward of the riprap ~~structure~~ revetment as directed by ~~Department staff.~~ the Division of Coastal Management.
- ~~(g)~~ (h) Construction authorized by this general permit will be limited to a maximum length of 500 feet.
- ~~(h)~~ (i) No backfill or any other fill of wetlands, submerged aquatic vegetation, estuarine waters, public trust areas, or highground areas is authorized by this general permit.
- ~~(i)~~ (j) No excavation of the shallow water bottom, any wetlands, or high ground is authorized by this general permit.
- ~~(j) The riprap must not be placed in such a manner as to impede water flow into or out of any natural channel or stream.~~
- (k) ~~The riprap~~ Riprap material used for revetment construction ~~must~~ shall be free from loose dirt or any ~~pollutant. It must be pollutant and be~~ of a size sufficient to prevent its movement from the site by wave ~~or current action.~~ action or currents.
- ~~(l) Riprap material must consist of clean rock or masonry materials such as marl, granite or broken concrete. Materials such as tires, car bodies, scrap metal, paper products, tree limbs, wood debris, organic material or similar materials are not appropriate riprap for the purposes of this General Permit.~~
- ~~(m)~~ (l) If the crossing of wetlands with mechanized or non-mechanized construction equipment is necessary, temporary construction mats shall be utilized for the area(s) to be crossed. The temporary mats shall be removed immediately upon completion of construction of the riprap structure.
- ~~(n)~~ (m) The permittee shall maintain the structure in good condition and in conformance with the terms and conditions of this permit or the remaining riprap ~~structure~~ revetment shall be removed within 90 days of notification from the Division of Coastal Management.

History Note: Authority G.S. 113A-107; 113A-118.1;
Eff. [December 1, 2008](#); August 1, 2000.