

USDA/NRCS

452 East Mark Twain Ave

Jamestown, TN 38556

(931) 879-8212 Ext:3

To: Sondra Wood

From: Dwight Dickson and Scott County Road Department

Subject: EWP 5114 sites 1-23 in Scott County. Each site has a separate application. I have talked with Allen Wilkinson and he stated to send applications to this email address. If you have any questions, please give me a call.

Thanks for your help!

Dwight Dickson

Site 7



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,
Nashville, Tennessee, 37243
1-888-891-8332 (TDEC)

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

| | | | |
|--|------------------------------|---|---|
| OFFICIAL STATE USE ONLY | Site #: | Permit #: | |
| Section 1. Applicant Information (individual responsible for site, signs certification below) | | | |
| Applicant Name (company or individual): Scott County Road Department | | SOS #: | Status: N/A |
| Primary Contact/Signatory: Kelvin King | | Signatory's Title or Position: Road Superintendent | |
| Mailing Address: P.O. Box 118 | | City: Huntsville | State: TN Zip: 37756 |
| Phone: (423) 663 - 3832 | Fax: (432) 663 - 2886 | E-mail: roaddept@highland.net | |
| Section 2. Alternate Contact/Consultant Information (a consultant is not required) | | | |
| Alternate Contact Name: Dwight Dickson | | | |
| Company: USDA/NRCS | | Title or Position: District Conservationist | |
| Mailing Address: 452 E. Mark Twain Ave | | City: Jamestown | State: TN Zip: 38556 |
| Phone: (931) 879 - 8212 | Fax: | E-mail: dwight.dickson@usda.gov | |
| Section 3. Fee (application will be incomplete until fee is received) | | | |
| <input type="checkbox"/> No Fee | | <input type="checkbox"/> Fee Submitted with Application | |
| | | Amount Submitted: \$ _____ | |
| Current application fee schedules can be found at the Division of Water Resources webpage at: https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee". | | | |
| Billing Contact (if different from Applicant): | | Name: | Email: |
| Address: | | Phone: | |
| Section 4. Project Details (fill in information and check appropriate boxes) | | | |
| Site or Project Name: Scott County EWP 5114 Site 7 | | Nearest City, Town or Major Landmark: Huntsville | |
| Street Address or Location (include zip): River Road Huntsville, TN 37756 | | | |
| County(ies): Scott | | MS4 Jurisdiction: | Latitude (dd.dddd): 36.383469 |
| | | | Longitude (dd.dddd): -84.487183 |
| Resources Proposed for Alteration: | | <input checked="" type="checkbox"/> Stream / River | <input type="checkbox"/> Wetland <input type="checkbox"/> Reservoir |
| Name of Water Resource (for more information, access http://tdeconline.tn.gov/dwr): New River | | | |
| Brief Project Description (a more detailed description is required under Section 8): <div style="text-align: right;">Repair stream banks from flood damage from March 2021.</div> | | | |
| Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| If Yes, provide the permit reference numbers: | | | |
| Will the activity require a 401 Water Quality Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | |
| If Yes, attach any 401 WQC pre-filing meeting request documentation | | | |
| Is the proposed activity associated with a larger common plan of development: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| If Yes, submit site plans and identify the location and overall scope of the common plan of development. | | | |
| Plans attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | |
| If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP): | | | |

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| | |
|--|-----------------------------------|
| Section 5. Project Schedule (fill in information and check appropriate boxes) | |
| Proposed start date: July 2021 | Estimated end date: December 2021 |
| Is any portion of the activity complete now? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| If yes, describe the extent of the completed portion: | |

The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.

| Section 6. Description | Attached | |
|--|-------------------------------------|--------------------------|
| | Yes | No |
| 6.1 A narrative description of the scope of the project | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.2 USGS topographic map indicating the exact location of the project (can be a photographic copy) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.3 Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.4 A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.5 A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.6 In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6.7 A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| Section 7. Project Rationale | Attached | |
|---|-------------------------------------|--------------------------|
| | Yes | No |
| Describe the need for the proposed activity, including, but not limited to the purpose, alternatives considered and rationale for selection of least impactful alternative, and what will be done to avoid or minimize impacts to water resources | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| Section 8. Technical Information | Attached | |
|---|-------------------------------------|--------------------------|
| | Yes | No |
| 8.1 Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (e.g., stream cross sections where road crossings are proposed) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8.2 For the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods and any proposed monitoring | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8.3 Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations and any other measures to treat, control, or manage impacts to waters | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| Section 9. Water Resources Degradation (degree of proposed impact) |
|--|
| <p>Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than <i>de minimis</i> degradation to water quality.</p> <p>Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality degradation:</p> <p><input checked="" type="checkbox"/> a. <i>De minimis</i> degradation, no appreciable permanent loss of resource values</p> <p><input type="checkbox"/> b. Greater than <i>de minimis</i> degradation (if greater than <i>de minimis</i> complete Sections 10-11)</p> <p>For information and guidance on the definition of <i>de minimis</i> and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03- 06 of the Tennessee Water Quality Criteria Rule: https://publications.tnsofiles.com/rules/0400/0400-40/0400-40.htm</p> <p>For more information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at: https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html</p> |

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| Section 10. Detailed Alternatives Analysis | | Attached | |
|---|---|--------------------------|--------------------------|
| | | Yes | No |
| 10.1 | Analyze all reasonable alternatives and describe the level of degradation and permanent loss of resource value caused by each alternative. Assessment must consider options other than the "Preferred" and "No Action" alternatives. Provide associated rationale for selecting or rejecting all alternatives considered and demonstration that the least impactful practicable alternative was selected. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10.2 | Discuss the social and economic consequences of each alternative | <input type="checkbox"/> | <input type="checkbox"/> |
| 10.3 | Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area | <input type="checkbox"/> | <input type="checkbox"/> |

| Section 11. Compensatory Mitigation | | Attached | |
|--|--|--------------------------|--------------------------|
| | | Yes | No |
| 11.1 | A detailed discussion of the proposed compensatory mitigation. Provide evidence of credit reservation if proposing to utilize a third-party provider. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.2 | Analysis of any proposed appreciable loss of resource value using the TN Stream Mitigation Guidelines. Provide Stream Quantification Tool (SQT) results if applicable. Include Existing Condition Score (ECS) and debit/credit calculations. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.3 | Describe how the compensatory mitigation would result in no net loss of resource value | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.4 | Provide a detailed monitoring plan for the compensatory mitigation site if permittee-responsible project is proposed | <input type="checkbox"/> | <input type="checkbox"/> |
| 11.5 | Describe the long-term protection measures for the compensatory mitigation site if permittee-responsible project is proposed (e.g., deed restrictions, conservation easement) | <input type="checkbox"/> | <input type="checkbox"/> |

| Certification and Signature | | | |
|--|--|---|--|
| <p>An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.</p> <p><i>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.</i></p> | | | |
| <div style="border-bottom: 1px solid black; min-height: 20px;">Kelvin King</div> <div style="font-size: 0.8em;">Printed Name</div> | <div style="border-bottom: 1px solid black; min-height: 20px;">Road Superintendent</div> <div style="font-size: 0.8em;">Official Title</div> | <div style="border-bottom: 1px solid black; min-height: 40px; text-align: center;"> </div> <div style="font-size: 0.8em;">Signature</div> | <div style="border-bottom: 1px solid black; min-height: 20px;">7/15/21</div> <div style="font-size: 0.8em;">Date</div> |

Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the proposed activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to water.permits@tn.gov.

| EFO | Street Address | Zip Code | EFO | Street Address | Zip Code |
|-----------|--------------------------------|------------|--------------|---------------------------------|----------|
| Memphis | 8383 Wolf Lake Drive, Bartlett | 38133-4119 | Cookeville | 1221 South Willow Ave. | 38506 |
| Jackson | 1625 Hollywood Drive | 38305-4316 | Chattanooga | 1301 Riverfront Pkwy., Ste. 206 | 37402 |
| Nashville | 711 R S Gass Boulevard | 37243 | Knoxville | 3711 Middlebrook Pike | 37921 |
| Columbia | 1421 Hampshire Pike | 38401 | Johnson City | 2305 Silverdale Road | 37601 |



Scott County EWP

Site 7

6.1 The scope of the project is to repair flood damage to stream banks adjacent to roads, bridges, and culverts caused by an event in March 2021. After completion, the project will help to protect sites from future flooding events. Stream banks will be sloped back on a 2:1 slope or flatter, and then backfilled with geotextile fabric and rock rip rap.

6.2 Please see attached topographic map.

6.3 Please see attached photos of the site.

6.4 Existing stream is approximately 4'-6' wide and 6' deep, stream bottom is composed of mixed rock, riparian vegetation is mixed shrubs and trees.

6.5 Proposed stream dimensions will be the same as existing stream dimensions, stream bottom composition will be the same as existing stream, riparian vegetation will be the same as existing stream.

6.6 No wetlands are present.

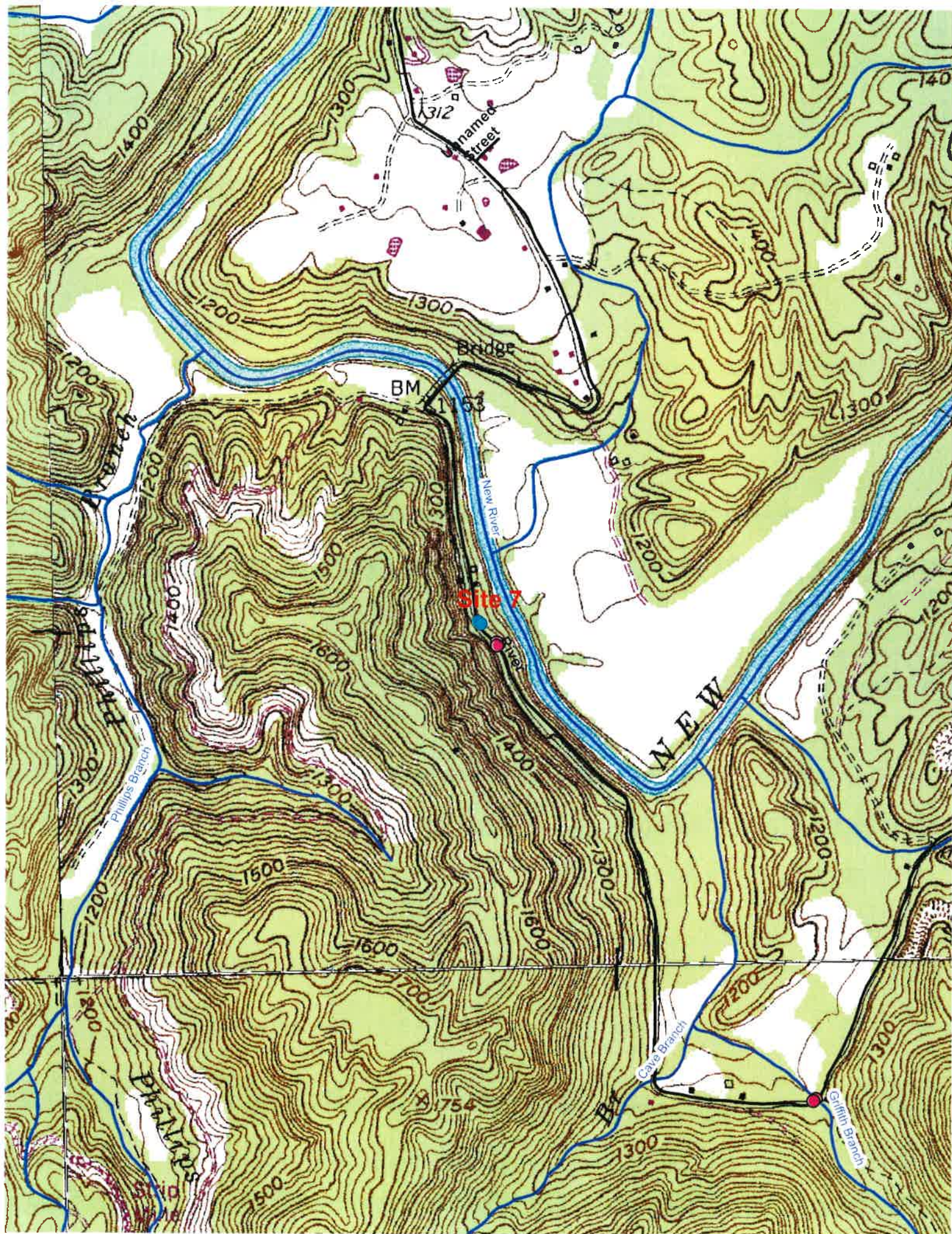
6.7 No hydrologic or jurisdictional determination documents issued.

7. When completed, the project will repair damage from flood in March 2021. It will also minimize damage from future flooding events at this site. If left untreated, the site will continue to erode with every rainfall, resulting in sediment being deposited into streams. All work will be done when stream is at minimum flow to minimize impacts to the stream. After completion, all disturbed areas will be seeded and mulched according to N.R.C.S. standards and specification. See attached list of alternatives considered.

8.1 See attached designs and drawings from N.R.C.S. Engineers.

8.2 Sequence of events: Stream banks will be sloped on 2:1 slope or flatter with backhoe or track-hoe, all excavated material will be hauled out of the floodplain, geotextile fabric will be laid and pinned on excavated area, approved rock rip-rap will be laid on top of geotextile fabric to designed thickness using a backhoe or track-hoe, after construction is completed, all disturbed areas will be seeded and mulched according to N.R.C.S. standards and specifications.

8.3 During excavation of the keyways and the side slopes of the stream bank stabilization measures, geotextile shall be installed and maintained on the excavated slopes down to the toe of the slope or at the existing water line elevation, whichever is lower in elevation. As excavation in this area proceeds, the geotextile will be installed at the end of each day. The geotextile will be removed, and temporarily stockpiled the next time that the Sponsor continues with construction activities. At the point where construction proceeds to the point that the entire excavated area is covered in geotextile, and held in place with pins, then the removal is no longer needed. Geotextile shall remain pinned down in place upon completion of the excavation, and covered with rock riprap as shown on the drawings.







Scott County 5114- Streambank Stabilization Project Alternatives

The proposed project consists of a section of eroded streambank on un-named tributary of un-named tributary of Paint Rock Creek in Scott County, Tennessee.

All 404 and ARAP permit applications require a list of alternatives considered, a brief description of each alternative, and discussion of the decisions that lead to the conservation practice alternative that is chosen. This list of alternatives are the ones that were considered on this project site.

NRCS policy requirements – NRCS national policy requires that all Streambank Stabilization practices be designed to have a 20 year minimum life expectancy.

NRCS policy requires NRCS to design structures to the 2 year storm elevation. Guidance from national leaders in natural channel design (Dave Rosgen) recommends that structures be designed to “bankfull flow”. The terms “bankfull flow”, “channel forming flow”, and 2 year flow are all approximately the same thing.

Contractors chosen to construct projects on landowner’s property are the choice of the landowner. NRCS has NO input into who the landowner chooses to build the proposed project.

Most federal cost share programs require for NRCS to cost share on the least cost alternative practice that will accomplish the specified goals. For example, NRCS may design a rock riprap revetment for an eroded streambank. We design for the structure to extend to the approximate 2 year storm flow elevation. This elevation is frequently lower than the top of the existing streambank. Many landowners may choose to extend the rock riprap revetment to the top of the bank. The landowner has that option as an alternative, but NRCS cost share is capped at the cost associated with the least cost alternative. In this case, the landowner pays for the rest of the project out of their own funds.

Permitting agencies have asked NRCS if it is possible to come back year after year and “patch or repair” projects that undergo storm flow damages. This is an attempt to encourage the use of less structural measures and more vegetation. Landowners are required to do maintenance on a project for the life of the practice. NRCS policy requires engineering designed practices to meet the 20 year life expectancy without major repairs, and we don’t have a program or policy that allows NRCS to use much higher risk techniques that would require repairs on a regular basis (Like a Mitigation project where monitoring is required). Minor maintenance is the landowner’s responsibility.

The typical streambank stabilization project that is evaluated is nearly always vertical, and somewhat concave where the top of the bank extends further out over the stream than the bottom of the slope does. They are normally dominated by some type of coarse soil material (Chert, gravel, river rock, sand in W. TN) along the lower portions of the streambank. These coarse materials have very little clay type material that would help resist erosion. These types of soils are extremely easily eroded. In addition to being easily eroded, they have the fastest part of the stream, the thalweg, located immediately adjacent to the toe of the bank.

Normally, there is no vegetation left on the eroded slopes. Whatever vegetation was there has long since been undercut and has been washed downstream. In addition, whatever trees left on top of the bank are already undercut and falling into the stream, or are headed in that direction. Just to be clear, planting trees in a riparian area floodplain adjacent to a stream does almost nothing to stop streambank erosion. It provides lots of benefits to the stream and to the floodplain, but erosion resistance on the

streambank isn't one of these attributes. Most of the bank heights are just too tall for trees and shrubs to ever get the rooting depth to the toe of the bank that would help resist erosion. In addition, a tremendous source for the erosion that occurs is occurring below the water line. The roots of most trees and shrubs doesn't penetrate the water line with sufficient frequency and density to provide very much erosion protection below the water line.

Rock riprap V-weirs

Rock riprap V-weirs are a stabilization technique that are used to assist with bed degradation or aggradation problems and for streambank stabilization problems. Bed degradation or aggradation isn't really a problem at this location. In addition, the site is not suitable for installation of a V-weir due to the extreme curvature of the site. It's very important for the areas between V-weirs and sloped areas above V-weirs to be established in deep rooted grasses, shrubs, and trees. For these reasons, this alternative was considered but eliminated for this project site.

Rock riprap jetties or j-hook vanes

Rock riprap jetties or J-hook vanes are essentially the same structure with different names. Jetties are a stabilization technique that are used to assist with streambank stabilization problems. The jetties are more effective in a gentle curving stream alignment. It's very important for the areas between jetties and sloped areas above jetties to be established in deep rooted grasses, shrubs, and trees. Jetties are not typically effective due to the extreme stream curvature of this site. For these reasons, this alternative was considered but eliminated for this project site.

Rootwads

Rootwads are a technique pioneered by Hydrologist Dave Rosgen. They are a technique that is listed in NRCS reference materials. Rootwads use the stump roots of large trees with limestone rock boulders and footer logs to form revetments and stabilize the eroding streambank – specifically the toe of the eroded streambank. It's very important for the areas between rootwads and sloped areas above rootwads to be established in deep rooted grasses, shrubs, and trees. Tennessee engineering staff have designed and assisted with the construction of numerous rootwad revetments for demonstration projects in the late 90s. In almost every case, these structures have failed and been eroded away. Most of these streambanks are right back to the highly eroded streambanks that existed prior to design and construction the first time. These structures were originally designed to handle direct impacts from storm flows. These storm flow impacts typically cause very deep scour into the streambed and on the adjacent streambanks, and into the streambanks at the edges of the rootwads and above the rootwads. The scour that forms over steepens the streambanks, and frequently scours the banks back away from the rootwad stump, and the rootwads routinely work themselves loose and eventually free along with all of the vegetation that was dependent on the rootwads to stabilize the toe of the eroded slopes. The Hydrologist (Dave Rosgen) that pioneered these structures has had so many problems from these structures that he no longer designs or recommends them. The very high percentage chance of failure for this alternative is the reason that this alternative was considered but eliminated for this project site.

Cedar tree revetments

Cedar tree revetment are a technique pioneered in the Midwest (Missouri DNR had the 1st brochure on it). They are a technique that is listed in NRCS reference materials. Cedar tree revetments use overlapped cedar trees to form a lined revetment along the lower portions of the eroded streambank. The cedar trees are cabled together and cabled to various types of anchors. The anchors are then secured into the bank to hold the cedars in place. It's very important for the sloped areas above the cedar tree revetment to be established in deep rooted grasses, shrubs, and trees. The idea is for the vegetation to

be able to hold the soil in place by the time that the cedar trees have rotted or washed away. NRCS engineers designed and assisted with the construction of numerous cedar tree revetment for demonstration projects in the late 90s. In almost every case, these structures have failed and been eroded away. The only ones that are still in place are locations where the stream channel locations have adjusted and the streamflow is no longer flowing against the cedar trees. Most of the rest of these streambanks are right back to the highly eroded streambanks that existed prior to design and construction the 1st time. These structures were originally designed to slow water against the eroding bank and to catch sediment which would allow more vegetation to become established. When the cedar trees were originally constructed, they are ratcheted down so that they are very tight against the streambank. Over time, the cedar trees start to rot and become brittle. Many of these eventually break limbs and become less tight against the bank. When a bankfull flow occurs the cedar tree revetments shake violently since they are no longer held tightly. They eventually break free from the cables and anchors, or they pull the cables and anchors free from the soil. Most of the time the vegetation that was dependent on the cedar tree revetment is washed away shortly following the tree revetment failure. The very high percentage chance of failure for this alternative is the reason that this alternative was considered but eliminated for this project site.

Rock riprap revetment

In my judgment, the rock riprap revetment is the best engineering alternative to accomplish streambank stabilization at this site. The rock riprap revetment alternative requires that the keyway be constructed below the maximum predicted scour depth, or to bedrock. The keyway will be constructed an average of 4' into the streambed. The rock riprap is sized to stay in the types of storm flows that are predicted in this location over the life of the conservation practice. The rock riprap revetment will be lined underneath by geotextile. The rock riprap revetment in this location takes a direct impact from stream flows. The rock riprap revetment height will need to extend to the top of the existing bank height due to the fact that during high flow events the water is jumping the bank at this location and the risk of failure or damage that would lead to failure of a vegetated upper slope is very high.

I recognize that there are some negative opinions about the use of geotextile in combination with rock riprap. The geotextile serves the purpose of preventing soil from piping through the rock riprap. Piping would allow the ground behind the rock riprap to settle and erode. The main negative opinion about the use of geotextile appears to be that it supposedly prevents roots from penetrating the geotextile and prevents vegetation from becoming established. I've went back and reviewed some of the rock riprap revetment streambank stabilization projects that are approaching 10 to 15 years of age. I have pictures where the face of the rock riprap is covered with trees, shrubs, and herbaceous vegetation. In some cases, it was difficult to see the rock riprap revetment hidden by the vegetation. I have also reviewed other sites where the vegetation wasn't nearly as good. In my opinion, the differences between the current conditions of the sites with good vegetation and without much vegetation doesn't have anything to do with the geotextile. It has to do with how active the flood flows are in each stream channel, and the availability and quality of the sediment deposits that occur on and in the rock riprap revetment. In streams where the floodplain is very actively flooding, and good quality sediment is routinely deposited in the rock riprap, then the natural regeneration of vegetation is very prolific. If a stream does not often flood up on the rock riprap revetment, or if the sediment is extremely coarse (Example – Streams flowing off the side of Cumberland Plateau or out of Cherokee National Forest that are dominated by very large rounded river rock type sediments with very little fine materials.), then the riparian vegetation has a much harder time naturally regenerating. We have similar riparian regeneration resistance with incised channels where the streams don't actively flood frequently up on the rock riprap to deposit sediment. We must keep in mind that vegetation doesn't normally start

reestablishment until the slopes become stable long enough for roots to penetrate the soil and become entrenched. On the typical site that we are asked to evaluate, there would be no vegetation for a long time unless the bank is stabilized or the stream channel thalweg changes alignment to an area that doesn't directly impact the eroded area anymore.

Slope Excavation, Erosion Control Blanket, and revegetation

This is the bioengineering technique. It consists of excavating a 2:1 slope, placing erosion control blanket down to the toe of the constructed slope, and anchoring it in place, and revegetating the slope with native grasses, bare root shrub seedlings, or one of the many types of bioengineering techniques that uses cuttings. This is a technique that is listed in NRCS reference materials, and defined in many of the NRCS references by Robin Sotir (Noted Soil Bioengineering consultant). These types of projects have a place, but they are normally used in conjunction with other engineering techniques that act as the foundation for these practices to build upon. The places where this type of alternative can function well in a stand-alone situation are small sites, low bank heights, and also areas where the erosion rates and stream flow velocities are not nearly as high as the typical eroded sites that NRCS works on. NRCS tried this technique as a demonstration project on some severely eroded areas. The results were nearly always bad, and it normally didn't take too long for it to occur. This technique has an extremely high rate of failure when used as a stand-alone technique on any severely eroding streambank. All of our reference materials and guidance requires streambank stabilization methods to be designed and constructed to a depth sufficient to resist the maximum depth of scour into stream. Based on my experience, I normally never use less than 2' of depth for a structure into a streambed. This practice doesn't accomplish this. Erosion control fabric is effective at holding soil in place until areas can become revegetated. It's not normally too effective at holding soil in place below the water line and into the streambed. This alternative is appropriate in conjunction with rock riprap revetments, in between rock riprap v-weirs, and in-between rock riprap jetties. However, in a stand-alone situation, the very high percentage chance of failure for this alternative is the reason that this alternative was considered but eliminated for this project site.

This same technique with staked coir rolls (Biologs) at the toe of the slope would be used in very similar locations with similar results as the alternative listed above. Most of these materials are biodegradable and have a typical lifespan range from 2 to 5 years. Once the Biologs degrade, there is no protection from scour below the water line and into the streambed. The roots of native vegetation just normally doesn't penetrate the water in significant density to resist the erosion that occurs in these areas. This alternative is appropriate in conjunction with rock riprap revetments, in between rock riprap v-weirs, and in-between rock riprap jetties. However, in a stand-alone situation, the very high percentage chance of failure for this alternative is the reason that this alternative was considered but eliminated for this project site.

This technique using Biologs above is more effective in lake shore erosion situations where they can be used to protect lakeshores from boat or wind erosion. They still have a limited life span (2-5 years), but they are more effective in these lower energy erosion situations where flow velocities are extremely low.

No Action

The no action alternative is just what it says. This alternative would not include any streambank stabilization measures to stabilize this eroded streambank. In addition, there would be no forest riparian buffer in this area. The project site would continue to erode. Sediment from this area would still enter the stream. The NRCS conservation practice life of a streambank stabilization project is a

minimum of 20 years. We can assume that the erosion on this site will continue for at least that length of time. Most eroded sections of streambank don't naturally repair themselves. Occasionally a stream will change direction and bypass an eroded area, but this just isn't that common on the project sites that NRCS typically evaluates or recommends work on.

General

All areas that are disturbed during construction shall be stabilized with a critical area seeding, limed, fertilized, and mulched with small grain straw mulch at a rate of 2.5 tons per acre.

Prepared by: Terry Horne, Area Engineer

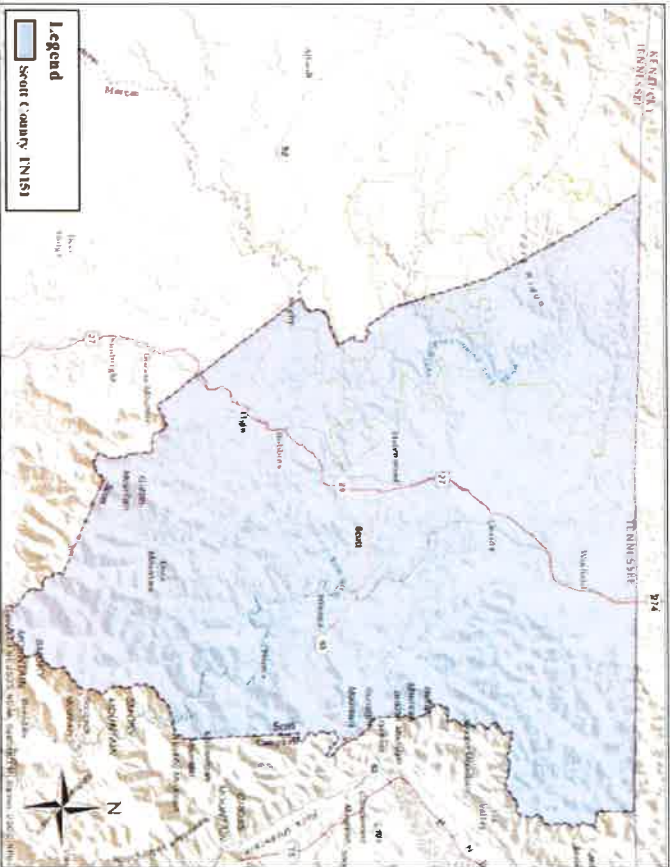
PROJECT CODE 5114

Prepared By:
Department of Agriculture
Resources Conservation
Area 3 Engineering
Cookeville, Tennessee

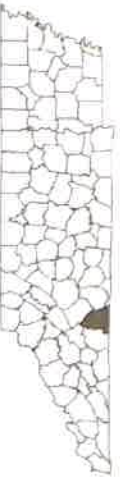
And

INDEX TO DRAWINGS

1. COVER SHEET
2. SITE LIST (SITES 1-14)
3. SITE LIST (SITES 15-25)
4. LOCATION MAP
5. TYPICAL CROSS SECTIONS
6. TYPICAL CULVERT WRAP SECTIONS
7. TYPICAL RAIL PILE SECTIONS
8. ROCK RIP-RAP CHART (SITES 1-18)
9. ROCK RIP-RAP CHART (SITES 19-23)



NOT TO SCALE



Location Map
Scott County

The US Department of Agriculture (USDA) generally determines grant eligibility statements if you believe your agricultural information may violate specific laws about how to file a determination complaint in Canada from the Office of the Assistant Secretary for Civil Rights (ASAC). USDA prohibits discrimination at all workplace levels, regardless of race, ethnicity, sex, age, marital status, sexual orientation, gender identity or expression, religion, national origin, disability, genetic information, reprisal, or because of or part of an individual's income as derived from any public assistance program. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at www.nrcr.usda.gov, email to nrcr@usda.gov

USA
Office of the Assistant Secretary for Civil Rights
1600 Independence Avenue, SW
Washington, DC 20250-9410

If you are unable to reach the ASAC by phone, please contact the ASAC by email at asac@nrcr.usda.gov. If you need more information, call toll-free 1-877-636-6328 or 1-800-645-6136 (in Canada), or write "NRCR" or "complaint" in the subject line of your letter to the ASAC.

For additional information regarding the ASAC, visit the Federal Relay Service at tollfree.usda.gov.

Program manager, who leads project activities and oversees the progress of the project, and provides guidance and support to the project team. The program manager is responsible for communication of program information (e.g. Brain, vlog post, website etc.) around contact USDA Center of Excellence (COE) 7200-8600 (voice and TDD)



IMPORTANT: Utility Owners Must Be Notified Of The Date And Time Construction Is Scheduled To Approach The Utilities (Pipelines, Telephone Lines, Electric Lines, etc.), Construction Should Not Commence Until All Utility Companies Have Been Notified And Have Their Utilities Located On The Ground

| | |
|--|---|
| <div style="text-align: center;">  </div> | <p>CONSTRUCTION DRAWINGS APPROVED</p> <hr/> <p>STATE CONSERVATION ENGINEER, NRCS</p> <p>NASHVILLE, TENNESSEE</p> |
| <p>Sheet 1 of 9</p> | <p>File Name 5114-SCOTT</p> <p>Drawing Number 5114-A-47151</p> |
| <p>USDA</p> <p>United States Department of Agriculture</p> <p>Natural Resources Conservation Service</p> | |

STREAMBANK & ROAD STABILIZATION
EMERGENCY WATERSHED PROTECTION WORK
SCOTT COUNTY, TENNESSEE
COVER SHEET

| | |
|-------------------------------|------------------------|
| | Date |
| Designed: <u>J. BROCKWELL</u> | <u>5 PEARSON</u> 05/21 |
| Drawn: <u>J. BROCKWELL</u> | 05/21 |
| Checked: <u>S. PEARSON</u> | 06/21 |
| Approved: _____ | |

| Description | Lat (Deg) | Long (Deg) | Lat (DMS) | Long (DMS) | Location Description | Description of Debris/Repair | Justification |
|-------------|-----------|------------|------------------|-------------------|----------------------|--|--------------------|
| Site 1 | 36.376939 | -84.627332 | 36° 22' 36.98" N | 084° 37' 38.39" W | OLD JAMESTOWN RD | 130' OF EROSION AROUND CULVERT ON OLD JAMESTOWN ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 2 | 36.380542 | -84.613272 | 36° 22' 49.95" N | 084° 36' 47.77" W | OLD MOUNTAINVIEW RD | EROSION ALONG 45' OF OLD MOUNTAINVIEW ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 3 | 36.380579 | -84.612988 | 36° 22' 50.08" N | 084° 36' 46.75" W | OLD MOUNTAINVIEW RD | EROSION ALONG 50' OF OLD MOUNTAINVIEW ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 4A | 36.381103 | -84.609153 | 36° 22' 51.97" N | 084° 36' 32.95" W | OLD MOUNTAINVIEW RD | 30' OF EROSION AROUND D.S. END OF CULVERT ON OLD MOUNTAINVIEW ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 4B | 36.38111 | -84.609091 | 36° 22' 51.99" N | 084° 36' 32.72" W | OLD MOUNTAINVIEW RD | 20' OF EROSION AROUND U.S. END OF CULVERT ON OLD MOUNTAINVIEW ROAD, CULVERT WRAP W/ BOULDER TOE PROTECTION | PROTECTION OF ROAD |
| Site 5A | 36.378344 | -84.529234 | 36° 22' 42.03" N | 084° 31' 45.24" W | LOW GAP RD | 55' OF EROSION AROUND CULVERT ON LOW GAP ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 5B | 36.378461 | -84.52929 | 36° 22' 42.45" N | 084° 31' 45.44" W | LOW GAP RD | 30' OF EROSION AROUND CULVERT ON LOW GAP ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 6 | 36.374342 | -84.534273 | 36° 22' 27.63" N | 084° 32' 03.38" W | LOW GAP RD | 50' OF EROSION AROUND CULVERT ON LOW GAP ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 7 | 36.383469 | -84.487183 | 36° 23' 00.48" N | 084° 29' 13.85" W | RIVER RD | 47' OF EROSION AROUND CULVERT ON RIVER ROAD, CULVERT WRAP W/ BOULDER TOE PROTECTION | PROTECTION OF ROAD |
| Site 8 | 36.382963 | -84.486633 | 36° 22' 58.66" N | 084° 29' 11.87" W | RIVER RD | 20' OF EROSION AROUND CULVERT ON RIVER ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 9 | 36.371772 | -84.477398 | 36° 22' 18.37" N | 084° 28' 38.63" W | RIVER RD | 30' OF EROSION AROUND DUAL ARCH CULVERTS ON RIVER ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 10 | 36.379114 | -84.462613 | 36° 22' 44.81" N | 084° 27' 45.40" W | RIVER RD | 65' OF EROSION AROUND CULVERT ON RIVER ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 11 | 36.369575 | -84.448266 | 36° 22' 10.46" N | 084° 26' 53.75" W | CORDELL RD | 35' OF EROSION AROUND CULVERT ON CORDELL ROAD, RIPRAP REVETMENT | PROTECTION OF ROAD |
| Site 12 | 36.36176 | -84.44653 | 36° 21' 42.33" N | 084° 26' 47.50" W | CORDELL RD | 40' OF EROSION AROUND CULVERT ON CORDELL ROAD, RIPRAP REVETMENT W/ BOULDER TOE PROTECTION | PROTECTION OF ROAD |
| Site 13 | 36.331219 | -84.448635 | 36° 19' 52.38" N | 084° 26' 55.08" W | BURGESS CREEK RD | EROSION ALONG 75' OF BURGESS CREEK ROAD, RAIL PILE REVETMENT | PROTECTION OF ROAD |
| Site 14 | 36.575598 | -84.336861 | 36° 34' 32.15" N | 084° 20' 12.69" W | GUMFORK RD | 100' OF EROSION AROUND CULVERT ON GUMFORK ROAD, CULVERT WRAP | PROTECTION OF ROAD |



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| | United States Department of Agriculture Natural Resources Conservation Service |
| File Name: S114-SCOTT Drawing Number: S114-47151 Sheet 2 of 3 | |

STREAMBANK & ROAD STABILIZATION
EMERGENCY WATERSHED PROTECTION WORK
SCOTT COUNTY, TENNESSEE
SITE LIST (SITES 1-14)

| | |
|------------------------------------|-------|
| Date | 05/21 |
| Designed: J. BROCKWELL, S. PEARSON | |
| Drawn: J. BROCKWELL, S. PEARSON | 05/21 |
| Checked: S. PEARSON | 06/21 |
| Approved: | |

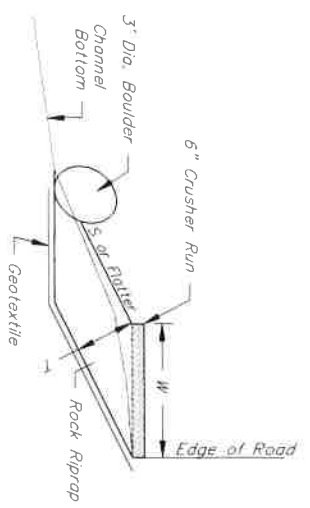
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|----------|-----------|------------|------------------|-------------------|-----------------------|--|--------------------|
| Site 15 | 36.569974 | -84.315932 | 36° 34' 11.90" N | 084° 18' 57.35" W | LOWER JELICO CREEK RD | 90' OF EROSION AROUND CULVERT ON LOWER JELICO CREEK ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 16 | 36.570367 | -84.315066 | 36° 34' 13.32" N | 084° 18' 54.23" W | LOWER JELICO CREEK RD | 60' OF EROSION AROUND CULVERT ON LOWER JELICO CREEK ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 17 | 36.572029 | -84.311481 | 36° 34' 19.30" N | 084° 18' 41.33" W | LOWER JELICO CREEK RD | 25' OF EROSION AROUND CULVERT ON LOWER JELICO CREEK ROAD, RIPRAP REVEMENT | PROTECTION OF ROAD |
| Site 18 | 36.452692 | -84.501708 | 36° 27' 09.69" N | 084° 30' 06.14" W | CHERRY FORK RD | EROSION ALONG 90' OF CHERRY FORK ROAD, RAIL PILE REVEMENT | PROTECTION OF ROAD |
| Site 19 | 36.370042 | -84.457002 | 36° 22' 12.15" N | 084° 27' 25.20" W | WILLIAM NEWPORT RD | 76' OF EROSION AROUND CULVERT ON WILLIAM NEWPORT ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 20 | 36.369919 | -84.457574 | 36° 22' 11.70" N | 084° 27' 27.26" W | WILLIAM NEWPORT RD | 57' OF EROSION AROUND CULVERT ON WILLIAM NEWPORT ROAD, CULVERT WRAP | PROTECTION OF ROAD |
| Site 21A | 36.420408 | -84.392406 | 36° 25' 13.46" N | 084° 23' 32.66" W | SUGAR GROVE RD | 25' OF EROSION AROUND D.S. END OF CULVERT ON SUGAR GROVE ROAD, RIPRAP REVEMENT | PROTECTION OF ROAD |
| Site 21B | 36.420432 | -84.392278 | 36° 25' 13.55" N | 084° 23' 32.20" W | SUGAR GROVE RD | 40' OF EROSION AROUND U.S. END OF CULVERT ON SUGAR GROVE ROAD, RIPRAP REVEMENT | PROTECTION OF ROAD |
| Site 22 | 36.427967 | -84.406665 | 36° 25' 40.68" N | 084° 24' 23.99" W | SUGAR GROVE RD | 40' OF EROSION AROUND CULVERT ON SUGAR GROVE ROAD, RIPRAP REVEMENT | PROTECTION OF ROAD |
| Site 23 | 36.432145 | -84.412377 | 36° 25' 55.72" N | 084° 24' 44.55" W | SUGAR GROVE RD | 40' OF EROSION AROUND CULVERT ON SUGAR GROVE ROAD, RIPRAP REVEMENT W/ BOULDER TOE PROTECTION | PROTECTION OF ROAD |



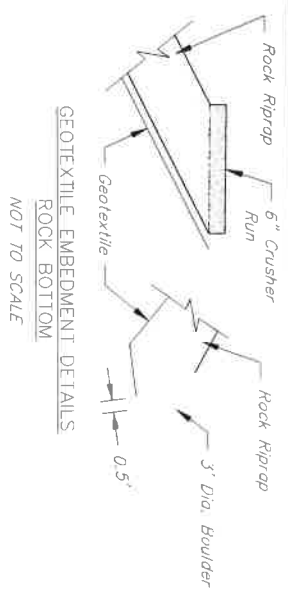
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| United States Department of Agriculture Natural Resources Conservation Service | File Name S114--SCOTT Drawing Number S114-47151 |
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STREAMBANK & ROAD STABILIZATION
 EMERGENCY WATERSHED PROTECTION WORK
 SCOTT COUNTY, TENNESSEE
 SITE LIST (SITES 15-23)

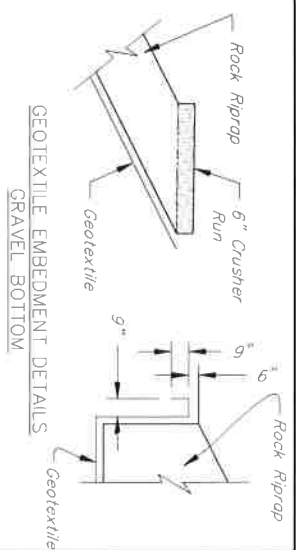
| |
|---|
| Date Designed <u>J. BROCKWELL, S. PEARSON</u> 05/21 Drawn <u>J. BROCKWELL, S. PEARSON</u> 05/21 Checked <u>S. PEARSON</u> 06/21 Approved: _____ |
|---|



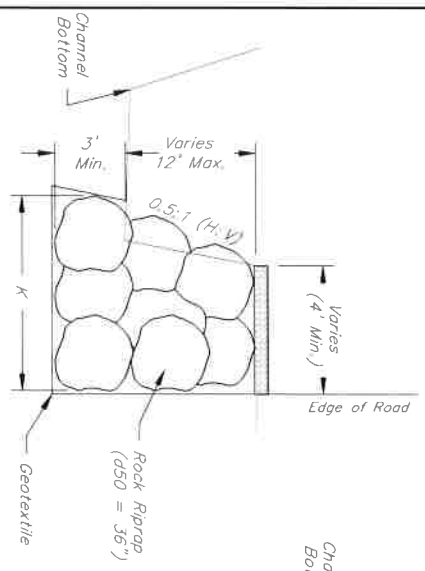
TYPICAL SECTION B ROCK BOTTOM
NOT TO SCALE



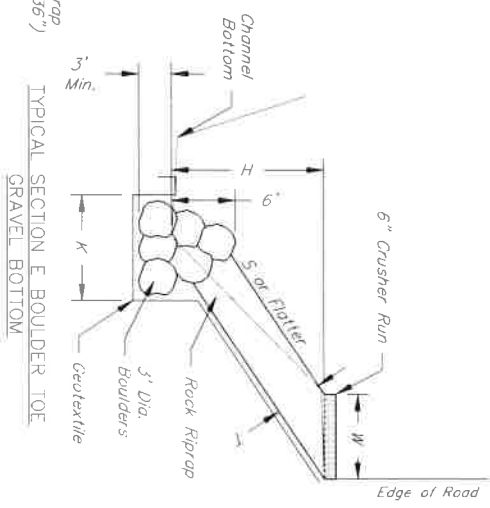
GEOTEXTILE EMBEDMENT DETAILS
ROCK BOTTOM
NOT TO SCALE



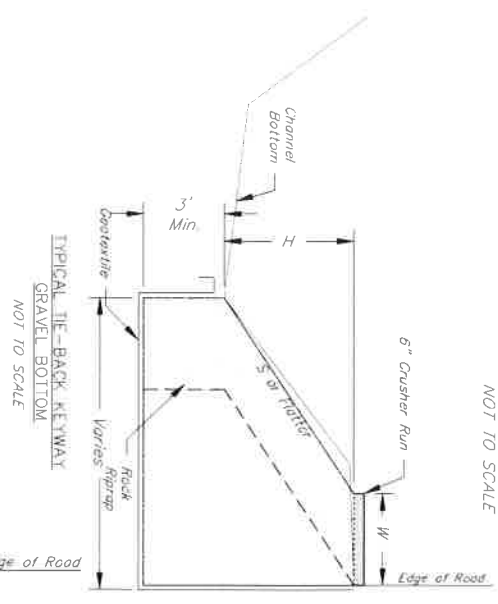
GEOTEXTILE EMBEDMENT DETAILS
GRAVEL BOTTOM
NOT TO SCALE



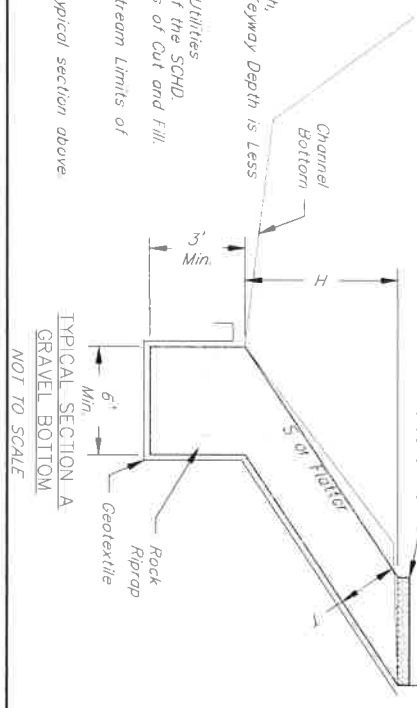
TYPICAL SECTION D
STACKED ROCK
NOT TO SCALE



TYPICAL SECTION E BOULDER TOE
GRAVEL BOTTOM
NOT TO SCALE



TYPICAL TIE-BACK KEYWAY
GRAVEL BOTTOM
NOT TO SCALE



TYPICAL SECTION A
GRAVEL BOTTOM
NOT TO SCALE

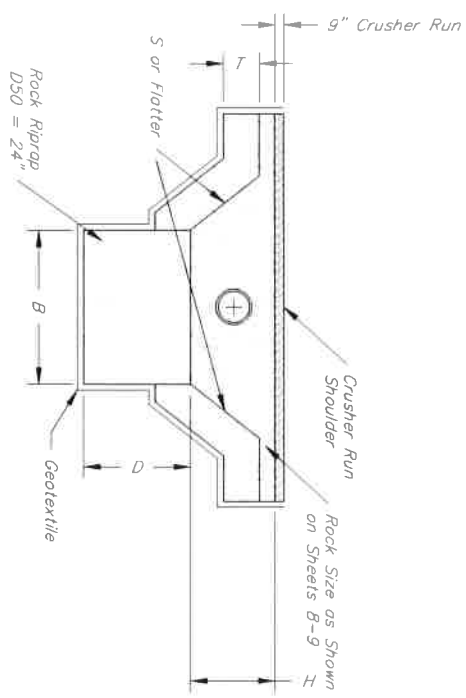
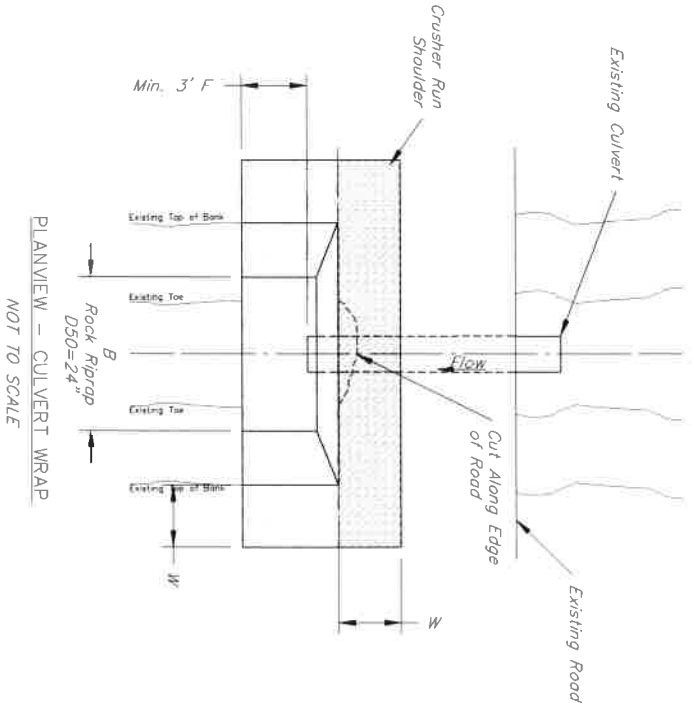
- NOTES:
1. Keyways Shall be Constructed Where Possible. When Keys Cannot be Constructed to the Total Depth, The Keyway Shall be Excavated and Constructed to the Solid Rock Bottom of The Stream. If the Keyway Depth is Less Than 2 Feet, the Revetment Shall be Constructed Using Typical Section B.
 2. The NRCS Inspector Shall Designate the Beginning and Ending Rock Riprap Location.
 3. Scott County Highway Department (SCHD) Shall be Responsible for Locating and Protecting of All Utilities Including Those Not Shown on This Drawing. Damaged Utilities Shall be Repaired at the Expense of the SCHD.
 4. The NRCS Inspector Shall Approve the Locations and Extent of Shaping of the Slope and Locations of Cut and Fill.
 5. The SCHD Shall Provide a Smooth Transition From the Rock Riprap Slopes to Natural Slope.
 6. New Rock Riprap Slope Shall Not Protrude into the Stream Farther than the Upstream and Downstream Limits of Construction.
 7. A Smooth Transition Shall be Made to the Existing Streambank.
 8. Tie-back keyways shall be constructed at both ends of each structure and shall be 5' wide. See typical section above.



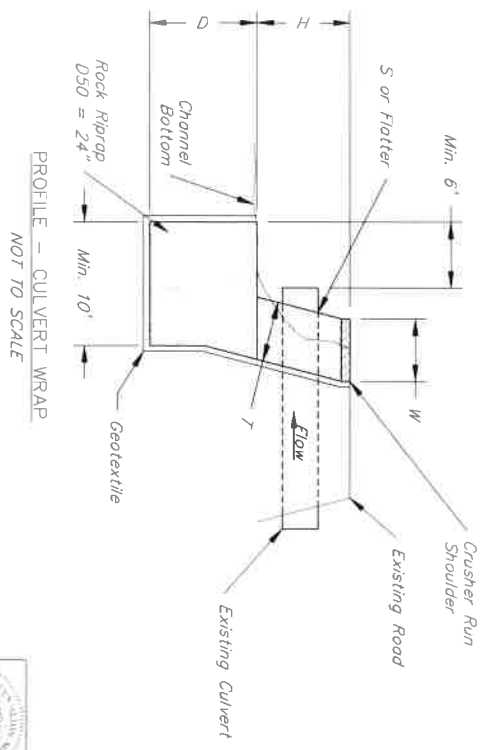
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| | United States Department of Agriculture |
| | Natural Resources Conservation Service |
| Title: 5114-SCOTT Drawing Number: 5114-67151 Sheet: 5 of 9 | |

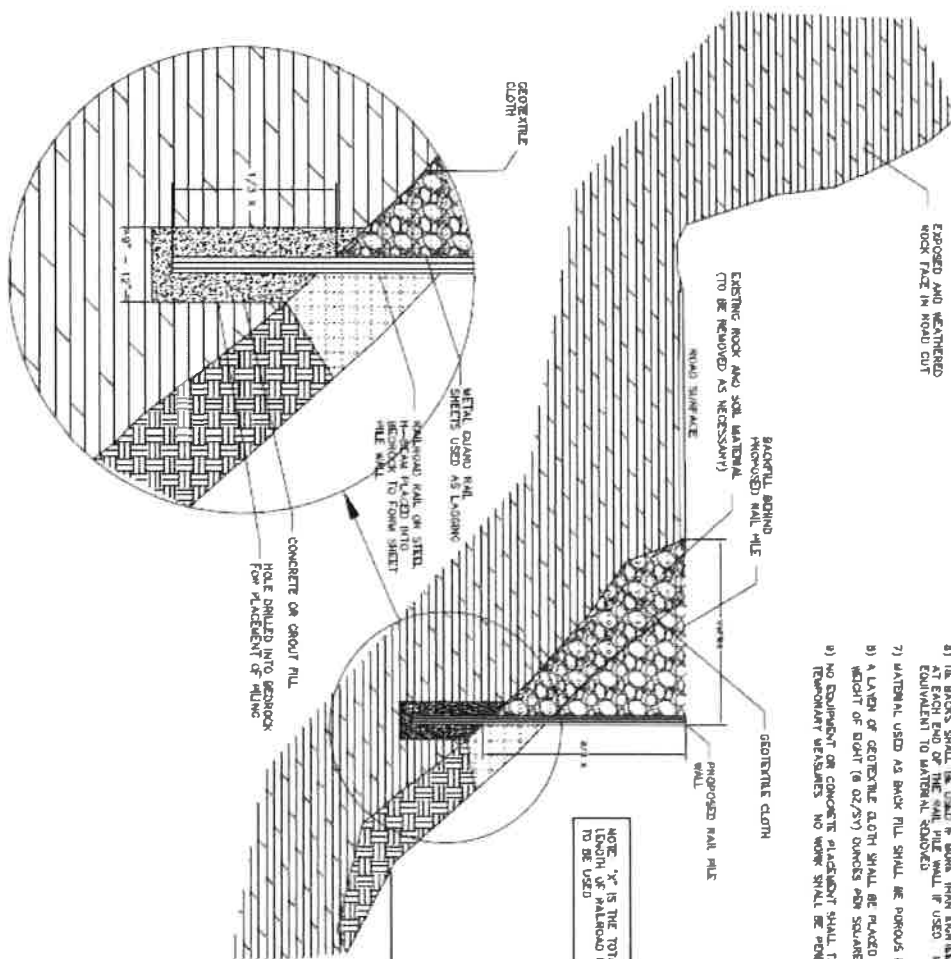
STREAMBANK & ROAD STABILIZATION
EMERGENCY WATERSHED PROTECTION WORK
SCOTT COUNTY, TENNESSEE
TYPICAL CROSS SECTIONS

| | |
|------------------------------------|-------------|
| Designed: J. BROCKWELL, S. PEARSON | Date: 05/21 |
| Drawn: J. BROCKWELL | 05/21 |
| Checked: S. PEARSON | 06/21 |
| Approved: | |

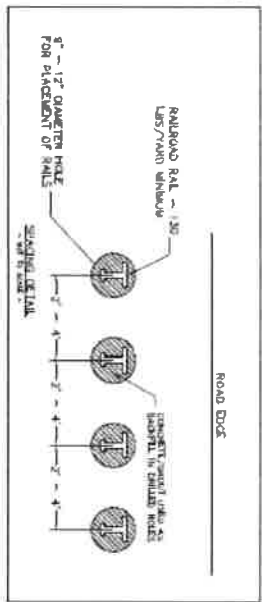
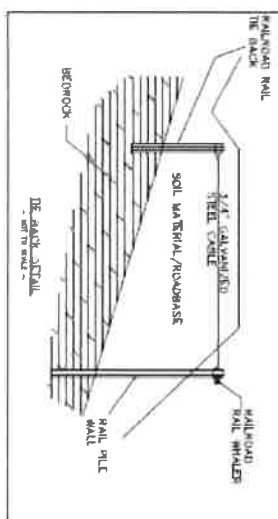


- NOTES:**
1. Keyways Shall be Constructed Where Possible. When Keys Cannot be Constructed to The Total Depth, The Keyway Shall be Excavated and Constructed to The Solid Rock Bottom of The Stream.
 2. Rock Riprap in Splash Pad Below Culvert Shall Have a D50 = 24". All Other Rock Sizes are Specified in Chart on Sheet 8 & 9.
 3. The NRCS Inspector Shall Designate the Beginning and Ending Rock Riprap Location.
 4. Scott County Highway Department (SCHD) Shall be Responsible for Locating and Protecting of All Utilities Including Those Not Shown on This Drawing. Damaged Utilities Shall be Repaired at the Expense of the SCHD.
 5. The NRCS Inspector Shall Approve the Locations and Extent of Shaping of the Slope and Locations of Cut and Fill.
 6. The SCHD Shall Provide a Smooth Transition From the Rock Riprap Slopes to Natural Slope Limits of Construction.
 7. New Rock Riprap Slope Shall Not Protrude into the Stream Further Than the Upstream and Downstream Limits of Construction.
 8. A Smooth Transition Shall be Made to the Existing Streambank.
 9. For Chart of Sites Information See Sheet No. 8 & 9.





NOTE: "x" IS THE TOTAL LENGTH OF RAILROAD RAIL TO BE USED



- DESIGN NOTES**
- 1) THE RAIL PILE SHALL BE CONSTRUCTED OF RAILROAD RAIL WITH A MINIMUM CLASSIFICATION OF ONE HUNDRED AND THIRTY (130 LBS./YD.) PROVIDED FOR TAND. STEEL. H-BEAM MAY BE SUBSTITUTED FOR RAIL RAIL PROVIDED THEY MEET THE SAME STRENGTH AND EXISTING MOMENT STRENGTH. REFER TO CONSTRUCTION SPECIFICATION 402 FOR MORE DETAILS.
 - 2) RAILS SHALL BE SET INTO THE UNDERLYING BEDROCK, APPROXIMATELY ONE-THIRD (1/3) OF THE TOTAL LENGTH OF THE RAIL USED. THE HOLE SHALL BE BACKFILLED WITH CONCRETE GROUT TO ACHIEVE THE DESIRED SUPPORT.
 - 3) RAILS SHALL BE ORIENTED WITH FLANGES PARALLEL TO AND FACING THE ROADWAY.
 - 4) HORIZONTAL LACING SHALL BE STEEL GALVANIZED RAIL TO SUPPORT THE WEIGHT OF BACKFILL MATERIAL.
 - 5) SPACING OF VERTICAL RAIL SUPPORTS SHALL BE BETWEEN TWO (2) AND FOUR (4) FEET APART IN A SINGLE ROW.
 - 6) THE BACKS OF THE RAILS SHALL BE USED IF MORE THAN EIGHTEEN (18) FEET OF RAIL IS EXPOSED. ALONG BED ROCK ANCHOR. THE BACKS SHALL BE PLACED EVERY TEN (10) FEET AND AT EACH END OF THE RAIL PILE. IF USED MATERIAL EXCAVATED FROM THE BED ROCK TRENCHES SHALL BE REPLACED BY MATERIAL AT A LEVEL OF COMPACTION EQUIVALENT TO MATERIAL EXCAVATED.
 - 7) MATERIAL USED AS BACK FILL SHALL BE POROUS IN NATURE. MATERIAL SUCH AS GRAVEL, RIPRAP, STONE OR RIVER COBBLE MAY BE USED AS BACKFILL.
 - 8) A LAYER OF GEOTEXTILE CLOTH SHALL BE PLACED BETWEEN BACKFILL MATERIAL AND NATURAL GRADE AS INDICATED. THE GEOTEXTILE CLOTH SHALL HAVE A MINIMUM FABRIC WEIGHT OF 2.0 LBS./YD. (8 OZ./SQ YD) DANCES PER SQUARE YARD.
 - 9) NO EQUIPMENT OR CONCRETE PLACEMENT SHALL TAKE PLACE IN FLOWING WATER. IF WORK IS REQUIRED IN THE FLOW PATH THEN THE AREA SHALL BE DEMARSHED WITH TEMPORARY BARRIERS. NO WORK SHALL BE PERFORMED IN THE CHANNEL OF RIVERS OR CREEKS.

- DRAWING NOT TO SCALE -



USDA United States Department of Agriculture
Natural Resources Conservation Service

STREAMBANK & ROAD STABILIZATION
EMERGENCY WATERSHED PROTECTION WORK
SCOTT COUNTY, TENNESSEE
TYPICAL RAIL PILE SECTIONS

| | |
|------------------------|-------------|
| Designed: J. BROCKWELL | Date: 05/21 |
| Drawn: J. BROCKWELL | 05/21 |
| Checked: S. PEARSON | 06/21 |
| Approved: | |

Sheet 7 of 9
Drawing Number: 5114-47151
File Name: 5114-SCOTT

| Site Name | Site NO. | Site | B | H | S | W | T | D | Appt oxima te SQ. YDS. | Geote xile SQ. YDS. | Rock Riprap Tons | Crusher Run Tons | Typical Section | Location |
|-----------------------|----------|------|-----|------|------------|--------|-------|----|------------------------------------|------------------------------|---------------------|---------------------|-----------------|-----------------------|
| OLD JAMESTOWN RD | 1 | 24" | 8' | 8' | 2.1 | 8'-11" | 4'-0" | 4' | 130 | 850 | 1050 | 30 | CULVERT WRAP | 36 376939, -84 627332 |
| OLD MOUNTAINVIEW RD | 2 | 24" | - | 6' | 1.25: 1 | 8'-11" | 4'-0" | - | 45 | 250 | 275 | 10 | A | 36 380542, -84 613272 |
| OLD MOUNTAINVIEW RD | 3 | 24" | - | 5' | 2.1 | 8'-11" | 4'-0" | - | 50 | 350 | 375 | 10 | A | 36 380579, -84 612988 |
| OLD MOUNTAINVIEW RD | 4A | 36" | - | 10' | 2.1 | 8'-11" | 4'-0" | - | 30 | 250 | 325 | 8 | B | 36 381103, -84 609153 |
| OLD MOUNTAINVIEW RD | 4B | 36" | 8' | 6.5' | 2.1 | 8'-11" | 4'-0" | 3' | 20 | 150 | 175 | 6 | CULVERT WRAP | 36 38111, -84 609091 |
| LOW GAP RD | 5A | 24" | 4' | 6' | 1.25: 1 | 8'-11" | 4'-0" | 4' | 55 | 300 | 325 | 12 | CULVERT WRAP | 36 378344, -84 529234 |
| LOW GAP RD | 5B | 24" | - | 5' | 1.25: 1 | 8'-11" | 4'-0" | - | 30 | 200 | 200 | 8 | A | 36 378461, -84 52929 |
| LOW GAP RD | 6 | 24" | 8' | 5' | 2.1 | 8'-11" | 4'-0" | 4' | 50 | 350 | 375 | 10 | CULVERT WRAP | 36 374342, -84 534273 |
| RIVER RD | 7 | 36" | 6' | 6' | 1.5:1 | 8'-11" | 4'-0" | 3' | 47 | 350 | 475 | 10 | CULVERT WRAP | 36 383469, -84 487183 |
| RIVER RD | 8 | 24" | - | 15' | 2.1 | 8'-11" | 4'-0" | - | 37 | 450 | 425 | 9 | A | 36 382963, -84 486633 |
| RIVER RD | 9 | 24" | - | 4.5' | 1.5:1 | 8'-11" | 4'-0" | - | 30 | 200 | 200 | 8 | A | 36 371772, -84 477398 |
| RIVER RD | 10 | 24" | - | 10' | 2.1 | 8'-11" | 4'-0" | - | 65 | 550 | 700 | 15 | A | 36 379114, -84 462613 |
| CORDELL RD | 11 | 24" | - | 16' | 2.1 | 8'-11" | 4'-0" | - | 35 | 500 | 925 | 9 | A | 36 369575, -84 448266 |
| CORDELL RD | 12 | 24" | - | 7' | 1.5:1 | 8'-11" | 4'-0" | - | 40 | 300 | 325 | 9 | A | 36 36176, -84 44653 |
| BURGESS CREEK RD | 13 | - | - | 60' | - | 8'-11" | 4'-0" | - | 75 | - | - | 18 | RAIL PILE | 36 331219, -84 448635 |
| GUMFORK RD | 14 | 24" | 8' | 8' | 2.1 | 8'-11" | 4'-0" | 4' | 100 | 700 | 850 | 22 | CULVERT WRAP | 36 575598, -84 336861 |
| LOWER JELICO CREEK RD | 15 | 24" | 8' | 25' | 2.1 | 8'-11" | 4'-0" | 4' | 20 | 300 | 425 | 6 | CULVERT WRAP | 36 569974, -84 315932 |
| LOWER JELICO CREEK RD | 16 | 24" | 10' | 5.5' | 2.1 | 8'-11" | 4'-0" | 4' | 60 | 400 | 450 | 15 | CULVERT WRAP | 36 570367, -84 315066 |
| LOWER JELICO CREEK RD | 17 | 24" | - | 3.5' | 1.5:1 | 8'-11" | 4'-0" | - | 25 | 200 | 250 | 7 | A | 36 572029, -84 311481 |
| CHERRY FORK RD | 18 | - | - | 60' | - | 8'-11" | 4'-0" | - | 90 | - | - | 20 | RAIL PILE | 36 452692, -84 501708 |



| Site Name | Site NO. | Size | B | H | S | W | T | D | Approximate Length | Geotextile SQ. YDS. | Rock RipRap Tons | Crusher Run Tons | Typical Section | Location |
|--------------------|----------|------|-----|-------|-------|--------|-------|----|--------------------|---------------------|------------------|------------------|-----------------|-----------------------|
| WILLIAM NEWPORT RD | 19 | 24" | 8' | 10.5' | 2:1 | 8'-11" | 4'-0" | 4' | 76 | 600 | 800 | 22 | CULVERT WRAP | 36.370042, -84.457002 |
| WILLIAM NEWPORT RD | 20 | 24" | 10' | 7' | 2:1 | 8'-11" | 4'-0" | 4' | 57 | 400 | 500 | 15 | CULVERT WRAP | 36.369919, -84.457574 |
| SUGAR GROVE RD | 21A | 24" | - | 6' | 1.5:1 | 8'-11" | 4'-0" | - | 25 | 200 | 225 | 7 | A | 36.420408, -84.392406 |
| SUGAR GROVE RD | 21B | 24" | - | 5' | 1.5:1 | 8'-11" | 4'-0" | - | 40 | 250 | 275 | 10 | A | 36.420432, -84.392278 |
| SUGAR GROVE RD | 22 | 24" | - | 5.5' | 1.5:1 | 8'-11" | 4'-0" | - | 40 | 250 | 275 | 10 | A | 36.427967, -84.406665 |
| SUGAR GROVE RD | 23 | 36" | - | 13' | 2:1 | 8'-11" | 4'-0" | - | 30 | 400 | 725 | 8 | B | 36.432145, -84.412377 |



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|--|-------------------------------|
| United States Department of Agriculture | |
| Natural Resources Conservation Service | |
| File Name: 5114-SCOTT | Drawing Number: 5114-47151 |

STREAMBANK & ROAD STABILIZATION
 EMERGENCY WATERSHED PROTECTION WORK
 SCOTT COUNTY, TENNESSEE
 ROCK RIP-RAP CHART (SITES 19-23)

| |
|---|
| Designed: J. BROCKWELL, S. PEARSON Date: 05/21 |
| Drawn: J. BROCKWELL Date: 05/21 |
| Checked: S. PEARSON Date: 06/21 |
| Approved: _____ |

April 2021

**USDA / NATURAL RESOURCES CONSERVATION SERVICE (NRCS) - TENNESSEE
CULTURAL RESOURCES UNDERTAKING WORKSHEET**

Date: 5/17/2021 Planner Name: Adam McLerran
Applicant's Name: Scott Co. Highway Dept.

If the undertaking requires a permit, mark all that apply in the dropdown box.

COE & TDEC

Latitude (decimal deg.): 36.383469

Longitude (decimal deg.): -84.487183 Tract Number: N/A

| County | Farm Number | Practice Code | Practice Name | Ground Disturb (NG, G, PG) | Amount in Units | Units (ft, no, ac) | Funding Source (EQIP, TDA, EWP, etc) |
|--------|-------------|---------------|------------------------------|-------------------------------|-----------------|-----------------------|---|
| SCOTT | Site 6 | 580 | Streambank and Shoreline Pro | G | 47.0 | Ft. | EWP |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

Description of proposed ground disturbance (eg. depth and width of excavation, borrow areas, etc.):

Excavation of bank to a 2:1 slope and backfilled with geotextile and rock rip rap

Has the APE ever been plowed? If yes, describe (eg. moldboard, chisel, etc.): N/A

Describe any known disturbance or soil characteristics within the APE that may prevent the presence of intact sites (eg. fill material, exposed subsoil or bedrock, deflated topsoils, etc.):

Describe any observed artifacts, cemeteries, mounds, standing structures, caves, etc. within APE:

Tennessee Division of Archaeology site files checked on: 5/18/2021
Field Reconnaissance needed? ☐ Yes ☒ No
Notes: No known sites in vicinity. Area eroded and disturbed.

Tribal Consultation Date:

Determination: No Historic Properties Affected ☒
No Adverse Effects ☐
Adverse Effects ☐

Mitigate ☐ Proceed ☒

X Christopher C. Nelson

Date: 5/18/2021

Cultural Resources Specialist
Signed by: CHRISTOPHER NELSON

| | | | | | | | | | |
|--|--|--|-----------------------|---|-----------------------|--|-----------------------|--|--|
| U.S. Department of Agriculture Natural Resources Conservation Service ENVIRONMENTAL EVALUATION WORKSHEET | | NRCS-CPA-52 4/2013 | | A. Client Name: Scott Co | | | | | |
| D. Client's Objective(s) (purpose): Reduce streambank erosion | | B. Conservation Plan ID # (as applicable): Program Authority (optional): EWP | | | | | | | |
| | | C. Identification # (farm, tract, field #, etc. as required): Scott Co 5114, DSR 326, Sites 5A,5B,6,7,8,9 | | | | | | | |
| E. Need for Action: Stream banks are actively eroding from damaged caused by storm event Spring 2021. | | H. Alternatives | | | | | | | |
| | | No Action ✓ if RMS <input type="checkbox"/> | | Alternative 1 ✓ if RMS <input checked="" type="checkbox"/> | | | | | |
| | | No changes in current management | | Reduce streambank erosion and improve water quality and wildlife habitat by installing rock rip-rap structures. All disturbed areas will be seeded and mulched. | | | | | |
| | | | | Reduce streambank erosion and improve water quality and wildlife habitat by installing concrete block retaining wall. All disturbed areas will be seeded and mulched. | | | | | |
| Resource Concerns | | | | | | | | | |
| In Section "F" below, analyze, record, and address concerns identified through the Resources Inventory process. (See FOTG Section III - Resource Planning Criteria for guidance). | | | | | | | | | |
| F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern) | | I. Effects of Alternatives | | | | | | | |
| | | No Action | | Alternative 1 | | Alternative 2 | | | |
| | | Amount, Status, Description <i>(Document both short and long term impacts)</i> | ✓ if does NOT meet PC | Amount, Status, Description <i>(Document both short and long term impacts)</i> | ✓ if does NOT meet PC | Amount, Status, Description <i>(Document both short and long term impacts)</i> | ✓ if does NOT meet PC | | |
| SOIL: EROSION | | | | | | | | | |
| Excessive bank erosion from streams, shorelines or water conveyance | | No changes in current management | | <input checked="" type="checkbox"/> | | Streambank erosion will be reduced by installing rock rip-rap structures. All disturbed areas will be seeded and mulched. | | <input type="checkbox"/> | |
| Active erosion and sloughing of streambank (field visit) | | | | NOT meet PC | | NOT meet PC | | Reduce streambank erosion will be reduced by installing concrete block retaining wall. All disturbed areas will be seeded and mulched. | |
| | | | | | | | | NOT meet PC | |
| SOIL: SOIL QUALITY DEGRADATION | | | | | | | | | |
| No resource concern identified | | N/A | | <input type="checkbox"/> | | N/A | | <input type="checkbox"/> | |
| | | | | NOT meet PC | | NOT meet PC | | NOT meet PC | |
| | | | | | | | | | |
| WATER: EXCESS / INSUFFICIENT WATER | | | | | | | | | |
| No resource concern identified | | N/A | | <input type="checkbox"/> | | N/A | | <input type="checkbox"/> | |
| | | | | NOT meet PC | | NOT meet PC | | NOT meet PC | |
| | | | | | | | | | |
| WATER: WATER QUALITY DEGRADATION | | | | | | | | | |
| Excessive sediment in surface waters | | No changes in current management | | <input checked="" type="checkbox"/> | | Sediment in surface water will be reduced by installing rock rip-rap structures. All disturbed areas will be seeded and mulched. | | <input type="checkbox"/> | |
| Active erosion and sloughing of streambank resulting in sediment in surface waters (field visit) | | | | NOT meet PC | | NOT meet PC | | Reduce streambank erosion will be reduced by installing concrete block retaining wall. All disturbed areas will be seeded and mulched. | |
| | | | | | | | | NOT meet PC | |

| F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern) | I. (continued) | | | | | |
|---|--|--------------------------|--|--------------------------|--|--------------------------|
| | No Action | | Alternative 1 | | Alternative 2 | |
| | Amount, Status, Description (Document both short and long term impacts) | ✓ If does NOT meet PC | Amount, Status, Description (Document both short and long term impacts) | ✓ If does NOT meet PC | Amount, Status, Description (Document both short and long term impacts) | ✓ If does NOT meet PC |
| AIR: AIR QUALITY IMPACTS | | | | | | |
| No resource concern identified | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| | | NOT meet PC | | NOT meet PC | | NOT meet PC |
| PLANTS: DEGRADED PLANT CONDITION | | | | | | |
| No resource concern identified | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| | | NOT meet PC | | NOT meet PC | | NOT meet PC |
| ANIMALS: INADEQUATE HABITAT FOR FISH AND WILDLIFE | | | | | | |
| No resource concern identified | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| | | NOT meet PC | | NOT meet PC | | NOT meet PC |
| ANIMALS: LIVESTOCK PRODUCTION LIMITATION | | | | | | |
| No resource concern identified | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| | | NOT meet PC | | NOT meet PC | | NOT meet PC |
| ENERGY: INEFFICIENT ENERGY USE | | | | | | |
| No resource concern identified | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| | | NOT meet PC | | NOT meet PC | | NOT meet PC |
| HUMAN: ECONOMIC AND SOCIAL CONSIDERATIONS | | | | | | |
| Public Health and Safety | No changes in current management | | Public health and safety will be improved by protecting infrastructure (roads) | | Public health and safety will be improved by protecting infrastructure (roads) | |
| Infrastructure (roads) is at risk with current erosion | | | | | | |

Special Environmental Concerns: Environmental Laws, Executive Orders, policies, etc.

In Section "G" complete and attach Environmental Procedures Guide Sheets for documentation as applicable. Items with a "•" may require a federal permit or consultation/coordination between the lead agency and another government agency. In these cases, effects may need to be determined in consultation with another agency. Planning and practice implementation may proceed for practices not involved in consultation.

| G. Special Environmental Concerns (Document existing/ benchmark conditions) | J. Impacts to Special Environmental Concerns | | | | | |
|---|--|------------------------------------|---|------------------------------------|--|------------------------------------|
| | No Action | | Alternative 1 | | Alternative 2 | |
| | Document all impacts (Attach Guide Sheets as applicable) | ✓ if needs further action | Document all impacts (Attach Guide Sheets as applicable) | ✓ if needs further action | Document all impacts (Attach Guide Sheets as applicable) | ✓ if needs further action |
| •Clean Air Act <i>Guide Sheet FS1 FS-2</i> No nonattainment areas present in the planning area | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Clean Water Act / Waters of the U.S. <i>Guide Sheet Fact Sheet</i> Not present in the planning area | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Coastal Zone Management <i>Guide Sheet Fact Sheet</i> Not present in the planning area | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Coral Reefs <i>Guide Sheet Fact Sheet</i> Not present in the planning area | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Cultural Resources / Historic Properties <i>Guide Sheet Fact Sheet</i> Not present in the planning area, see cultural resources review | No Effect NA | <input type="checkbox"/> | Chris Nelson, NRCS archaeologist - No historic properties affected, Proceed. | <input type="checkbox"/> | Chris Nelson, NRCS archaeologist - No historic properties affected, Proceed. | <input type="checkbox"/> |
| •Endangered and Threatened Species <i>Guide Sheet Fact Sheet</i> Not present in the planning area, see TWRA and USFW review | No Effect N/A | <input type="checkbox"/> | No Effect JEAkins, biologist conducted review using TDEC Heritage Database, no concern of T&E species impact. | <input type="checkbox"/> | JEAkins, biologist conducted review using TDEC Heritage Database, no concern of T&E species impact. | <input type="checkbox"/> |
| Environmental Justice <i>Guide Sheet Fact Sheet</i> None identified (FOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Essential Fish Habitat <i>Guide Sheet Fact Sheet</i> None identified (FOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Floodplain Management <i>Guide Sheet Fact Sheet</i> None identified (FEMA Map) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Invasive Species <i>Guide Sheet Fact Sheet</i> None identified (FOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Migratory Birds/Bald and Golden Eagle Protection Act <i>Guide Sheet Fact Sheet</i> None identified (FOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Natural Areas <i>Guide Sheet Fact Sheet</i> None identified (FOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Prime and Unique Farmlands <i>Guide Sheet Fact Sheet</i> None identified (landowner) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Riparian Area <i>Guide Sheet Fact Sheet</i> Not present in planning area | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| Scenic Beauty <i>Guide Sheet Fact Sheet</i> Not present in planning area | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |

| | | | | | | |
|---|---|--|---|--------------------------|---|--------------------------|
| •Wetlands <i>Guide Sheet Fact Sheet</i> Not present in planning area (see soils maps and descriptions) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| •Wild and Scenic Rivers <i>Guide Sheet Fact Sheet</i> Not present in planning area (EOTG 2) | No Effect N/A | <input type="checkbox"/> | No Effect N/A | <input type="checkbox"/> | N/A | <input type="checkbox"/> |
| K. Other Agencies and Broad Public Concerns | No Action | | Alternative 1 | | Alternative 2 | |
| Easements, Permissions, Public Review, or Permits Required and Agencies Consulted. | N/A | | TDEC ARAP Permit, USACE permit and TVA 26A | | TDEC ARAP Permit, USACE permit and TVA 26A | |
| Cumulative Effects Narrative (Describe the cumulative impacts considered, including past, present and known future actions regardless of who performed the actions) | No changes in current management | | Streambank erosion will be reduced by installing rock rip-rap structures. All disturbed areas will be seeded and mulched. | | Streambank erosion will be reduced by installing concrete clock retaining wall. All disturbed areas will be seeded and mulched. | |
| L. Mitigation (Record actions to avoid, minimize, and compensate) | N/A | | N/A | | N/A | |
| M. Preferred Alternative | <input checked="" type="checkbox"/> preferred alternative <input type="checkbox"/> Supporting reason | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| | | | Meets identified resource concerns and aligns with objectives. | | | |
| N. Context (Record context of alternatives analysis) | | | | | | |
| The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. | | | | | | |
| O. Determination of Significance or Extraordinary Circumstances | | | | | | |
| Intensity: Refers to the severity of impact. Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. If you answer ANY of the below questions "yes" then contact the State Environmental Liaison as there may be extraordinary circumstances and significance issues to consider and a site specific NEPA analysis may be required. | | | | | | |
| Yes | No | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Is the preferred alternative expected to cause significant effects on public health or safety? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Is the preferred alternative expected to significantly affect unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Are the effects of the preferred alternative on the quality of the human environment likely to be highly controversial? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Does the preferred alternative have highly uncertain effects or involve unique or unknown risks on the human environment? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Does the preferred alternative establish a precedent for future actions with significant impacts or represent a decision in principle about a future consideration? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Is the preferred alternative known or reasonably expected to have potentially significant environment impacts to the quality of the human environment either individually or cumulatively over time? | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Will the preferred alternative likely have a significant adverse effect on ANY of the special environmental concerns? Use the Evaluation Procedure Guide Sheets to assist in this determination. This includes, but is not limited to, concerns such as cultural or historical resources, endangered and threatened species, environmental justice, wetlands, floodplains, coastal zones, coral reefs, essential fish habitat, wild and scenic rivers, clean air, riparian areas, natural areas, and invasive species. | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | • Will the preferred alternative threaten a violation of Federal, State, or local law or requirements for the protection of the environment? | | | | |
| P. To the best of my knowledge, the data shown on this form is accurate and complete: | | | | | | |
| In the case where a non-NRCS person (e.g. a TSP) assists with planning they are to sign the first signature block and then NRCS is to sign the second block to verify the information's accuracy. | | | | | | |
| Signature (TSP if applicable) | | Title | | Date | | |
| Jenny E. Adkins | | Environmental Liaison | | 5/20/2021 | | |
| Signature (NRCS) | | Title | | Date | | |
| If preferred alternative is not a federal action where NRCS has control or responsibility and this NRCS-CPA-52 is shared with someone other than the client then indicate to whom this is being provided. | | | | | | |



The following sections are to be completed by the Responsible Federal Official (RFO)

NRCS is the RFO if the action is subject to NRCS control and responsibility (e.g., actions financed, funded, assisted, conducted, regulated, or approved by NRCS). These actions do not include situations in which NRCS is only providing technical assistance because NRCS cannot control what the client ultimately does with that assistance and situations where NRCS is making a technical determination (such as Farm Bill HEL or wetland determinations) not associated with the planning process.

Q. NEPA Compliance Finding (check one)

The preferred alternative:

Action required

| | | |
|-------------------------------------|--|---|
| <input type="checkbox"/> | 1) is not a federal action where the agency has control or responsibility. | Document in "R.1" below. No additional analysis is required |
| <input checked="" type="checkbox"/> | 2) is a federal action ALL of which is categorically excluded from further environmental analysis AND there are no extraordinary circumstances as identified in Section "O" . | Document in "R.2" below. No additional analysis is required |
| <input type="checkbox"/> | 3) is a federal action that has been sufficiently analyzed in an existing Agency state, regional, or national NEPA document and there are no predicted <u>significant adverse environmental effects or extraordinary circumstances</u> . | Document in "R.1" below. No additional analysis is required. |
| <input type="checkbox"/> | 4) is a federal action that has been sufficiently analyzed in another Federal agency's NEPA document (EA or EIS) that addresses the proposed NRCS action and its' effects and has been formally adopted by NRCS . NRCS is required to prepare and publish its own Finding of No Significant Impact for an EA or Record of Decision for an EIS when adopting another agency's EA or EIS document. (Note: This box is not applicable to FSA) | Contact the State Environmental Liaison for list of NEPA documents formally adopted and available for tiering. Document in "R.1" below. No additional analysis is required |
| <input type="checkbox"/> | 5) is a federal action that has NOT been sufficiently analyzed or may involve predicted significant adverse environmental effects or extraordinary circumstances and may require an EA or EIS. | Contact the State Environmental Liaison. Further NEPA analysis required. |

R. Rationale Supporting the Finding

| | |
|---|--|
| R.1 Findings Documentation | Emergency Watershed Protection Program, Natural Resources Conservation Service, Programmatic Environmental Impact Statement, |
| R.2 Applicable Categorical Exclusion(s) (more than one may apply) 7 CFR Part 650 Compliance With NEPA, subpart 650.6 Categorical Exclusions states prior to determining that a proposed action is categorically excluded under paragraph (d) of this section, the proposed action must meet six sideboard criteria. See NECH 610.116. | |

I have considered the effects of the alternatives on the Resource Concerns, Economic and Social Considerations, Special Environmental Concerns, and Extraordinary Circumstances as defined by Agency regulation and policy and based on that made the finding indicated above.

S. Signature of Responsible Federal Official:

William Dwight Dickson

District Conservationist

5/20/2021

Signature

Title

Date

Additional notes

S.

Dickson, Dwight - NRCS, Jamestown, TN

From: Adkins, Jenny - NRCS, Cookeville, TN
Sent: Friday, May 28, 2021 8:51 AM
To: Dickson, Dwight - NRCS, Jamestown, TN
Cc: Pearson, Shelby - NRCS, Nashville, TN; Horne, Terry - NRCS, Nashville, TN
Subject: FW: 2021-TA-0826 RE: [EXTERNAL] RE: Scott Co. 5114 EWP sites



Jenny L. Adkins
USDA NRCS
State Office Environmental Liaison/Biologist
900 S. Walnut Ave
Cookeville, TN 38501
(931)528-6472 x113
(931)337-7205 Mobile

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From: Boles, Dustin W <dustin_boles@fws.gov>
Sent: Friday, May 28, 2021 8:01 AM
To: Adkins, Jenny - NRCS, Cookeville, TN <jenny.adkins@usda.gov>
Cc: Pearson, Shelby - NRCS, Nashville, TN <shelby.pearson@usda.gov>; Horne, Terry - NRCS, Nashville, TN <terry.horne@usda.gov>; Dickson, Dwight - NRCS, Jamestown, TN <dwright.dickson@usda.gov>; Anna Dellapenta <Anna.Dellapenta@tn.gov>
Subject: 2021-TA-0826 RE: [EXTERNAL] RE: Scott Co. 5114 EWP sites

Jenny,

Thank you for your e-mail regarding the proposed EWP projects at 20 various locations in Scott County, Tennessee. As your e-mail indicates, four of these sites are located near records of the federally threatened blackside dace. Currently, the aquatic habitat within the action area for each of the identified sites is impaired, and the action would be improve conditions by stabilizing the bank and reducing sedimentation in receiving streams. Since habitat conditions within the action area are degraded, we would not expect take to occur of any federally protected species and any effects to be insignificant and/or discountable or beneficial. Based on the best information available at this time, a not likely to adversely affect determination would be appropriate.

Sincerely,

Dustin Boles
Private Lands Biologist
U.S. Fish & Wildlife Service
Partners for Fish & Wildlife Program
446 Neal Street
Cookeville, Tennessee 38501
931-525-4984 (Office)
931-261-0117 (Cell)
Email: dustin_boles@fws.gov

NOTE: This email correspondence and any attachments to and from this sender are subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

From: Anna Dellapenta <Anna.Dellapenta@tn.gov>
Sent: Thursday, May 27, 2021 11:53 AM
To: Adkins, Jenny - NRC5, Cookeville, TN <jenny.adkins@usda.gov>
Cc: Boles, Dustin W <dustin_boles@fws.gov>
Subject: [EXTERNAL] RE: Scott Co. 5114 EWP sites

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Ms. Adkins,

The Tennessee Wildlife Resources Agency has reviewed the information you provided regarding proposed streambank stabilization projects in Scott County, Tennessee and our response is attached. In addition to the in-stream construction prohibition time frames, we recommend consulting with USFWS regarding species under federal authority, that all work be done during times of low flow and follow BMPs to prevent erosion. If I can be of more assistance, please let me know.

Anna Dellapenta
Wildlife Diversity Aquatic Biologist
Tennessee Wildlife Resources Agency
5107 Edmonson Pike
Nashville, TN 37211
Cell: (615)499-0231



From: Adkins, Jenny - NRCS, Cookeville, TN <jenny.adkins@usda.gov>
Sent: Thursday, May 20, 2021 1:34 PM
To: Anna Dellapenta <Anna.Dellapenta@tn.gov>; Dustin W Boles <dustin_boles@twrs.gov>
Cc: Pearson, Shelby - NRCS, Nashville, TN <shelby.pearson@usda.gov>; Horne, Terry - NRCS, Nashville, TN <terry.horne@usda.gov>; Dickson, Dwight - NRCS, Jamestown, TN <dwight.dickson@usda.gov>
Subject: [EXTERNAL] Scott Co. 5114 EWP sites

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. ***

Hello Anna and Dustin,

I hopefully, will not be sending you many more of EWP's for review. There are probably 20 more for me to review first. Thanks! If you have questions, please don't hesitate to ask.

Scott Co.

| DSR | Site | Lat (Deg) | Long (Deg) | Lat (DMS) | Long (DMS) | Road | |
|-----|------|-----------|------------|-----------|------------|------|--|
|-----|------|-----------|------------|-----------|------------|------|--|

| | | | | | | | | |
|-----|-----|-----------|---|-----------|---------------------|----------------------|-----------------------|---|
| | 10 | 36.379114 | - | 84.462613 | 36° 22' 44.81" N | 084° 27' 45.40" W | RIVER RD | Emerald Darter |
| | 11 | 36.369575 | - | 84.448266 | 36° 22' 10.46" N | 084° 26' 53.75" W | CORDELL RD | Emerald Darter |
| | 12 | 36.36176 | - | 84.44653 | 36° 21' 42.33" N | 084° 26' 47.50" W | CORDELL RD | Emerald Darter |
| | 13 | 36.331219 | - | 84.448635 | 36° 19' 52.38" N | 084° 26' 55.08" W | BURGESS CREEK RD | Emerald Darter |
| | 19 | 36.370042 | - | 84.457002 | 36° 22' 12.15" N | 084° 27' 25.20" W | WILLIAM NEWPORT RD | Emerald Darter |
| | 20 | 36.369919 | - | 84.457574 | 36° 22' 11.70" N | 084° 27' 27.26" W | WILLIAM NEWPORT RD | Emerald Darter |
| | 14 | 36.575598 | - | 84.336861 | 36° 34' 32.15" N | 084° 20' 12.69" W | GUMFORK RD | Blackside Dace LT Fed Cumberland Arrow Darter - D State |
| 327 | 15 | 36.569974 | - | 84.315932 | 36° 34' 11.90" N | 084° 18' 57.35" W | LOWER JELICO CREEK RD | Blackside Dace LT Fed Cumberland Arrow Darter - D State |
| | 16 | 36.570367 | - | 84.315066 | 36° 34' 13.32" N | 084° 18' 54.23" W | LOWER JELICO CREEK RD | Blackside Dace LT Fed Cumberland Arrow Darter - D State |
| | 17 | 36.572029 | - | 84.311481 | 36° 34' 19.30" N | 084° 18' 41.33" W | LOWER JELICO CREEK RD | Blackside Dace LT Fed Cumberland Arrow Darter - D State |
| 329 | 21A | 36.420408 | - | 84.392406 | 36° 25' 13.46" N | 084° 23' 32.66" W | SUGAR GROVE RD | Emerald Darter |
| | 21B | 36.420432 | - | 84.392278 | 36° 25' 13.55" N | 084° 23' 32.20" W | SUGAR GROVE RD | Emerald Darter |
| | 22 | 36.427967 | - | 84.406665 | 36° 25' 40.68" N | 084° 24' 23.99" W | SUGAR GROVE RD | Emerald Darter |
| | 23 | 36.432145 | - | 84.412377 | 36° 25' 55.72" N | 084° 24' 44.55" W | SUGAR GROVE RD | Emerald Darter |

Jenny

Jenny L. Adams
USDA NRCS
State Office Environmental Liaison/Biologist

900 S. Walnut Ave.
Cookeville, TN 38501
(931)528-6472 x113
(931)337-7205 Mobile

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United States Department of Agriculture

June 23, 2021

Mr. Kelvin King
Superintendent
Scott County Road Department
Post Office Box 118
Huntsville, TN 37756

RE: 5114 EWP Scott County Eligibility

Dear Mr. King:

This is in response to your request dated April 7, 2021 for Federal assistance under the Natural Resources Conservation Service (NRCS) Emergency Watershed Protection (EWP) Program to repair watershed damages and impairments and to remove the imminent hazards to life and property caused by the heavy rain and flood damage of March 27-28, 2021 to roads, bridges, culverts and infrastructure in your county. The table below shows the damaged locations that have been approved as eligible for the EWP Program.

| DSR No. | SITE No. | SITE NAME | LATITUDE* | LONGITUDE* |
|----------|----------|--------------------------------------|------------|-------------|
| 5114-325 | 001 | Scott County Old Jamestown Rd. | 36.376942° | -84.627301° |
| 5114-325 | 002 | Scott County Old Mountain View Rd. | 36.380652° | -84.613228° |
| 5114-325 | 003 | Scott County Old Mountain View Rd. | 36.380583° | -84.612884° |
| 5114-325 | 04A | Scott County Old Mountain View Rd. | 36.381188° | -84.609162° |
| 5114-325 | 04B | Scott County Old Mountain View Rd. | 36.381188° | -84.609001° |
| 5114-326 | 05A | Scott County Low Gap Rd. | 36.378393° | -84.529149° |
| 5114-326 | 05B | Scott County Low Gap Rd. | 36.378462° | -84.529342° |
| 5114-326 | 006 | Scott County Low Gap Rd. | 36.374385° | -84.534298° |
| 5114-326 | 007 | Scott County River Rd. | 36.383382° | -84.487067° |
| 5114-326 | 008 | Scott County River Rd. | 36.383287° | -84.486971° |
| 5114-326 | 009 | Scott County River Rd. | 36.371755° | -84.477468° |
| 5114-326 | 010 | Scott County River Rd. | 36.379128° | -84.462651° |
| 5114-326 | 011 | Scott County Cordell Rd | 36.369828° | -84.448371° |
| 5114-326 | 012 | Scott County Cordell Rd. | 36.361876° | -84.446585° |
| 5114-326 | 013 | Scott County Byrgess Creek Rd. | 36.331095° | -84.448661° |
| 5114-327 | 014 | Scott County Gum Fork Rd. | 36.575685° | -84.337728° |
| 5114-327 | 015 | Scott County Lower Jellico Creek Rd. | 36.569835° | -84.317280° |

Natural Resources Conservation Service
675 US Courthouse, 801 Broadway
Nashville, Tennessee 37203
Voice (615) 277-2531 Fax (855) 540-3502
USDA is an equal opportunity provider, employer, and lender.

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|----------|-----|--------------------------------------|------------|-------------|
| 5114-327 | 016 | Scott County Lower Jellico Creek Rd. | 36.570437° | -84.314999° |
| 5114-327 | 017 | Scott County Lower Jellico Creek Rd. | 36.572328° | -84.311351° |
| 5114-328 | 018 | Scott County Cherry Fork Rd. | 36.452538° | -84.502033° |
| 5114-326 | 019 | Scott County William Newport Rd. | 36.370036° | -84.457627° |
| 5114-326 | 020 | Scott County William Newport Rd. | 36.369932° | -84.457874° |
| 5114-329 | 21A | Scott County Sugar Grove Rd. | 36.420382° | -84.392348° |
| 5114-329 | 21B | Scott County Sugar Grove Rd. | 36.420403° | -84.392202° |
| 5114-329 | 022 | Scott County Sugar Grove Rd. | 36.427940° | -84.406690° |
| 5114-329 | 023 | Scott County Sugar Grove Rd. | 36.432143° | -84.412411° |

*decimal degrees format.

Pursuant to Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources (DWR), Rule Chapter 0400-40-11-02(2)(a)1.(vii), "Projects that replace, restore or repair public infrastructure or remediate damages from flooding or storm events and qualify for federal disaster assistance are exempt from subparts (i), (ii), (iii), (iv), (v) and (vi) of this part." This statement is taken from the 401 Certification or ARAP subparagraph of the Schedule of Fees subpart. This letter will serve as documentation that the above listed projects are eligible for EWP Program funding and the letter must be included with the ARAP application to be eligible for the fee exemption.

The DSR funding has not been received by TN NRCS. Please begin the process of completing all your Sponsor obligations (land rights, permits, cost share, etc.) as soon as possible. Construction is required to be completed and accepted by NRCS within 220 days of the actual NRCS TN funding receipt date.

The EWP Program regulations require timely action after receipt of funds as stated in the EWP Program Manual and 7 CFR Part 624. To ensure the permit portion of the Sponsor's obligations is completed in a timely manner, the Sponsor must apply for permits as soon as possible after EWP eligibility has been determined. The Sponsor is responsible for monitoring progress and obtaining permits in a timely manner.

Only NRCS decisions relating to eligibility for the EWP Program may be appealed in accordance with 7 CFR Part 614 and 7 CFR Part 11, as applicable. Decisions rendered under the EWP Program may be appealed in accordance with 7 CFR Part 614 (See Title 440, Programs Part 510 Appeals and Mediation which is found at <https://directives.sc.egov.usda.gov/>).

Mr. Kelvin King

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If you have any questions, please contact me at (615) 277-2561 or Dwight Dickson, District Conservationist, at (931) 879-8212, Ext. 102.

Sincerely,

MARCUS MILLER

Digitally signed by MARCUS
MILLER
Date: 2021.06.23 14:06:50 -05'00'

M. Alton Miller

EWP Program Manager

cc: Steven Morris, Acting ASTC Field Operations, USDA-NRCS, Cookeville, TN
Alton Miller, Acting State Conservation Engineer, USDA-NRCS, Nashville, TN
Terry Horne, Environmental Engineer, USDA-NRCS, Nashville, TN
Shelby Pearson, Agricultural Engineer, USDA-NRCS, Nashville TN
Jenny Adkins, Environmental Liaison, USDA-NRCS, Cookeville, TN
Dwight Dickson, District Conservationist, USDA-NRCS, Jamestown, TN