

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



Effective Date: April 7, 2020
Expiration Date: April 7, 2025

Activities Covered by this Permit

This general permit authorizes alterations associated with actively, excessively 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 of this permit.

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, stacked stone, 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 shall not exceed 300 linear feet for the treatment of one bank, or 200 linear feet per bank if the treatment includes both banks, with the following special conditions:
 - a. The use of structures or treatments such as seawalls, grouted riprap, concrete, retaining walls, bulkheads, etc. that prevent the establishment of woody rooted vegetation may only be permitted at vertical docking facilities at municipal or commercial marinas, or in areas where critical public infrastructure would prohibit other, less severe treatments from use.
 - b. Activities located within Tennessee Valley Authority or the United States Army Corps of Engineers (USACE) reservoirs shall not exceed 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 and is included in the total limitation

- of 1000 feet of work.
- 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 1/4 the bank height.
3. In-stream structures may be used in conjunction with bank treatments, subject to the same cumulative limitations on streambank hard armoring and total project lengths of disturbance along the bank. 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 by this general permit.
 4. Unless required to maintain the safety and structural integrity of public utility infrastructure (including utility line easements), or structures subject to State Safe Dam regulations or similar requirements, any spraying, mowing, or other disturbance of the stabilization treatment that interferes with its ability to naturalize is prohibited. Removal of invasive species is permitted.
 5. Written notification of the commencement of authorized work shall be provided to the local TDEC Environmental Field Office prior to, or within 24 hours after initiation of the approved work.
 6. Work performed by vehicles and other related heavy equipment may not be staged within the stream channel.
 7. Work performed by hand and related hand-operated equipment is allowed within the stream channel.
 8. This permit does not authorize projects for which the primary purpose is stream relocation, compensatory mitigation, flood control or drainage improvement.
 9. Only bank treatments utilizing bioengineering techniques with no in-channel deflection structures may be authorized in State Scenic Rivers.
 10. The placement of riprap shall not interfere with an NPDES-permitted facility's ability to comply with the Seep Action Plan component of their permit.
 11. Materials used for bank stabilization shall consist of rock, wood, or products made specifically for use in earthen slope stabilization. This permit does not authorize the use of other salvaged materials not found in the natural environment for bank stabilization.

General Conditions

1. The amount of fill, stream channel and bank modifications, or other impacts associated with the activity shall be limited to the minimum necessary to accomplish the project purpose. The permittee shall utilize the least impactful practicable method of construction.

2. 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) (except where no application is required as specified below) 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 Act.
3. Activities, either individually or cumulatively, that may result in an appreciable permanent loss of resource values to streams or wetlands 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.
4. Clearing, grubbing, and other disturbance to riparian vegetation shall be kept at the minimum necessary for slope construction and equipment operations. Unnecessary native riparian vegetation removal, including tree removal, is prohibited. Native riparian vegetation must be reestablished in all areas of disturbance outside of any permanent authorized structures 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.
5. This activity may not result in the permanent disruption to the movement of fish or other aquatic life upon project completion.
6. Blasting within 50 feet of any jurisdictional stream or wetland is prohibited.
7. Activities that directly impact wetlands, or impair surface water flow into or out of any wetland areas are not covered.
8. Activities located in a component of the National Wild and Scenic River System or waters designated as Outstanding National Resource Waters are not covered.
9. 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 authorized by this permit. Permittee is responsible for obtaining prior authorization from the United States Fish and Wildlife Service (USFWS) as required by Section 7 or Section 10 under the Endangered Species Act.
10. Work shall not commence until the permittee has obtained all necessary authorizations pursuant to applicable provisions of section 10 of The Rivers and Harbors Act of 1899, section 404 of the Clean Water Act, section 26a of The Tennessee Valley Authority Act, section 402 of the Clean Water Act (including, but not limited to, an NPDES permit for construction stormwater), or any other federal, state, or local laws.
11. Backfill activities must be accomplished in the least impactful manner possible that stabilizes the streambed and banks to prevent erosion. The completed activities may not disrupt or impound stream flow.
12. The use of monofilament-type erosion control netting or blanket is prohibited in the stream channel, stream banks, or any disturbed riparian areas within 30 feet of top of bank.
13. This permit does not authorize impacts to cultural, historic, or archaeological features or sites.

14. This permit does not authorize access to public or private property. Arrangements concerning the use of public or private property shall be made with the landowner. The permittee is responsible for obtaining any additional permitting or maintenance agreements with other government or public agencies or lands.
15. 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. Any disturbance to the stream bed or banks must be restored to its original condition. As approved after Division review, activities may be conducted in the flowing water if working in the dry will likely cause additional degradation. Any work conducted in the flowing water must be for a short duration and with minimal impact, and conform to the Division-approved methodology.
16. All activities must be carried out in such a manner as will prevent violations of water quality criteria as stated in TDEC Rule Chapter 0400-40-03, or impairment of the uses of waters of the state as designated by Rule Chapter 0400-40-04.
17. 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 (<http://tnepsc.org/handbook.asp>). Permanent vegetative stabilization using native species of all disturbed areas in or near the stream channel must be initiated within 14 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.
18. 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 mechanized 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.

Shoreline stabilization activities located within Kentucky Lake, Pickwick Lake, Tims Ford Lake, Fort Loudoun Lake, Watts Bar Lake, Douglas Lake, Norris Lake, Cherokee Lake, South Holston Lake, Ft. Patrick Henry Lake, Boone Lake, Watauga Lake, Chickamauga Lake, Tellico Lake, Melton Hill Lake, or Nickajack Lake managed by the Tennessee Valley Authority may be performed 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 preceding permit limits, and each of the following limitations:

1. Riprap or other hard armoring stabilization, individually or cumulatively, shall not exceed 150 linear feet of shoreline.
2. Riprap shall follow the natural contour of the shoreline.
3. Riprap shall not extend below the winter pool elevation.
4. The placement of riprap shall not interfere with an NPDES-permitted facility's ability to comply with the Seep Action Plan component of their permit

5. Vegetative stabilization techniques, including live vegetative plantings, live stakes, branch packing, live fascines, vegetated soil lifts, brush mattresses, tree revetments, and coconut fiber coir rolls may be authorized for an unlimited total length.
6. Work shall not commence until proper authorization under a 26a permit from the TVA is obtained.

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 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 receiving an NOC unless a Notice of Termination (NOT) form is received prior to the one-year anniversary of the issuance date of the NOC. An NOT form can be downloaded from the division's ARAP webpage (<https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html>).

APPROVED, 
Jennifer Dodd (Apr 7, 2020)

Jennifer Dodd
Director, Division of Water Resources

04/07/2020
DATE: