Tennessee Department of Environment and Conservation
General Aquatic Resource Alteration Permit for Bank Stabilization

Effective Date: July 23, 2015
Expiration Date: April 6, 2020

Activities Covered by this Permit

This general permit authorizes alterations associated with actively eroding stream and reservoir banks. For the purpose of this general permit, all stabilization techniques including soil bioengineering, in-stream structures, and hard armor treatments are subject to limitations, as described in the special conditions section.

Hard armoring treatments for bank stabilization may be authorized when other alternatives using natural materials or ecologically designed applications are not feasible due to site constraints. Examples of these types of armoring treatments include riprap, gabion baskets, concrete articulated flexmats, form-filled fabric, interlocking block walls, and other treatments.

Soil bioengineering is an applied science that combines structural, biological, and ecological concepts to repair and reconstruct stable vegetated stream channels that mimic natural habitat in both composition and structure for erosion prevention and sediment control. It is intended to compliment a natural stream's ability to dissipate energy and provide a stable and productive habitat. It includes methods that facilitate the stream bank recovery process by retaining or re-establishing native plant communities and re-establishing naturally stable bank morphology.

Certain activities due to size, location or potential water quality impacts are not covered under this general permit, as described in both the Special and General Conditions sections. Activities not qualifying for authorization under this general permit may be authorized by a standard (individual) permit provided that all requirements of the *Tennessee Water Quality Control Act of 1977* (the *Act*) are met.

Special Conditions

1. Hard armoring bank stabilization treatment is limited to 300 linear feet for the treatment of one bank, and 200 linear feet if the treatment includes both banks.

    (a) The use of grout, concrete, or other barrier that prevents the establishment of rooted vegetation may be authorized on a limited basis. These treatments may only be permitted in areas where critical public infrastructure would prohibit other, less severe treatments from use.
    (b) Activities located within water resource development lands and waters managed by the Tennessee Valley Authority or the United States Army Corps of Engineers (USACE), are limited to 500 linear feet of hard armoring treatments.

2. Soil bioengineering techniques used to stabilize streambanks are limited to 1000 linear feet.

    (a) Hard armoring used in conjunction with these techniques is subject to the same limitations described in Special Condition #1 above.
    (b) Stone toe protection in connection with, and directly below, soil bioengineering treatment is allowable, but must be limited to the minimum height necessary to stabilize the immediate bed-bank interface. It may not exceed 1/5 the bank height or one row of "class c" rock, whichever is greater.

3. In-stream structures may be used in conjunction with bank treatments, subject to the same limitations on streambank hard armoring and total project lengths. These structures may include rock vanes, weirs, jetties, wing deflectors, or similar techniques, subject to the following conditions:

    (a) Placement of liners, matting or hard armor in other locations along the stream bottom is not covered.
    (b) Projects must be limited to a maximum of five (5) in stream structures.
    (c) Structures keyed into both banks that span the channel may not impede the movement of fish and aquatic life.
    (d) In-stream structures keyed into one bank must not extend past 1/3 the width of the stream channel.
    (e) Use of in-stream structures in any waterway which is identified by the department as having contaminated sediments, and the activity will likely mobilize the contaminated sediments are not covered.

4. Work performed by vehicles and other related heavy equipment may not be staged within the stream channel.

5. Work performed by hand and related hand-operated equipment is allowed within the stream channel.

6. This permit does not authorize projects for which the primary purpose is stream relocation, compensatory mitigation, flood control or drainage improvement.

7. Only bank treatments utilizing bioengineering techniques with no in-channel deflection structures may be authorized in State Scenic Rivers.

General Conditions

1. All activities must be accomplished in conformance with the approved plans, specifications, data and other information submitted in support of the ARAP application (form CN-1091) and the limitations, requirements and conditions set forth herein. Failure to comply with the terms and conditions of this permit is a violation of the Tennessee Water Quality Control Act of 1977 (the Act), and is subject to penalty in accordance with T.C.A. §69-3-115.
2. Activities, either individually or cumulatively, that may result in greater than *de minimis* degradation to waters of the state are not covered. This general permit shall not be used incrementally to combine with other activities resulting in a net loss of water resource values.
3. Clearing, grubbing, and other disturbance to riparian vegetation shall be kept at the minimum necessary for slope construction and equipment operations. Unnecessary riparian vegetation removal, including trees, is prohibited. Native riparian vegetation must be reestablished after work is completed. Coverage under this permit does not serve to waive any local riparian buffer protection requirement, and permittees are responsible for obtaining any necessary local approval.
4. This activity may not result in the permanent disruption to the movement of fish or other aquatic life upon project completion.
5. Activities that directly impact wetlands, or impair surface water flow into or out of any wetland areas are not covered.
6. Activities located in a component of the National Wild and Scenic River System or waters designated as Outstanding National Resource Waters are not covered.

7. Activities occurring in known or likely habitat of state or federally listed threatened, endangered, deemed in need of management, or species of special concern may not be authorized without prior coordination with the Tennessee Wildlife Resources Agency (TWRA) and TDEC Division of Natural Areas (DNA) to determine if any special conditions are required to avoid and/or minimize harm to the listed species or their habitat. Adverse effects to federally listed threatened and endangered species are not permitted without prior authorization from the United States Fish and Wildlife Service (USFWS) as required by Section 7 or Section 10 under the Endangered Species Act.
8. Work shall not commence until the permittee has obtained all necessary authorizations pursuant to applicable provisions of §10 of The Rivers and Harbors Act of 1899; §404 of The Clean Water Act and §26a of The Tennessee Valley Authority Act, as well as any other federal, state or local laws.
9. Backfill activities must be accomplished in a manner that stabilizes the streambed and banks to prevent erosion. The completed activities may not disrupt or impound stream flow.
10. The use of monofilament-type erosion control netting or blanket is prohibited in the stream channel and along the riparian corridor.
11. This permit does not authorize impacts to cultural, historic or archaeological features or sites.
12. This permit does not authorize access to private property. Arrangements concerning the use of private property shall be made with the landowner.
13. Where practicable, all activities shall be accomplished in the dry. All surface water flowing towards this work shall be diverted using cofferdams and/or berms constructed of sandbags, clean rock (containing no fines or soils), steel sheeting, or other non-erodible, non-toxic material. All such diversion materials shall be removed upon completion of the work. Activities may be conducted in the flowing water if working in the dry will likely cause additional degradation. If work is conducted in the flowing water it must be of a short duration and with minimal impact.
14. All activities must be carried out in such a manner as will prevent violations of water quality criteria as stated in TDEC Rule 0400-40-03. This includes, but is not limited to, the prevention of any discharge or use of materials that may be harmful to humans, terrestrial or aquatic life, or causes a condition in which visible solids, bottom deposits or turbidity impairs the designated uses of waters of the state.
15. Erosion prevention and sediment control measures must be in place and functional before any earth moving operations begin, and shall be designed according to the department's *Erosion and Sediment Control Handbook* (www.tn.gov/environment/wpc/sed_ero_controlhandbook/). Permanent vegetative stabilization using native species of all disturbed areas in or near the stream channel must be initiated within 15 days of project completion (see also *Landscaping with Natives* at tneppc.org). Non-native, non-invasive annuals may be used as cover crops until native species can be established.
16. The permittee is responsible for obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) *General Permit for Storm Water Discharges from Construction Activities* where clearing, grading or excavation results in an area of disturbance of one or more acres, or activities that result in the disturbance of less than one acre if it is part of a larger common plan of development or sale.
17. Temporary stream crossings shall be limited to one point in the construction area and erosion control measures shall be utilized where stream bank vegetation is disturbed. Stream beds shall not be used as linear transportation routes for construction equipment, rather, the stream channel may be crossed perpendicularly with equipment provided no additional fill or excavation is necessary.

Obtaining Permit Coverage

Activities where the length of the stream or reservoir bank to be treated does not exceed a total length of 50 feet on one or both banks (limited to one site per 1000 linear feet of stream or reservoir bank) may be done without submittal of an application or written authorization from the division prior to the commencement of work, provided the work is performed in accordance with the permit terms and conditions.

Other proposed bank stabilization activities may obtain coverage by submitting a signed and completed ARAP application (form CN-1091), along with any other required information, to the division. Work shall not commence until a written Notice of Coverage (NOC) from the division is received. As noted above, not all activities may be eligible for coverage under this general permit and coverage may be denied when appropriate.

Each Notice of Coverage under this general permit is valid until the expiration date specified on the NOC. If the expiration date on an NOC extends beyond the date the General Permit is modified, reissued, or revoked, and the permittee has commenced or is under contract to commence this activity before the expiration date, the permittee may have up to twelve (12) months from the date of the modification, reissuance, or revocation of the General Permit to complete the activity under the present terms and conditions of the general permit.

An application fee as established in Rule 0400-40-11-.02 will be assessed to applicants intending to receive an NOC to conduct activities under this general permit. An annual maintenance fee will be assessed to those individuals holding general permit coverage unless a Notice of Termination (NOT) form is received prior to the one-year anniversary of the issuance date of the NOC, or the NOC was issued for less than a one-year term. An NOT form can be downloaded from the division's ARAP webpage (http://www.tn.gov/environment/permits/arap.shtml).

APPROVED: _____ DATE: 7/23/15

Tisha Calabrese Benton
Director, Division of Water Resources