

# **A Comparison of Regulatory Authorizations for Shoreline Stabilization**

**North Carolina Coastal Federation**

**Tracy E. Skrabal**

October 2, 2012



Jurisdiction	Living Shorelines/Sills	Timeline for Permit	Bulkhead/Revetments	Timeline for Permit
<b>North Atlantic Division</b>				
<i>New England Division – suspended all nationwide permits March 20, 2012 – using G.P. for entire district</i>				
<b>Maine</b>	<p>G.P. – miscellaneous</p> <p><i>Inland Water bank stabilization:</i> Aquatic habitat restoration, establishment, and enhancement of wetlands and riparian areas and the restoration and enhancement of streams and other open waters with impacts of any area <math>\geq 15,000</math> SF, provided those activities result in net increase in overall aquatic resource functions and services.</p> <p><i>Navigable Water bank stabilization:</i> Aquatic habitat restoration, establishment and enhancement provided those activities are proactive and result in net increases in aquatic resource functions and services</p>		<p>G.P. (20)</p> <p>Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated.</p> <p><i>Inland Water bank stabilization:</i> Category 1 (corps notification required): <math>&lt; 500'</math> long &amp; <math>&lt; 1</math> cy fill below OHW (only rough-faced stone or fiber roll revetments allowed) Category 2: (corps application required): <math>\geq 500'</math> long or <math>\geq 1</math> cy fill below OHW line or slopes <math>\geq 1H:1V</math> In stream work must take place between July 15 – Oct 1</p> <p><i>Navigable Water bank stabilization:</i> Category 1: <math>&lt; 200'</math> long &amp; <math>&lt; 1</math> c.y. per linear foot along high tide line. Work must be conducted “in the dry, during low water” or between Nov. 8 – Apr. 9); structure angles <math>&lt; 1H:1V</math> and only rough-faced stone or fiber roll revetments allowed.</p>	Cat 1 notification – 2 week before commencing
<b>Connecticut</b>	<p>G.P. (19)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties.</p>		<p>G.P. (19)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties. For example, vertical bulkheads should only be used in</p>	Cat 1 notification – 2 week before commencing

			<p>situations where reflected wave energy can be tolerated. A revetment is sloped and is typically employed to absorb the direct impact of waves more effectively than a vertical seawall, having a less adverse effect on the beach in front of it, abutting properties and wildlife.</p> <p><i>Stream bank stabilization:</i> ≤200' length &amp; ≤1 c.y. fill per linear foot below OHW line, work limited to June 1 – Sep. 30</p>	
<b>Rhode Island</b>	<p>G.P. NAE-2011-2402 (authorized Feb. 22, 2012) Sequential minimization process: avoidance of aquatic resource impacts, diversion of overland flow, <b>vegetative stabilization</b>, stoned surfaces, walls/bulkheads.</p>		<p>G.P. NAE-2011-2402 (authorized Feb. 22, 2012) <i>Inland bank stabilization</i> Category 1 (corps notification required): &lt;100' long &amp; &lt;1 cy fill per linear foot below OHW, slopes must be ≤ 3H:1V Category 2 (corps application required): ≥100' long &amp; ≥1 cy fill per linear foot below OHW In stream work limited to July 1 –Oct 1</p>	<p>Cat 1 notification – 2 week before commencing</p>
<b>Massachusetts</b>	<p>G.P. (20) Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties using this <i>sequential minimization process</i>: avoidance of aquatic resource impacts, diversion of overland flow, <i>vegetative stabilization</i>, stone-sloped surfaces, and walls/bulkheads. Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated.</p>		<p>G.P. (20) Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties using this sequential minimization process: avoidance of aquatic resource impacts, diversion of overland flow, vegetative stabilization, stone-sloped surfaces, and walls/bulkheads. Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated. <i>Inland bank stabilization:</i> Category 1 (corps notification required):</p>	<p>Cat 1 notification – 2 week before commencing</p>

			<p>≤100' long &amp; ≤1 cy fill below OHW, slopes must be ≤ 3H:1V</p> <p>No work must take place during time of year for spawning run/habitat of species present listed in Appendix B otherwise between Sept 1- June 30</p> <p>Category 2 (corps application required): work not qualifying for category 1.</p>	
<b>New Hampshire</b>	<p>P.G.P. (20)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties using least intrusive method to stabilize the bank (Env-Wt 404 Criteria for Shoreline Stabilization) and the following <i>sequential minimization process</i>: diversion of water, <i>vegetative stabilization</i>, stone-sloped surfaces, and walls. Vertical bulkheads should only be used where reflected wave energy can be tolerated</p>	<p>Cat 1 – notification prior to commencing</p> <p>Cat 2 – 30 day review period</p>	<p>P.G.P. (20)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties using least intrusive method to stabilize the bank (Env-Wt 404 Criteria for Shoreline Stabilization) and the following sequential minimization process: diversion of water, vegetative stabilization, stone-sloped surfaces, and walls. Vertical bulkheads should only be used where reflected wave energy can be tolerated</p> <p><i>Inland bank stabilization</i>: ≤100' long &amp; ≤1 cy fill below OHW, slopes must be ≤ 3H:1V</p> <p>Work must take place between Jul 15- Oct 1</p>	<p>Cat 1 – notification prior to commencing</p> <p>Cat 2 – 30 day review period</p>
<b>Vermont</b>	<p>P.G.P (19)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties. Must use least intrusive method to stabilize the bank, following this <i>sequential minimization process</i>: avoidance, diversion of overland flow, <i>vegetative stabilization</i>, stone-sloped surfaces, and walls.</p>	<p>Cat 1 – notification prior to commencing</p> <p>Cat 2 – 60 day review period</p>	<p>P.G.P. (19)</p> <p>Bank stabilization structures must be designed to minimize environmental effects and effects to neighboring properties. Must use least intrusive method to stabilize the bank, following this <i>sequential minimization process</i>: avoidance, diversion of overland flow, <i>vegetative stabilization</i>, stone-sloped surfaces, and walls.</p>	<p>Cat 1 – notification prior to commencing</p> <p>Cat 2 – 60 day review period</p>

	Vertical walls/bulkheads must only be used in situations where reflected wave energy can be tolerated.		Vertical walls/bulkheads must only be used in situations where reflected wave energy can be tolerated. <i>Waters of the U.S.</i> Category 1 (notification): <100' long & <1 cy fill below OHW; work must take place between Jul 15- Oct 1 Category 2 (application): ≥100' long or ≥ 1cy fill per linear foot below OHW <i>Navigable Waters of the U.S.</i> Category 1: nothing Category 2: < 500' long; average 1 c.y. per linear foot below OHW or less provided no wetland fill Individual Permit: ≥ 500' long or ≥ 1 c.y. per linear foot below OHW	
<i>Baltimore District – suspended all nationwide permits in lieu of State Program General Permit (SPGP), which Baltimore District developed in cooperation with both the State of Maryland (MDSPGP) and the Commonwealth of Pennsylvania (PASPGP)</i>				
<b>Maryland</b>	MDSPGP-4 (authorized Oct. 1, 2011) Will be reviewed in the order of preference: (1) nonstructural shoreline stabilization (beach nourishment, marsh creation, root wad or similar); (2) structural shoreline stabilization (revetments, breakwaters groins and bulkheads)  <i>Tidal marsh creation &amp; beach nourishment (i.e. groins, stone sills in un-vegetated area to facilitate tidal marsh creation or beach nourishment; low profile sills not authorized with beach nourishment; breakwaters not authorized)</i>	Cat A – notification prior to commencing Cat B (concurrent review with state) – 30 day review period	MDSPGP-4 (authorized Oct. 1, 2011) Will be reviewed in the order of preference: (1) nonstructural shoreline stabilization (beach nourishment, marsh creation, root wad or similar); (2) structural shoreline stabilization (revetments, breakwaters groins and bulkheads)  <i>New structures other than revetments and toe-protection for new or existing bulkheads (low profile stone sill, groin, breakwater, groins)</i> Category A (does not require Corps review, may require Joint Permit Application): structure ≤ 500 linear feet along shoreline; total impacts to waters of the U.S. ≤ 5,000	Cat A – notification prior to commencing Cat B (concurrent review with state)– 30 day review period

	<p>Category A (does not require Corps review, may require Joint Permit Application): total impacts ≤ 17,500 sq. ft., may not extend more than 500 linear feet or 35 feet channelward of MWH; non-structural shorelines must be experiencing documented erosion</p> <p>Category B (requires Corps review and Joint Permit Application): total impacts ≤ 0.5 acre; may not extend more than 50' channelward of MWH</p>		<p>sq.ft.; may not extend out more than 10 feet channelward of MHW,</p> <p>Category B (requires Corps review and Joint Permit Application): total impacts ≤ 0.5 acre and ≤ 2,000 linear feet along shoreline, may not extend more than 25 feet channelward of MHW shoreline</p> <p><i>Bulkhead repair or replacement</i></p> <p>Category A: may not extend 18" channelward of existing structure; discharges ≤ 1 c.y per running foot below MHW; no impacts to vegetated wetlands or SAV</p> <p>Category B: may not extend more than 3' channelward of existing structure; impacts to waters of the U.S. ≤ 10,000 sq.ft.; impacts to vegetated wetlands ≤ length of bulkhead repair in linear feet</p> <p><i>New bulkheads:</i></p> <p>Category A: ≤500 linear feet, must be placed at MHW, no impacts to special aquatic sites</p> <p>Category B: may not extend more than 3 feet channelward of MHW, total impacts to waters of the U.S. ≤ 0.5 acre and/or 2,000 linear feet of shoreline</p> <p><i>Non-tidal Bank Stabilization</i></p> <p>Category A: ≤ 500 linear feet, total impacts ≤ 10,000 sq. ft. , ≤ 1 c.y. per linear foot of discharge below OHW , no discharge into wetlands or SAV</p>	
--	--	--	---	--

			Category B: ≤ 2,000 linear feet, total impacts ≤ 0.5 acre, ≤ 1 c.y. per linear foot of discharge below OHW	
<i>Philadelphia District –</i>				
<b>Pennsylvania</b>	To maximum extent possible, bank stabilization should be accomplished using natural stabilization techniques (riparian plantings shall be included to the extent practicable)	Cat I – no notification Cat II – notification prior to commencing Cat III – 60 day review period	Suspended nationwide permits for activities authorized in PASPGP-4 (authorized July 1, 2011) <i>Stream bank rehabilitation and protection</i> Category I (requires no Corps notification; must comply with PADEP): ≤500 linear feet and total impacts ≤ 1 acre Category II (requires notification via PA Bulletin): exceeds ≤500 linear feet OR total impacts ≤ 1 acre Category III (requires Corps approval): exceeds ≤500 linear feet and total impacts ≤ 1 acre	Cat I – no notification Cat II – notification prior to commencing Cat III – 60 day review period
Delaware (cannot find working links to regional conditions)			(Joint permit application) NWP 13 – no more than 500’ length along bank, ≤ 1 c.y. per running foot along bank	automatic
<b>New Jersey</b>	NWP 13 regional condition: Bank stabilization efforts should be accomplished through non-structural measures such as <i>vegetation or combinations of vegetation and rock</i> . Any application that does not include such measures shall include an analysis demonstrating that such measures were not practicable and/or appropriate. <i>Authorized March 16, 2012</i>  Living shorelines projects authorized	30 day review	NWP 13 – no more than 500’ length along bank, ≤ 1 c.y. per running foot along bank  Regional Condition G-5: All permanent structures, including piers and docks (piles, stringers, whalers and decking), utility poles, boat lifts, mooring piles, breakwaters, and replacement bulkheads must be constructed with non-polluting material  SPGP 17 (authorizes construction in substantially developed artificial lagoons):	PCN notification 60 days

	under NWP 27; <i>Reauthorized March 15, 2012;</i>	period	Replacement or repair of existing bulkhead cannot extend more than 18" channelward of existing bulkhead. Structures authorized cannot extend more than 20% of the width of the lagoon from MLWL.	
<b>Norfolk District</b>				
<b>Virginia</b>	RP 19 includes sills and beach nourishment; sills may be made of sandbags, riprap, gabions, timber or concrete. Beach nourishment is authorized landward of sills for erosion purposes only (max of 1 acre). Submerged sills may not be connected to upland or constructed in conjunction with groin or other erosion control structures.  Most living shoreline projects covered under NWP 27. <i>Reauthorized March 15, 2012</i>	45 days  30 day review period	Joint application applies to all bank stabilization <i>Bulkheads will be denied unless no viable alternative exists.</i> NWP 13 – no more than 500' length along bank, ≤ 1 c.y. per running foot along bank RP 19 – Groins, jetties, spurs associated and beach nourishment landward of groin for erosion control only (max of 1 acre); bulkheads, riprap revetments must be necessary for existing erosion problem, filling of vegetated wetlands may not exceed length of shoreline activity, repair of bulkheads up to 2' channelward of existing bulkhead	45 days
<b>South Atlantic Division</b>				
<b>Wilmington District</b>				
<b>North Carolina</b>	Individual Permit required for stone sill projects that qualify for NC's state General Permit.  For stone sill projects that obtain NC's Major CAMA permit, COE authorizes with Programmatic Permit 291.  Wooden sills (no fill) authorized by NC's GP and Programmatic GP.	60-120 days  45-60 days	NWP 13 – no more than 500' length along bank, ≤ 1 c.y. per running foot along bank  GP 197800080 – <i>to maintain, repair, construct and backfill bulkheads and riprap along eroding high-ground shorelines &amp; to construct riprap to protect eroding wetland shorelines</i>  Structures must be ≤ 500 linear ft along shoreline; bulkhead placement must not exceed 2' average and 5' max waterward if	60 days



			MHWM and OHWM; riprap must not exceed 10' waterward of MHWM and OHWM	
<i>Charleston District</i>				
<b>South Carolina</b>	Most living shoreline projects covered under NWP 27; includes PC notification which allows agencies 15 days to comment within the 45 day permit period. NWP 27 – discharge cannot cause loss greater than 300 linear feet of streambed. Can also use NWP 13 for sill projects if qualifying.	45 days review	NWP 13 – no more than 500' length along bank, ≤ 1 c.y. per running foot along bank	automatic
<i>Savannah District</i>				
<b>Georgia</b>	NWP 13 for 95% of all permits for living shoreline or other projects; **** have programmatic 401 certification for any project that gains approval by state (USCOE defers to state of GA on 98% of all shoreline stabilization projects)  Most living shoreline projects covered under NWP 27; <i>Reauthorized March 15, 2012</i>	60 day PCN  45 day PCN	NWP 13 – no more than 500' length along bank, ≤ 1 c.y. per running foot along bank  RP0057 – Riprap, bulkheads: ≤1c.y. per linear foot in addition to that authorized in NWP 13  RP0061 – Jetties/Breakwaters: less than 1000c.y. non-erosive material during low water; 500c.y. during normal pool conditions.	60 day PCN
<i>Mobile District</i>				
<b>Alabama</b>	ALG09-2011 (Joint Application Required) – Newly approved and adopted for estuarine nourishment and living shoreline projects; allows fill for sandy beaches or marsh sills, breakwaters, etc . with marsh restoration. Includes requirement for legal document that voluntarily removes fee simple ownership of	45-60 day	NWP 13 – not authorized in AL – previously used for all shoreline stabilization projects; <b>State of Alabama (ADEM) recently denied Coastal Zone consistency for NWP for bulkheads/riprap; thereby requiring all bulkhead projects to need to go to AL/COE for permits for all projects</b>  ALG11-2011 (Joint application with State of	disallowed  45-60 days

	<p>“reclaimed” shoreline, thus addressing concerns over upland property reclamation.</p> <p>ALG10-2011 (Joint Application required) – <i>authorizes restoration of dunes, beaches, wetlands, submerged grassbeds.</i></p> <p>Reef and/or breakwater construction allowed in conjunction with living shorelines to encourage shoreline enhancement.</p>		<p>Alabama Required)</p> <p><i>Armoring systems – authorizes riprap, bulkheads, river training structures, bioengineering, and other shoreline protection methods.</i></p> <p><b>Contains regional conditions which require applicant to demonstrate why use of alternatives (to bulkheads/riprap) is not feasible.</b></p> <p>Riprap ≤ 1 c.y. per linear foot</p> <p>Bulkheads ≤ 1000’ total length, cannot extend 24” waterward from base of failed structure</p> <p><b>Permit does not authorize wing walls, groins, jetties, or any solid structure perpendicular to shore</b></p> <p><i>Notice went out Sept. 30, 2011</i></p>	
<i>Jacksonville District</i>				
<b>Florida</b>	<p>Recently re-authorized NWP 27 now used to cover most living shoreline projects, where goal is restoration/preservation of estuarine resources.</p> <p><i>Reauthorized March 15, 2012</i></p> <p>Regional conditions require joint authorization.</p>	30 day PCN	<p><i>Note: Jacksonville District defines residential canals as manmade waterways and therefore permits for structures within these canals are excluded.</i></p> <p>NWP 13 (Joint application required) – no more than 500’ length along bank, ≤ 1 c.y. per running foot along bank below OHWM</p> <p><i>Regional conditions: not used in Florida Keys; no structures within 100’ setback;</i></p> <p><i>SAJ-77: authorizes minor structures within Okeechobee waterway – revetments ≤ 500’ long and ≤ 1 c.y. fill per linear foot</i></p>	

			<p>SAJ -91: <i>riprap revetments in Cape Coral, Lee County, FL (residential canals excluded)</i>. no more than 500' length along bank, ≤ 1 c.y. per running foot along bank below OHWM</p> <p>SAJ-96: <i>minor structures within Pinellas County</i>) authorizes construction and repair of bulkheads and backfill and riprap revetments. New vertical seawalls cannot be placed waterward of MHWL or OHWL unless to align with adjacent seawall; cannot exceed 100' long. Seawalls and riprap restoration permitted within 1 foot waterward of previous location. New riprap cannot be more than 10' waterward of MHWL or OHWL. Slopes for stabilization methods other than seawalls can be no steeper than 2H:1V.</p> <p>FL SPGP IV-R1 (does not include Florida Panhandle) <i>Shoreline stabilization (riprap, seawalls, and others – NOT to include groins, jetties, breakwaters, beach nourishment)</i>: only to prevent erosion or stabilize eroded area; cannot be waterward of MHWL or OHWL; restoration of seawall or riprap ≤ 1' waterward of previous location; new riprap ≤ 10' waterward MHWL or OHWL; slopes ≤ 2H:1V</p>	
Mississippi Valley Division				
Vicksburg District				
<b>Mississippi</b>	NWP 27 ( <i>re-authorized March 1, 2012</i> ) covers most living shoreline projects,	45 day review	NWP 13 -	

	<p>where goal is restoration/preservation of estuarine resources.</p> <p>MSGP-03 (Joint Application Required) <i>Authorizes preservation and restoration of dunes, beaches, wetlands, submerged aquatic vegetation, protection and propagation of essential fish habitat, shoreline restoration and nourishment.</i></p> <p>Living shorelines may extend from existing shoreline at MHW and extend waterward by no more than 10'. Riprap materials, previous interlocking brick systems, filter mats, and similar should be used in lieu of vertical seawalls and bulkheads. <i>Notice went out Jan 25, 2011</i></p>		<p>MSGP-01 (Joint Application Required) <i>Authorizes bulkheads, armoring systems (riprap), bioengineering and other methods paralleling the shoreline.</i></p> <p>Structures must be along existing shoreline at MHTL or OHWL or landward of all jurisdictional wetlands.</p> <p>Bulkheads total length <math>\leq</math> 1000' for residential and <math>\leq</math>1500' for commercial properties;</p> <p>Riprap <math>\leq</math> 1c.y. per linear foot of shoreline, cannot extend farther than 36' into waterway from MHTL or OHWL <i>Solid groins or jetties are not authorized</i></p>	
<b>Louisiana</b>	<p>RGP 70: "bioengineered bank stabilization"</p> <p>Bank should be contoured to 2:1 slope, may be steeper in narrow transitional zone, plant stream bank with native vegetation only (no length or area restrictions) <i>Effective until 6/24/2013</i></p> <p><i>NWP 27 invalid unless Louisiana Department of Natural Resources determination/certification is obtained</i></p>	30 day PCN	<p><b>LA PGP generally supersedes NWP 13</b> –</p> <p>Category 1: bank stabilization not to exceed 200' long and greater than 1 c.y. per linear foot of fill. Category 2: bank stabilization &gt;200 but <math>\leq</math> 500 linear feet; or fill placement &gt; 1 c.y. linear foot. <i>NWP 13 invalid unless Louisiana Department of Natural Resources determination/certification is obtained</i></p>	<p>Cat 1: 45 day review Cat 2: 45 day review</p>

