



**Cumberland Soil & Water Conservation District**

**RFP #25-24-S&W**

**Storm Debris Removal in Cumberland County**

**Date of Issue: April 4, 2025**

**Mandatory Pre-Proposal Conference Date: April 11, 2025 (Friday) at 10:00 AM EST**

**Questions Due Date: April 17, 2025 (Thursday) at 12:00 PM EST**

**Proposal Due Date: April 25, 2025 (Friday) at 12:00 PM EST**

**Direct all inquiries concerning this RFP to:**

Mitchell Miller

Cumberland Soil & Water Conservation District

Soil Conservationist

Email: [Mitchell.miller@usda.gov](mailto:Mitchell.miller@usda.gov)

Phone: 910-484-8479 Ext. 3

Proposals shall be submitted in accordance with the terms and conditions of this RFP and any addenda issued hereto.

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## 1.0 PURPOSE AND BACKGROUND

The Cumberland Soil and Water Conservation District (SWCD) is seeking qualified vendors to perform storm debris removal in Cumberland County. After several recent storm events, debris has been deposited in these streams. Debris includes trees, tree mats, roots, manmade debris and structures, and miscellaneous debris that is hazardous and/or blocking the safe passage of the stream. The qualified vendor will provide three references documenting successful completion of similar debris removal projects. The qualified vendor will provide all labor, equipment and materials necessary to perform storm debris removal in Cumberland County within the limits the Cumberland SWCD has identified. This job will be based on linear footage.

## 2.0 PROPOSAL INSTRUCTIONS & REQUIREMENTS

### 2.1 REQUEST FOR PROPOSAL DOCUMENT

The RFP is comprised of the base RFP document, any attachments, and any addenda released before contract award. All attachments and addenda released for this RFP in advance of any contract award are incorporated herein by reference. By submitting a proposal, the vendor agrees to meet all stated requirements in this section as well as any other specifications, requirements and terms and conditions stated in this RFP. If a vendor is unclear about a requirement or specification or believes a change to a requirement would allow for the County to receive a better proposal, the vendor is urged and cautioned to submit these items in the form of a question during the question and answer period in accordance with Section 2.3.

Vendors shall populate all attachments of this RFP that require the vendor to provide information and include an authorized signature where requested. Failure to include required documents and/or signatures, where requested, will result in rejection of submitted proposals.

### 2.2 PROPOSAL SUBMITTAL

Proposals, subject to the conditions made a part hereof and the receipt requirements described below, shall be received at the address indicated in the table below.

<b>Mailing address for delivery of proposal via US Postal Service</b>	<b>Office address of delivery by any other method (special delivery, overnight, or any other carrier)</b>
<p><i>PROPOSAL TITLE:</i> <i>RFP #25-24-S&amp;W Storm Debris Removal in Cumberland County</i></p> <p><i>Cumberland Soil &amp; Water Conservation District</i> <i>Attn: Mitchell Miller</i> <i>301 East Mountain Drive, Suite 229</i> <i>Fayetteville, NC 28306</i></p>	<p><i>PROPOSAL TITLE:</i> <i>RFP #25-24-S&amp;W Storm Debris Removal in Cumberland County</i></p> <p><i>Cumberland Soil &amp; Water Conservation District</i> <i>Attn: Mitchell Miller</i> <i>301 East Mountain Drive, Suite 229</i> <i>Fayetteville, NC 28306</i></p>
<b>Email address for delivery of proposal electronically</b>	
<p><i>SUBJECT LINE: RFP #25-24-S&amp;W Storm Debris Removal in Cumberland County</i> <i><u>Mitchell.miller@usda.gov</u></i></p>	

**IMPORTANT NOTE:** All proposals shall be physically delivered to the office address listed above or if submitting electronically received by the email address listed above **on or before 12:00 PM EST, Friday, April 25, 2025**, regardless of the method of delivery. All risk of late arrival due to unanticipated delay—whether delivered by email, hand, U.S. Postal Service, courier or other delivery service is entirely on the vendor. It is the sole responsibility of the

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vendor to have the proposal to the County department specified by the specified time and date of opening. Any proposal received after the proposal submission deadline will be rejected.

All proposal addendums and/or corrections will be posted on the Cumberland County Vendor Self Service site <https://ccmunis.co.cumberland.nc.us/vss/Vendors/VBids/Default.aspx> . Vendors who submit a notice of intent to bid to [Mitchell.miller@usda.gov](mailto:Mitchell.miller@usda.gov) will receive addendums by email.

### 2.3 PROPOSAL QUESTIONS

Written questions shall be emailed to [Mitchell.miller@usda.gov](mailto:Mitchell.miller@usda.gov) by **12:00 PM EST, Thursday, April 17, 2025**. Vendors should enter “**RFP #25-24-S&W Storm Debris Removal in Cumberland County: Questions**” as the subject for the email. Questions will not be answered by phone. Question submittals should include a reference to the applicable RFP section.

Questions received prior to the submission deadline date, the County’s response, and any additional terms deemed necessary by the County will be posted in the form of an addendum to the Cumberland County Vendor Self Service Site, <https://ccmunis.co.cumberland.nc.us/vss/Vendors/default.aspx> and shall become an Addendum to this RFP. **Vendors who submit an intent to bid will receive addendums by email.** Vendors shall rely *only* on written material contained in an Addendum to this RFP. **Vendors should not contact any other County employees, besides those listed above, during the bid process. Vendors who contact any other County employees may be disqualified.**

Any questions considered minute in nature or that point to an error in the RFP or that the County determines will produce information required in order for all vendors to submit a responsible proposal, may be answered at the County’s discretion after the specified date and time. Such questions that are received after the deadline are not guaranteed to be answered and if the questions qualify as “minute in nature” shall be determined at the sole discretion of the County.

### 2.4 MANDATORY PRE-PROPOSAL CONFERENCE

#### Mandatory Pre-Proposal Conference

Date:	April 11, 2025 (Friday)
Time:	10:00 AM Eastern Time
Location:	Cumberland Soil and Water District Building Hubert M. Willis Conference Room 232 (Cumberland SWCD Conference Room) 2 <sup>nd</sup> Floor
Address:	301 East Mountain Drive, Suite 229, Agriculture Center, Fayetteville, NC 28306
POC:	Mitchell Miller
Contact #:	910-484-8479 Ext. 3

**Instructions:** It shall be MANDATORY that each vendor representative be present for a pre-proposal conference on Friday, April 11, 2025. Attendees must meet promptly at 10:00 AM Eastern Time at the Cumberland Soil and Water District Building, in the Hubert M. Willis Conference Room #232 (Cumberland SWCD Conference Room) on the 2<sup>nd</sup> Floor. The address is 301 East Mountain Drive, Suite 229, Agriculture Center, Fayetteville, NC 28306.

All attendees must sign in upon arrival. VENDORS WHO ARRIVE LATER THAN 15 MINUTES AFTER THE SPECIFIED TIME WILL NOT BE ALLOWED TO SIGN IN, PARTICIPATE IN THE CONFERENCE, NOR SHALL THEIR PROPOSAL BE CONSIDERED. Once the sign-in process is complete, all other persons wishing to attend may do so to the extent that space and circumstances allow.

Vendors are cautioned that any information released to attendees during the conference, other than that involving the physical aspects of the facility referenced above, and which conflicts with, supersedes, or adds to requirements in this Request for Proposal, must be confirmed by written addendum before it can be considered to be a part of this proposal.

### 2.5 RFP TERMS & CONDITIONS

It shall be the vendor's responsibility to read the instructions, the County's terms and conditions, all relevant exhibits and attachments, and any other components made a part of this RFP, and comply with all requirements and specifications herein. Vendors also are responsible for obtaining and complying with all Addenda and other changes that may be issued in connection with this RFP.

Questions, issues, or exceptions regarding any term, condition, or other component within this RFP, must be submitted as questions in accordance with the instructions in Section 2.3 PROPOSAL QUESTIONS. Vendor's proposal shall constitute a firm offer.

If a vendor desires modification of the terms and conditions of this solicitation, it is urged and cautioned to inquire during the question period, in accordance with the instructions in this RFP, about whether specific language proposed as a modification is acceptable to or will be considered by the County. It is the County's sole discretion to accept or reject requested modifications and/or exceptions.

### **3.0 NOTICES TO VENDOR**

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#### **3.1 PROHIBITED COMMUNICATIONS AND CONFIDENTIALITY**

**PROHIBITED COMMUNICATION:** Each vendor submitting a proposal, including its representatives, subcontractors, and suppliers, is prohibited from having any communication with any employees or members of the board of commissioners of the County except those employees of the County's Department as designated in this RFP. A vendor who does not comply with this provision may be disqualified from award of a contract.

**!IMPORTANT INFORMATION! CONFIDENTIAL INFORMATION:** The proposal must not contain any information marked as "confidential" or as a "trade secret" or in any other manner as to indicate that it is information protected by the Trade Secrets Protection Act ( the "Act") as set out in Article 24 of Chapter 66 of the North Carolina General Statutes, **unless the vendor has noticed the County Department of its intent to designate any information in the proposal as such and received permission from the County Department to do so in writing.** Vendor's notice to the County Department must be in writing and must describe the information for which confidentiality is requested and explain how the information is a "trade secret" as defined in G.S. § 66-152(3). If the County Department determines the information for which confidentiality is requested is a "trade secret" covered by the Act, it will notify the vendor how to mark the information in the proposal and will identify the measures that County will take to protect the confidentiality of the information. Vendor's submission of a proposal after receipt of this notice from the County Department shall be deemed to be acceptance of the County Department's statement of how it will maintain confidentiality. If the County Department determines the information for which confidentiality is requested is not a "trade secret" covered by the Act, it will notify vendor of that determination. Any proposal marked with any information as "confidential" or as a "trade secret" or in any other manner as to indicate that it is information protected by the Act in violation of this section shall be regarded as not responsive to the request for proposals and shall not be considered.

#### **3.2 PROPOSAL COMPLIANCE**

It is in the best interest of vendors to submit proposals that are clear, concise, and easily understood. Proposals should provide information essential for a straightforward and concise description of vendor capabilities to satisfy the requirements of the RFP specifications.

Vendor may include any optional data not provided for elsewhere and considered to be pertinent to this bid as an addendum.

Vendors are urged and cautioned to read the RFP completely through as noncompliance with requirements may result in bid rejection. Section 4.0 requirements and request for information must be in the same order with the same titles as listed in Section 4.0. Vendor proposals should be easy to follow and all sections should be easily identified.

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The specifications included in this package describe the services that the County feels are necessary to meet the performance requirements of this RFP, and shall be considered the minimum standards expected of the Proposer. However, the specifications are not intended to exclude potential bidders.

If the vendor is unable to meet any of the specifications as outlined therein, vendors are advised to submit questions and concerns regarding the specifications during the question and answer period described in Section 2.3.

If the vendor does not indicate or submit questions or concerns regarding the specifications, the County shall assume it is able to fully comply with these specifications. The County shall be the sole and final judge of compliance with all specifications.

The County further reserves the right to determine the acceptability or unacceptability of any and all alternatives or deviations.

### **3.3 PROPOSAL EVALUATION PROCESS**

The County shall review all responses to this RFP to confirm that they meet the specifications and requirements of the RFP. The County shall not be required to hold interviews; however, depending on the number of responses and the information contained in the responses, the County may decide to conduct interviews with firms of its choice. The County reserves the right to request clarification of information submitted.

The County reserves the right to reject any and all proposals.

### **3.4 EVALUATION CRITERIA**

All qualified proposals will be evaluated and award made based on considering the following criteria to result in an award most advantageous to the County:

1. Qualifications and Relative Experience of Firm	20 points
2. Qualifications and Experience of Staff	15 points
3. Respondents Technical Approach	20 points
4. Previous Successful Stream Debris Removal Projects	20 points
5. Cost Proposal	15 points
6. Proposed Start Date	<u>10 points</u>
	100 points

### **3.5 METHOD OF AWARD**

RFP will be awarded based on best overall value method of award.

The County reserves the right to make separate awards to different vendors, to not award, to engage in further negotiations, to award only part of the project, or to cancel this RFP in its entirety without awarding a contract, if it is considered to be most advantageous to the County to do so.

## **4.0 SCOPE OF WORK & VENDOR'S PROPOSAL CONTENT REQUIREMENTS**

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### **4.1 SCOPE OF WORK**

The Contractor shall be required to provide all labor, equipment and materials necessary for storm debris removal in Cumberland County. The Contractor will be responsible for removing all debris from the creek. Debris may include trees, tree mats, roots, manmade debris and structures, and miscellaneous debris that is hazardous and/or is blocking the safe passage of the stream. Stumps that are intact in the banks of the creeks will be permitted to remain. The job will be bid based on linear footage. Remove the debris and deposit the debris a minimum 30 feet from the streambank, cable the debris, anchoring it to living trees.

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The Contractor will be required to access private property to gain access to the streams. The contractor is responsible for acquiring access permission for properties as well as any permits needed to complete the work. Any property damaged or disturbed in the performance of this work is to be restored to the initial condition as is the responsibility of the contractor. The contractor is responsible for working out easements with utility companies to ensure that they notify them of the work taking place. The County will provide maps that document the beginning and end points of the project (Attachment E). The project will be bid based on the segments provided. The Contractor must observe all OSHA, Federal and State regulations/guidelines regarding working on the project.

The Contractor is prohibited from working on Sunday. All work may be performed from 7:00 AM to 6:00 PM Monday through Saturday, unless noted otherwise.

In the event of a significant rainfall event such as a Hurricane, or Tropical Storm, work in Cumberland County should stop 24 hours prior to a tropical storm, or hurricane warning and should not return until the water levels return to a normal level.

According to Soil and Water Commission Deadlines, we expect the contractor to get to the site and begin work within 45 days of the executed date of the contract. Should this not occur, a written explanation must be presented to the Cumberland Soil and Water Conservation District Board for approval.

No payment will be made to Vendor without prior inspection. Contractor must be willing to show the Cumberland SWCD Representatives, and Division of Soil and Water Conservation Inspectors the work has been completed prior to payment.

The contractor will be responsible to provide the transportation on the day of the site visit approval inspection with the Cumberland SWCD Representatives and/or Division of Soil and Water Conservation Inspectors.

Work should never be done when River Levels exceed the flood stage. This data can be obtained from the USGS Water Data Website at the link below. Debris removal when the levels are high could result in additional work required.

All work shall be performed following the Best Management Practices for Selective Clearing and Snagging found on the NC Department of Agriculture and Consumer Services website referred to as Appendix B. The information is an attachment to this RFP and the information is also below.

Trees and brush that shade streams and stabilize the banks should not be disturbed. In new channel construction, existing trees and brush should be left in place along the tops of banks. No stream work, including bank clearing and excavation or removal of materials, “snags”, or other channel obstructions, should be allowed except at specific locations where significant blockages in streams occur. Channel excavation and snag removal should be accomplished with the minimum streambank clearing needed to provide access to the stream and should not be undertaken unless it is necessary. The following BMPs prescribe the manner in which snag removal and stream channel clearing should be undertaken:

a. Practices for snagging.

(1) Logjam removal. Only those log accumulations that are obstructing flows to a degree that results in flooding or significant ponding or sediment deposition should be removed.

(2) Removal of other logs.

- Affixed logs. Isolated or single logs should not be disturbed if they are embedded, jammed, rooted, or waterlogged in the channel or in the floodplain, if they are not subject to displacement by current, and if they are not presently blocking flows. Generally, embedded logs that are parallel to the channel are not considered to cause blockage problems and should not be removed. Affixed logs that are crossways to the flow of waters in the channel and are trapping debris to the extent that could result in significant flooding or sedimentation may be removed.
- Free logs. All logs that are not rooted, embedded, jammed, or sufficiently waterlogged to resist movement by stream currents may be removed from the channel.

- (3) Protecting riparian vegetation. No rooted trees, whether alive or dead, should be cut unless:
  - They are leaning over the channel at an angle greater than 30 deg of vertical and they are dead or severely undercut, or damaged root systems are relying upon adjacent vegetation for support and it appears they will fall into the channel within 1 year and create blockage to flows; or
  - Their removal from the floodplain is required to secure access for equipment to a point where a significant blockage has been selected for removal.
  - Trees selected for removal should be cut well above the base leaving the stump and roots undisturbed. Procedures for removing the felled portion should be the same as for other logs as discussed below.
- (4) Equipment for log removal. First consideration should be given to the use of hand-operated equipment to remove log accumulations. When the use of hand-operated equipment is infeasible, vehicular equipment should be used in accordance with the following guidelines:
  - Water-based equipment (e.g., a crane or winch mounted on a small, shallow draft barge or other vessel) should be used for removing material from the stream. A small crawler tractor with winch or similar equipment may be used to remove debris from the channel to selected disposal points.
  - When stream conditions are inadequate for the use of water-based equipment, the smallest feasible equipment with tracking systems that minimize ground disturbance should be specified for use. Larger equipment may be employed from non-wooded areas where cables could be stretched down to the channel to drag out materials to be removed.
  - Access routes for equipment should be selected to minimize disturbance to existing floodplain vegetation, particularly in the riparian zone. Equipment should be selected which will require little or no tree removal in forested areas.
- (5) Log Disposal practices. All logs or trees designated for removal from a stream or floodplain should be removed or secured in such a manner as to preclude their reentry into the channel by floodwaters. Generally, they should be transported well away from the channel and floodway and positioned parallel to the stream channel so as to reduce flood flow impediment. When large numbers of logs are removed at one location (e.g., logjams), their use of firewood may be most appropriate. Burying of removed material should not be permitted. The trees must be pulled back 30 feet from the top of the streambank. The trees should be tied if they are within the 100 Year Floodplain which the Cumberland SWCD will provide the map.

b. Practices for stream channel clearing.

- (1) Small debris accumulation. Small debris accumulations should be left undisturbed unless they are collected around a log or blockage that should be removed. (Small debris accumulations will not constitute a significant blockage to flows. Upon removal of logs and other blockages under these BMPs and the following completion of the project, the changed water velocities will remove and disperse these small debris accumulations so that no significant blockage of water flows will result.)
- (2) Removal of sediment and soils. Major sediment plugs in the channel may be removed if they are presently blocking the channel to a degree that results in ponding and dispersed overland flow through poorly defined and non-existent channels and, in the opinion of appropriate experts, will not be removed by natural stream or river forces after logs and other obstructions have been removed.
- (3) Disposal of soil material. Conventional excavating equipment may be required for sediment blockages. This equipment should be employed in a manner which will minimize environmental damages as follows:

- Access routes for equipment should be selected to minimize disturbance to existing floodplain vegetation particularly in the riparian zone.
- Material disposal and necessary tree removal should be limited to one side of the original channel at any given location.
- To maximum extent possible, excavating equipment should not be employed in the stream channel bed.
- Where feasible, excavated materials should be removed from the floodplain. If the floodplain disposal is the only feasible alternative, the spoil material should be placed on the highest practical elevation and no material should be placed in any tributary or distributary channels which provide for ingress and egress of waters to and from the floodplain.
- No continuous spoil pile should be created. It is suggested that no pile exceed 50 ft in length or width and a gap of equal or greater length should be left between adjacent spoil piles.
- Spoil piles should be constructed as high as sediment properties allow.
- The placement of spoil material around the bases of mature trees should be avoided where possible.
- All disturbed areas should be reseeded or replanted with plant species which will stabilize soils and benefit fish and wildlife. Revegetation should be in accordance with Cumberland SWCD recommendations.
- All disturbed areas should be reseeded or replanted with plant species which will stabilize soils and benefit fish and wildlife. Revegetation should be in accordance with Cumberland SWCD recommendations.

**Upper Town of Linden Drainage Canal: See Attached Map**

**Unnamed Tributary to the Cape Fear River: See Attached Map**

**Unnamed Tributary to Rockfish Creek: See Attached Map**

**Harrison Creek Segment 5: Hair Canal Dike to Harrison Creek Segment 4**

**Beaver Dam Creek: Spencer Road to South River**

## **4.2 VENDOR'S PROPOSAL REQUIREMENTS**

The vendor's proposal must include the required information below. Proposals shall be tabbed, using the titles identified in this section, to identify the required information. Tabs must be in the same order as listed below. Failure to submit this information may render its proposal non-responsive. **Vendors are urged and cautioned to read the notices in Section 3.1. Noncompliance with the confidentiality requirements will result in a proposal being considered nonresponsive.**

### **A. INTRODUCTION: COMPANY INFORMATION AND EXECUTIVE SUMMARY**

Each respondent shall provide the following company information:

1. Firm's name and business address, including telephone and fax number, email address and website address.
2. The legal nature of the entity (Individual, partnership, corporation, etc.) and list the names of all officers, partners, principals, etc.
3. Year established. Include former firm name(s) and year(s) established, if applicable.
4. The name, title, address and telephone number of the firm's authorized negotiator for this project. The person identified must be authorized to make binding commitments for the firm and its subcontractors.

5. A copy of the respondents internal training program. Provide under separate cover the respondent's training manual. This manual will not count towards the limit of pages for this proposal since it is being requested under separate cover. If respondent considers the training manual to be confidential proprietary information, it should state so and should so label the training manual submitted.
6. Information concerning any current violations which may cause conflict with or affect the ability of the proposer to provide scope of services, or any litigation to which responding firm is a party within the last three years concerning or relating to it providing similar scope of services.

## **B. QUALIFICATIONS AND RELATIVE EXPERIENCE TO THE FIRM**

This section should be concise and should present only information that is relevant to this project. Include, at a minimum:

1. Provide for us a description and history of the firm focusing on previous governmental experience.
2. Recent experience demonstrating the ability to remove debris from stream channel.
3. Documented knowledge and experience of Federal, State and Local emergency agencies, state and federal programs, funding sources and reimbursement processes.
4. Provide a list of existing contracts with other counties.
5. Process for obtaining right of entries

## **C. QUALIFICATIONS AND EXPERIENCE OF STAFF**

This section should include key project staff. The staff included shall be full time employees of the proposing firm.

1. Current capacity and current expertise in debris removal from streams.
2. Experience with obtaining private property/ right of entries in other counties to ensure the work gets completed in a timely manner.
3. Provide at least 3 references that demonstrate the ability of your staff to perform the work described within the Scope of Work.

## **D. RESPONDENTS TECHNICAL APPROACH**

This section should include at a minimum the following information relevant to this project:

1. Provide for us a proposed start date once you have been notified that you have been awarded the contract.
2. Please address how you would approach a situation where we get a rainfall event that increases the water levels significantly and you are unable to see the debris that is below?
3. Would you be willing to make multiple passes, to ensure that the debris is removed from the creek?
4. Provide us a description of the transportation you would provide to show the Cumberland SWCD Representative and/or Division of Soil and Water Conservation Inspectors that the work is complete.
5. Please address if you will be subcontracting any of the work performed.
6. Provide experience working with debris removal in linear feet as opposed to other methods.

## **E. PREVIOUS SUCCESSFUL STREAM DEBRIS REMOVAL PROJECTS**

This section should be concise and should present only information that is relevant to this project. Include, at a minimum:

1. Share some of the more successful creek cleanup projects that you have completed since 2016.
2. Provide any landowner recommendations for stream debris removal that you performed on their property.

## **F. COST PROPOSAL**

Cost must be submitted using Attachment (D). Cost shall be all inclusive. Cost should be calculated in terms of linear feet.

**G. PROPOSED START DATE**

Once the County contacts you notifying you that they are ready for you to begin work. How soon could you get started on the project?

**H. REFERENCES**

Vendors shall provide at least three (3) references for which your company has provided services of similar size and scope to that proposed herein.

COMPANY NAME	CONTACT NAME	TELEPHONE NUMBER	EMAIL ADDRESS

**5.0 CONTRACT TERMS AND CONDITIONS**

---

**5.1 IRAN DIVESTMENT ACT**

As provided in N.C.G.S. 147-86.55-69, any person identified as engaging in investment activities in Iran, determined by appearing on the Final Divestment List created by the North Carolina State Treasurer pursuant to G.S. 147-86.57(6) c, is ineligible to contract with the County of North Carolina or any political subdivision of the COUNTY.

**5.2 E-VERIFY**

CONTRACTOR shall comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Further, if Contractor utilizes a subcontractor, CONTRACTOR shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes.

**5.3 DIVESTMENT FROM COMPANIES THAT BOYCOTT ISRAEL**

The CONTRACTOR certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. 147-86.81. It is the responsibility of each CONTRACTOR to monitor compliance with this restriction. Contracts valued at less than \$1,000.00 are exempt from this restriction.

**5.4 CONTRACT CHANGES**

Contract changes, if any, over the life of the contract shall be implemented by contract amendments agreed to in writing by the COUNTY and CONTRACTOR.

**5.5 CONTRACT TERM**

The Contract shall have an initial term of one (1) year, beginning on the date of notice to proceed (the “Effective Date”), with the option to renew for one additional one-year term. The CONTRACTOR shall begin work under the Contract within forty-five (45) days of the executed date of the contract.

**5.6 PRICING**

Proposal price shall constitute the total cost for complete performance in accordance with the requirements and specifications herein, including all applicable charges handling, administrative and other similar fees. CONTRACTOR shall not invoice for any amounts not specifically allowed for in this RFP. Cost shall be all inclusive.

## 5.7 INVOICES

***Invoicing should be based on progression of work as areas of stream debris are completed through each section.***

- a) Invoices must be submitted to the following address: Cumberland SWCD  
Attn: Mitchell Miller, Soil Conservationist  
301 East Mountain Drive  
Fayetteville, NC 28306
- b) Any applicable taxes shall be invoiced as a separate item.

## 5.8 PAYMENT TERMS

The CONTRACTOR will be paid net thirty (30) calendar days after the CONTRACTOR'S invoice is approved by the COUNTY.

## 5.9 APPROPRIATION OF FUNDS

The parties intend that contractual performances by either party beyond the first fiscal year after the execution of this agreement be contingent upon the continued funding and appropriation by the County Board of Commissioners. Therefore, the parties agree that services provided and payment due under this agreement will be provided upon a year-to-year basis contingent upon continued funding and appropriation. The fiscal year for Cumberland County begins on July 1 and ends June 30<sup>th</sup>.

## 5.10 FINANCIAL STABILITY

CONTRACTOR warrants that it has the financial capacity to perform and to continue perform its obligations under the contract; that CONTRACTOR has no constructive or actual knowledge of an actual or potential legal proceeding being brought against CONTRACTOR that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.

## 5.11 INSURANCE:

Providing and maintaining adequate insurance coverage is a material obligation of the CONTRACTOR and is of the essence of this Contract. All such insurance shall meet all laws of the County of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The CONTRACTOR shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this Contract. The limits of coverage under each insurance policy maintained by the CONTRACTOR shall not be interpreted as limiting the CONTRACTOR'S liability and obligations under the Contract. During the term of the Contract, the CONTRACTOR at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the Contract.

## 5.12 GENERAL INDEMNITY

The CONTRACTOR shall hold and save the COUNTY, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this Contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the CONTRACTOR in the performance of this Contract and that are attributable to the negligence or intentionally tortious acts of the CONTRACTOR provided that the CONTRACTOR is notified in writing within 30 days that the COUNTY has knowledge of such claims. The CONTRACTOR represents and warrants that it shall make no claim of any kind or nature against the COUNTY's agents who are involved in the delivery or processing of CONTRACTOR goods or services to the COUNTY. The representation and warranty in the preceding sentence shall survive the termination or

expiration of this Contract.

### **5.13 ENTIRE CONTRACT**

The contract formally entered into by the parties after the vendor is selected constitutes the entire understanding of the parties. In the event of a conflict between the COUNTY'S contract terms and the CONTRACTOR'S contract terms, the COUNTY'S terms shall be the overriding determining factor.

### **5.14 CONTRACT CANCELLATION**

The COUNTY may terminate this contract at any time by providing 30 days' notice in writing from the COUNTY to the CONTRACTOR. If the contract is terminated by the COUNTY as provided in this section, the COUNTY shall pay for services satisfactorily completed by the CONTRACTOR, less any payment or compensation previously made.

### **5.15 LAWS AND ORDINANCES**

The contract will be governed by North Carolina law.

### **5.16 COMPLIANCE WITH LAWS**

CONTRACTOR shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business and its performance in accordance with this contract, including those of federal, state, and local agencies having jurisdiction and/or authority.

### **5.17 CONTRACTOR REPRESENTATIONS**

CONTRACTOR warrants that qualified personnel shall provide services under this Contract in a professional manner. "Professional manner" means that the personnel performing the services will possess the skill and competence consistent with the prevailing business standards in the industry. CONTRACTOR agrees that it will not enter any agreement with a third party that may abridge any rights of the COUNTY under this Contract.

If any services, deliverables, functions, or responsibilities not specifically described in this Contract are required for CONTRACTOR'S proper performance, provision and delivery of the service and deliverables under this Contract, or are an inherent part of or necessary sub-task included within such service, they will be deemed to be implied by and included within the scope of the contract to the same extent and in the same manner as if specifically described in the contract. Unless otherwise expressly provided herein, CONTRACTOR will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the CONTRACTOR to provide and deliver the Services and Deliverables.

#### **CONTRACTOR certifies that it has not previously or currently:**

- a. Had any criminal felony conviction, or conviction of any crime involving moral turpitude, including, but not limited to fraud, misappropriation or deception, of CONTRACTOR, its officers or directors, or any of its employees or other personnel to provide services on this project, of which CONTRACTOR has knowledge.
- b. Had any regulatory sanctions levied against CONTRACTOR or any of its officers, directors or its professional employees expected to provide services on this project by any governmental regulatory agencies within the past three years. As used herein, the term "regulatory sanctions" includes the revocation or suspension of any license or certification, the levying of any monetary penalties or fines, and the issuance of any written warnings.
- c. Had any civil judgments against CONTRACTOR during the three (3) years preceding submission of its proposal herein.

Any personnel or agent of the CONTRACTOR performing services under any contract arising from this RFP may be required to undergo a background check at the expense of the CONTRACTOR, if so requested by the COUNTY.

*Proposal Number: RFP #25-24-S&W Storm Debris Removal in Cumberland County*

The COUNTY may, in its sole discretion, terminate the services of any person providing services under this Contract. Upon such termination, the COUNTY may request acceptable substitute personnel or terminate the contract services provided by such personnel.

**Attachments to this RFP begin on the next page.**

## **ATTACHMENT A: INSTRUCTIONS TO VENDORS**

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1. **READ, REVIEW AND COMPLY:** It shall be the vendor's responsibility to read this entire document, review all enclosures and attachments, and any addenda thereto, and comply with all requirements specified herein, regardless of whether appearing in these Instructions to vendors or elsewhere in this RFP document.
2. **LATE PROPOSALS:** Late proposals, regardless of cause, will not be opened or considered, and will automatically be disqualified from further consideration. It shall be the vendor's sole responsibility to ensure delivery at the designated office by the designated time.
3. **ACCEPTANCE AND REJECTION:** The County reserves the right to reject any and all proposals, to waive minor informality in proposals and to reject proposal with non-minor informalities, based on the sole discretion of the County.
4. **EXECUTION:** Failure to sign EXECUTION PAGE in the indicated space will render proposal non-responsive, and it shall be rejected.
5. **GIFTS:** Gifts and favors to the County of any kind in any amount are prohibited.
6. **SUSTAINABILITY:** To support the sustainability efforts of the County of Cumberland we solicit your cooperation in this effort. All copies of the proposal are printed double-sided.
7. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150 (1999), the County invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.
8. **INFORMAL COMMENTS:** The County shall not be bound by informal explanations, instructions or information given at any time by anyone on behalf of the County during the competitive process or after award. The County is bound only by information provided in this RFP and in formal Addenda issued through the State's IPS and the County's Vendor Self Service website.
9. **COST FOR PROPOSAL PREPARATION:** Any costs incurred by vendor in preparing or submitting offers are the Vendor's sole responsibility; the County of Cumberland will not reimburse any vendor for any costs incurred.
10. **VENDOR'S REPRESENTATIVE:** Each vendor shall submit with its proposal the name, address, and telephone number of the person(s) with authority to bind the firm and answer questions or provide clarification concerning the firm's proposal.
11. **SUBCONTRACTING:** The Contractor shall not assign or subcontract the work, or any part thereof, without the previous consent of Cumberland County, nor shall it assign, by power of attorney, operation of law, or otherwise, any moneys payable under the Contract without prior written consent of the County.  
  
If the vendor proposes to subcontract work in this project, the subcontractor and the activity in this project are to be identified in the proposal.  
  
All subcontractors must be approved by the County and must conform to and comply with the same terms, standards and specifications applicable to the contracting firm.  
  
The vendor shall be fully responsible and accountable to the County for the acts and omissions of its subcontractors, and of persons directly or indirectly employed by him.
12. **INSPECTION AT VENDOR'S SITE:** The County reserves the right to inspect, at a reasonable time, the

*Proposal Number: RFP #25-24-S&W Storm Debris Removal in Cumberland County*

equipment/item, plant or other facilities of a prospective vendor prior to Contract award, and during the Contract term as necessary for the County determination that such equipment/item, plant or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Contract.

13. **AFFIRMATIVE ACTION**: The vendor will take affirmative action in complying with all Federal and County requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin or disability.
14. **VENDOR REGISTRATION**: Vendors are not required to register as a vendor in our system in order to submit a bid; however, registration is recommended so that vendor information is available for future opportunities. New vendors can register by visiting the following URL: <https://ccmunis.co.cumberland.nc.us/vss/Vendors/default.aspx>.

*This Space is Intentionally Left Blank*

**ATTACHMENT B: EXECUTION OF PROPOSAL**

**EXECUTION**

In compliance with this Request for Proposal (RFP), and subject to all the conditions herein, the undersigned vendor offers and agrees to furnish and deliver any or all items/services upon which prices are proposed. By executing this proposal, the undersigned vendor certifies that this proposal is submitted competitively and without collusion, that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible from covered transactions by any Federal or State department or agency. Furthermore, the undersigned vendor certifies that it and its principals are not presently listed on the Department of State Treasurer’s Final Divestment List as per N.C.G.S 147-86.55-69.

The potential Contractor certifies and/or understands the following by placing an "X" in all blank spaces:

- \_\_\_\_\_ The County has the right to reject any and all proposals or reject specific proposals with deviated/omitted information, based on the County’s discretion if the omitted information is considered a minor deviation or omission. The County will not contact vendors to request required information/documentation that is missing from a proposal packet. Additionally, if the County determines it is in its best interest to do so, the County reserves the right to award to one or more vendors and/or to award only a part of the services specified in the RFP.
- \_\_\_\_\_ This proposal was signed by an authorized representative of the Contractor.
- \_\_\_\_\_ The potential Contractor has determined the cost and availability of all materials and supplies associated with performing the services outlined herein.
- \_\_\_\_\_ All labor costs associated with this project have been determined, including all direct and indirect costs.
- \_\_\_\_\_ The potential Contractor agrees to the conditions as set forth in this RFP with no exceptions.
- \_\_\_\_\_ Selection of a contract represents a preliminary determination as to the qualifications of the vendor. Vendor understands and agrees that no legally binding acceptance offer occurs until the Cumberland County Board of Commissioners, or its designee, executes a formal contract and/or purchase order.

Therefore, in compliance with the foregoing RFP, and subject to all terms and conditions thereof, the undersigned offers and agrees to furnish the services for the prices quoted within the timeframe required. Vendor agrees to hold firm offer through contract execution.

**Failure to complete, execute/sign (E-signature or handwritten) proposal prior to submittal shall render the proposal invalid and it WILL BE REJECTED.**

VENDOR:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & COUNTY & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO:
PRINCIPAL PLACE OF BUSINESS ADDRESS IF DIFFERENT FROM ABOVE (SEE INSTRUCTIONS TO VENDORS ITEM #10):		
PRINT NAME & TITLE OF PERSON SIGNING ON BEHALF OF VENDOR:	FAX NUMBER:	
VENDOR’S AUTHORIZED SIGNATURE:	DATE:	EMAIL:

**ATTACHMENT C: CERTIFICATION OF FINANCIAL CONDITION**

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Name of Vendor: \_\_\_\_\_

The undersigned hereby certifies that: [check all applicable boxes]

The vendor is in sound financial condition and, if applicable, has received an unqualified audit opinion for the latest audit of its financial statements.

Date of latest audit: \_\_\_\_\_

The vendor has no outstanding liabilities, including tax and judgment liens, to the Internal Revenue Service or any other government entity.

The vendor is current in all amounts due for payments of federal and County taxes and required employment-related contributions and withholdings.

The vendor is not the subject of any current litigation or findings of noncompliance under federal or County law.

The vendor has no findings in any past litigation, or findings of noncompliance under federal or County law that may impact in any way its ability to fulfill the requirements of this Contract.

He or she is authorized to make the foregoing statements on behalf of the vendor.

**Note:** This is a continuing certification and vendor shall notify the Contract Lead within 15 days of any material change to any of the representations made herein.

**If any one or more of the foregoing boxes is NOT checked, vendor shall explain the reason in the space below:**



\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed Name Title

**[This Certification must be signed by an individual authorized to speak for the vendor]**

**ATTACHMENT D: COST PROPOSAL**

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Projects will be awarded based on ranking of priority and availability of budget.

<b><u>Segment and Length</u></b>	<b><u>Price per Linear Foot</u></b>	<b><u>Total Bid Amount</u></b>
Upper Town of Linden Drainage Canal 6,038 Linear Feet	\$	\$
Unnamed Tributary to the Cape Fear River 332 Linear Feet	\$	\$
Unnamed Tributary to Rockfish Creek 1,500 Linear Feet	\$	\$
Segment 5: Harrison Creek 3,172 Linear Feet	\$	\$
Beaver Dam Creek 36,977 Linear Feet	\$	\$
<b><u>Total Bid Price for the Whole Job:</u></b>		\$

**ATTACHMENT E: MAPS**

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# Upper Town of Linden Drainage

Date: 2/22/2024

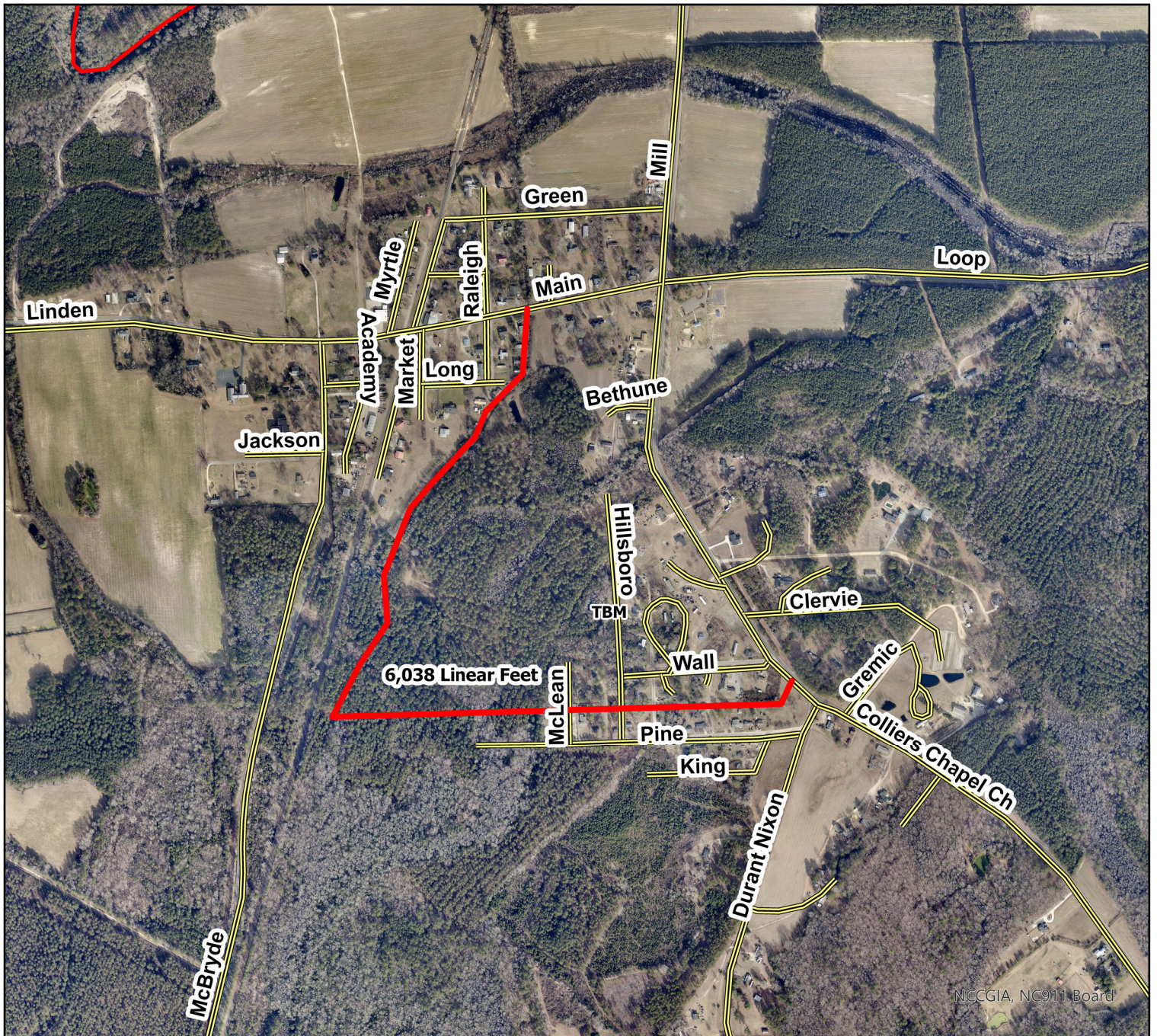
Customer(s): Cumberland SWCD

Field Office: Fayetteville Field Office

District: Cumberland Soil and Water Conservation District



Linear Footage: 6,038

Assisted By: Mitchell Miller - Soil Conservationist

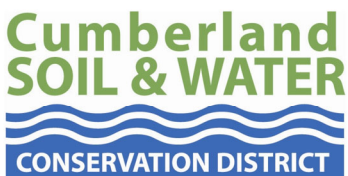


NCCGIA, NC911 Board

## Legend

-  Cumberland Roads
-  Upper Town of Linden Drainage

GPS Coordinates  
Longitude: 78.7492702°W  
Latitude: 35.2482510°N



# Unnamed Tributary to Cape Fear Map

Date: 12/2/2022

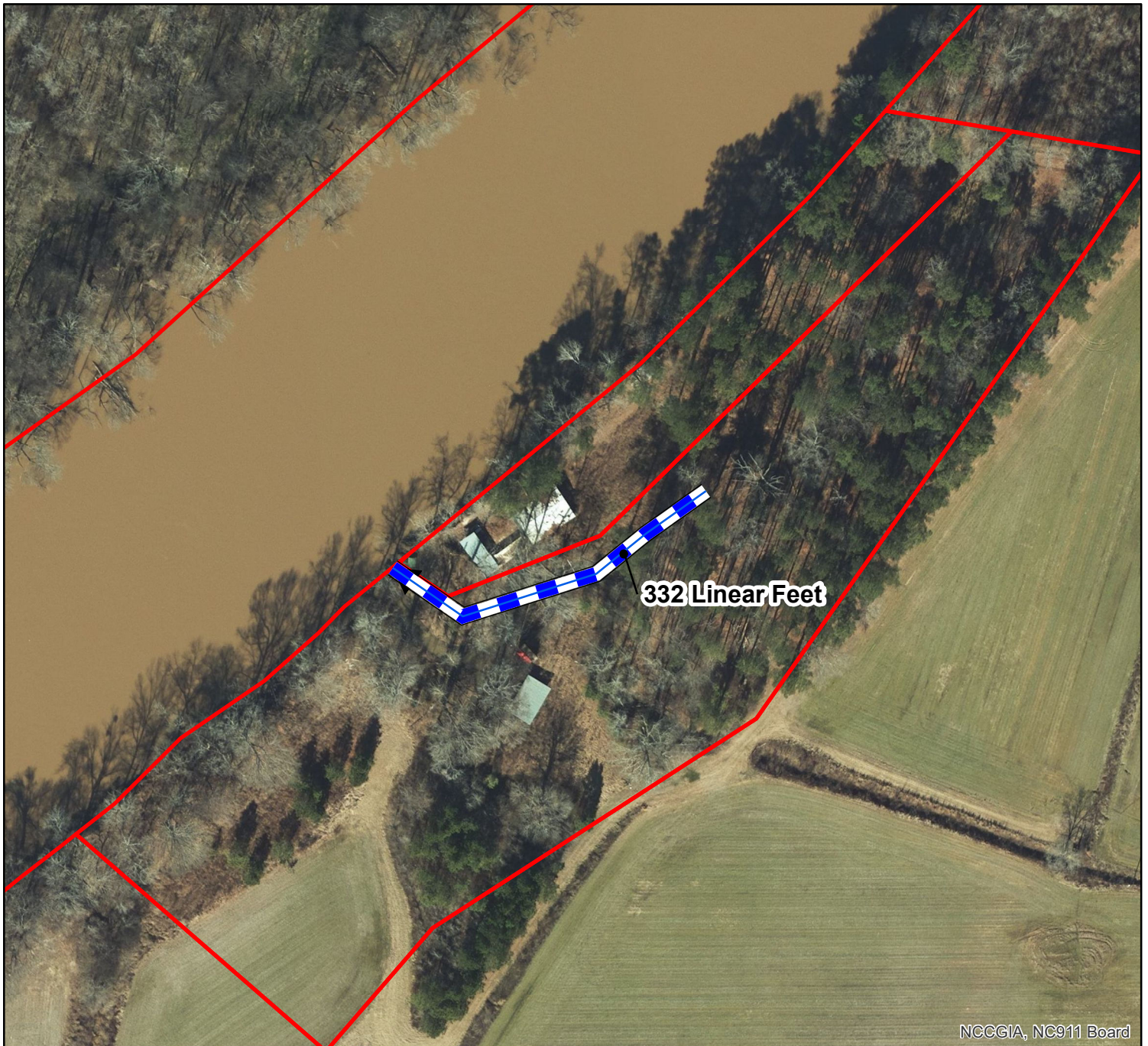
Customer(s): Cumberland County

Field Office: Fayetteville Field Office

District: Cumberland Soil and Water Conservation District



Actual Linear Footage: 332 Feet

Assisted By: Colin Hall- Technician

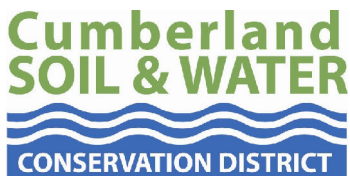


1 inch = 134 feet

## Legend

-  Riverstone Landing Unnamed Tributary to Cape Fear
-  Cumberland Roads

GPS Coordinates:  
Latitude: 34.909786  
Longitude: -78.808882



# Unnamed Tributary Rockfish Creek Map

Date: 12/2/2022

Customer(s): Cumberland County

Field Office: Fayetteville Field Office

District: Cumberland Soil and Water Conservation District



Approximate Linear Feet: 1500 Feet

Assisted By: Colin Hall- Technician

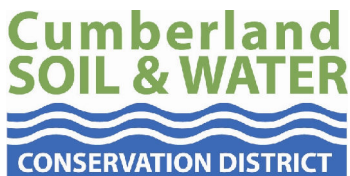


1 inch = 184 feet

## Legend

-  Clearing and Snagging
-  Cumberland Roads

GPS Coordinates:  
Latitude: 34.947931  
Longitude: -78.861473



# Harrison Creek Segment 5

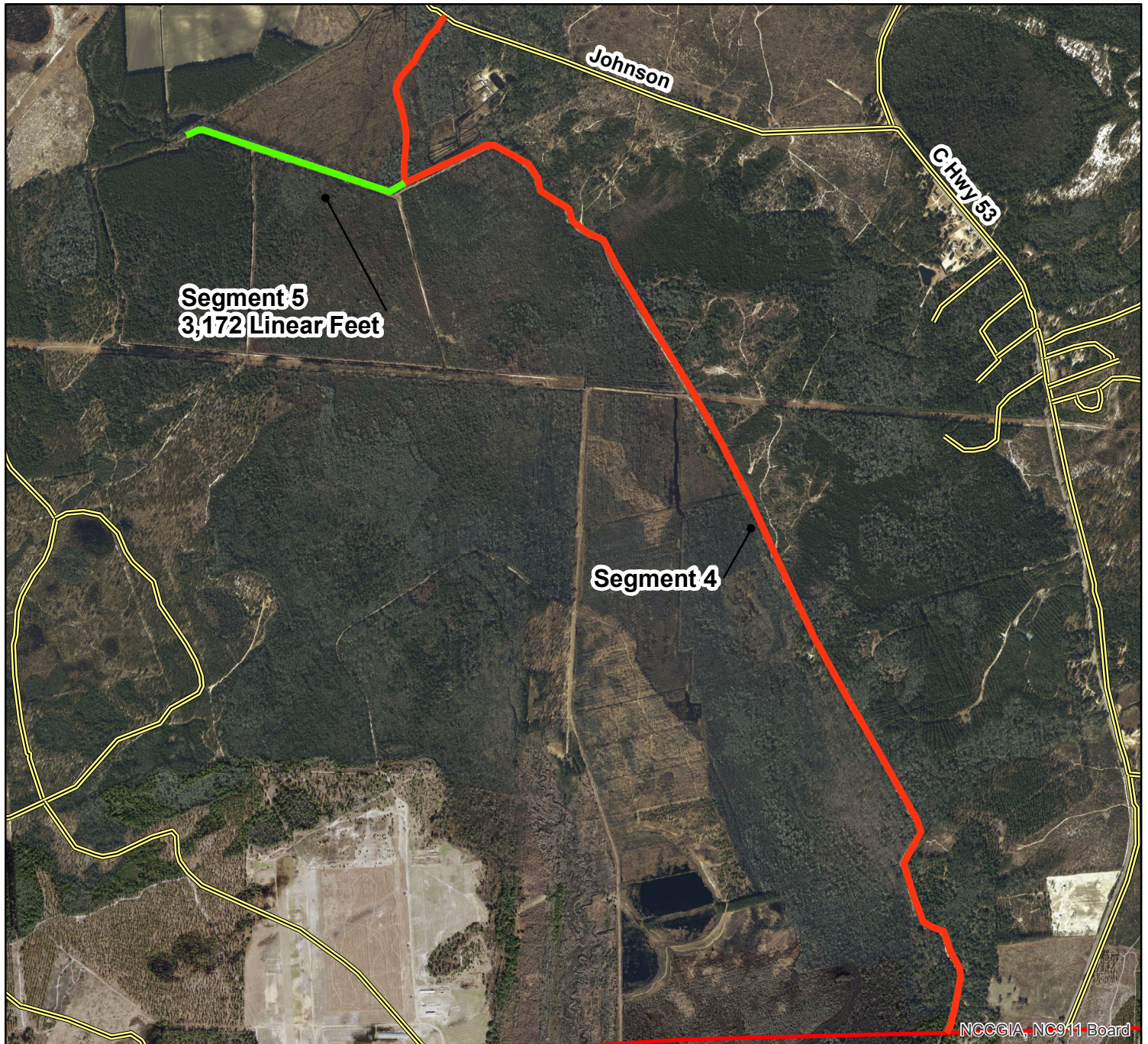
Date: 5/30/2023

Field Office: Fayetteville Field Office

District: Cumberland Soil and Water Conservation District




Approximate Linear Footage: 3,172

Assisted By: Mitchell Miller - Soil Conservationist



1 inch = 2,000 feet

### Legend

-  Harrison Creek Segment 5
-  Harrison Creek Segment 4
-  Cumberland Roads

GPS Coordinates:  
Latitude: 34.883089  
Longitude: -78.761522



# Beaver Dam Creek Map

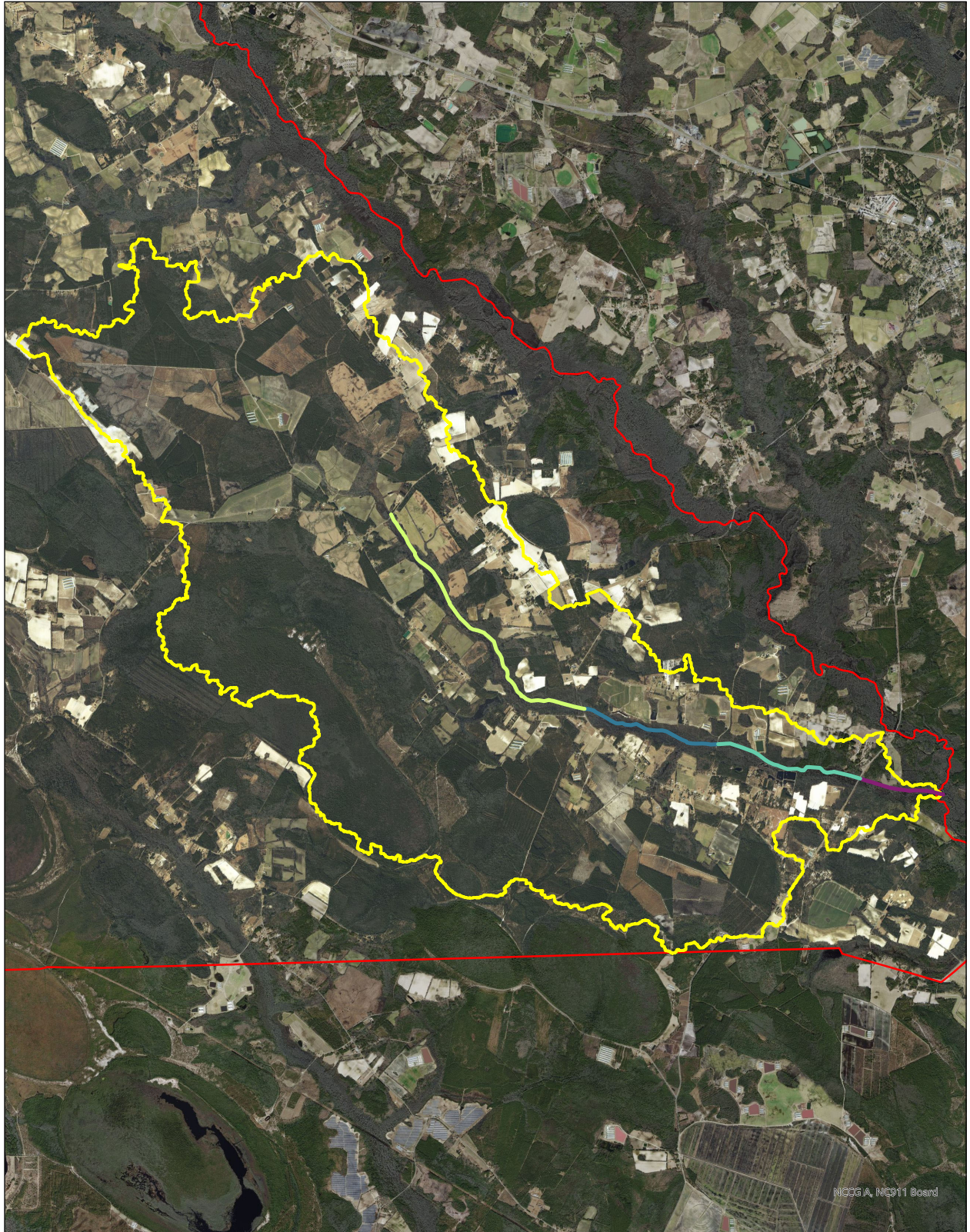
02/22/2024

District: Cumberland Soil and Water Conservation District

Field Office: Fayetteville Field Office

Linear Feet: 36,977

Assisted By: Colin Hall- Soil and Water Technician



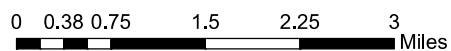
1 inch = 1.5 miles



### Legend

- Spencer Road to Hwy 210
- Manly Smith Road to Hwy 242
- Hwy 242 to South River
- Hwy 210 to Manly Smith Road
- Beaver Dam Creek Watershed
- County Boundary

GPS Coordinates:  
Latitude: 34.9011151°N  
Longitude: -78.6051316°W



**ATTACHMENT F: GUIDES**

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**Natural Resources Conservation Service**  
**CONSERVATION PRACTICE STANDARD**  
**CLEARING AND SNAGGING**

**Code 326**

**(ft)**

**DEFINITION**

Removal of vegetation along the bank (clearing) and selective removal of snags, drifts, or other obstructions (snagging) from natural or improved channels and streams.

**PURPOSE**

Reduce risks to agricultural resources or civil infrastructure by removing obstructions that hinder channel flow or sediment transport to—

- Restore flow capacity and direction.
- Prevent excessive bank erosion by eddies or redirection of flow.
- Reduce the undesirable formation of bars.
- Minimize blockages by debris and ice.

**CONDITIONS WHERE PRACTICE APPLIES**

Any natural or improved channel where the removal of vegetation, trees, brush, and other obstructions is needed to accomplish one or more of the listed purposes.

**CRITERIA**

Notify landowner and/or contractor of responsibility to locate all buried utilities in the project area, including drainage tile and other structural measures. The landowner is also required to obtain all necessary permits for project installation prior to construction.

The design must address all modified flow conditions caused by clearing and snagging.

**Capacity**

Determine the capacity of the channel, both before and after modification, using National Engineering Handbook (NEH) Part 654, Stream Restoration Design, Chapter 6, Stream Hydraulics. Select a value of Manning's "n" roughness coefficient to determine channel capacity after modification that reflects the degree of natural changes and maintenance expected to occur in future years.

**Location**

Include the perimeter and flow area of the channel in the area to be cleared and snagged. Trees on the bank that are leaning over or other objects that may fall into the channel may be included.

Clearing and snagging may also be used for other areas, such as temporary disposal areas or travelways, required for implementation of this practice.

**Stability**

Clearing and snagging activities may affect channel stability. The effect on downstream and upstream reaches due to the removal of obstructions must be analyzed using appropriate stream and channel geomorphologic procedures. Avoid or mitigate activities that negatively affect stability.

**Debris Disposal**

Remove cleared and snagged material from the floodplain or deposit in areas or in a manner that will not significantly affect the flow capacity of the floodplain. Designate locations to dispose of any garbage encountered during clearing and snagging operations; such as construction materials, metal, rubber, glass, and plastic.

**Vegetation**

Restore all areas denuded and/or disturbed during clearing and snag removal by planting vegetation, unless the disturbance is minimal and conditions are highly conducive for natural regeneration of vegetation. Use native vegetation where practical. Vegetation established as part of this practice should include ecologically suitable species obtained from local sources wherever practical.

Minimize disturbance of wetlands, riparian areas, and fish and wildlife habitat sites and avoid disturbance where possible.

The establishment of vegetation on cleared and snagged areas will be in accordance with the criteria contained within Conservation Practice Standard (CPS) Critical Area Planting (Code 342).

**CONSIDERATIONS**

Debris in stream systems affects the physical characteristics of the stream as well as the diversity and abundance of its aquatic organisms. Fisheries and/or aquatic biologists can assist in evaluating and incorporating measures to improve aquatic and riparian-wetland habitat:

Incorporate enhancements for fish and wildlife values as needed and practical. Special attention should be given to landscape aesthetics and to protecting and maintaining key shade, food, and den trees. Use CPS Stream Habitat Improvement and Management (Code 395).

Retain or replace habitat-forming elements that provide cover, food, pools, and water turbulence, to the extent possible.

Root balls of fallen trees that are securely anchored in the channel or naturally formed logjams may provide fish habitat and/or stability. The effects of these items must be included in the channel capacity hydraulic analysis. Existing root structure and stumps firmly within the soil should remain to help stabilize the soil and facilitate resprouting of woody vegetation.

Incorporate existing onsite woody debris into the design to help stabilize banks, modify channel flow, provide anchorage and food for invertebrates, and provide habitat and cover for fish. Note that woody debris should be securely fastened as dislodged woody debris may be a risk to downstream structures such as bridges, dams, or other civil works. Use NEH Part 654, Stream Restoration Design Technical Supplement 14E, for determining the forces acting on woody debris, and the necessary anchoring.

Erosion rates decline as a percentage of vegetative roots in a streambank increases. Selection of appropriate riparian vegetation will increase the streambank's ability to resist future erosion.

Clearing and snagging activity may resuspend sediments in the flow. Consider treatments that promote beneficial sediment deposition and the filtering of sediment and dissolved substances.

During construction, woody materials may float downstream and cause additional snags and drifts. Incorporate measures and practices, as needed and practical to address this concern.

Schedule in-stream work to avoid environmentally sensitive periods such as spawning and migration to the fullest extent possible.

Incorporate measures and practices, as needed and practical, to address modified flow conditions such as—

- A lowered hydraulic gradient which may drain adjacent flood plains more quickly.
- Decreased groundwater recharge in water-losing streams resulting from reduced residence time in the channel and adjacent floodplains.

Ground-disturbing activities associated with this practice have the potential to adversely affect protected plant species and may encourage the establishment of exotic and/or nonnative species. Quickly revegetating disturbed areas can minimize the introduction of nonnative species.

Temporary erosion and sediment best management practices can be used to minimize the delivery of fine sediment to adjacent and downstream reaches.

Incorporate construction methods that enhance fish and wildlife values as needed and practical to include—

- Use hand-operated equipment, water-based equipment, or small equipment to minimize soil, water, and other resource disturbances.
- Operate heavy machinery from atop adjacent streambanks to the fullest extent possible.
- After the material has been removed from streambank locations, limit machinery access to riparian areas to minimize damage to stream habitat.

## **PLANS AND SPECIFICATIONS**

Prepare plans and specifications for clearing and snagging that describe the requirements for applying the practice to achieve its intended purpose(s).

As a minimum, include, as applicable, the following items in the plans and specifications:

- Map of overall area including limits of clearing and snagging required.
- Location of ingress and egress to the site.
- Description of works of improvement, extent of removal, and manner of disposal.
- Location of disposal areas or location of areas off limits for disposal of debris.
- Requirements for disposal area to address final dressing, stabilization, drainage, and vegetation.
- Location and description of trees or woody vegetation to be left undisturbed.
- Method of debris disposal.
- Manner and sequence of construction operations so that impacts on the environment will be minimized.
- Erosion control measures, as applicable.
- Vegetative requirements for areas denuded and disturbed, as applicable.

Carry out all operations in a safe and skillful manner. Observe all safety and health regulations and use appropriate safety measures.

## **OPERATION AND MAINTENANCE**

Provide an operation and maintenance plan to the landowner/user to maintain channel capacity and vegetative cover. Items to include are—

- Assess the area after each major storm event for downed trees and debris accumulation. Remove or relocate and anchor downed trees and debris accumulations that are causing bank erosion problems as soon as possible.

- Periodically inspect the area for signs of streambank undermining or instability. Remove any debris accumulations that may contribute to the instability and closely monitor the area.
- Clear any vegetation and/or debris that block side drainage structures and channels.

#### **REFERENCES**

USDA-NRCS. 2007. National Engineering Handbook, Part 654, Stream Restoration Design. Washington, D.C.

USDA-NRCS. 2009. National Biology Handbook, Part 614, Stream Visual Assessment Protocol Version 2. Washington, D.C.

APPENDIX B: BEST MANAGEMENT PRACTICES (BMPs) FOR  
SELECTIVE CLEARING AND SNAGGING\*

Trees and brush that shade streams and stabilize the banks should not be disturbed. In new channel construction, existing trees and brush should be left in place along the tops of banks. No stream work, including bank clearing and excavation or removal of materials, "snags," or other channel obstructions, should be allowed except at specific locations where significant blockages in streams occur. Channel excavation and snag removal should be accomplished with the minimum streambank clearing needed to provide access to the stream and should not be undertaken unless it is absolutely necessary. The following BMPs prescribe the manner in which snag removal and stream channel clearing should be undertaken:

a. Practices for snagging.

- (1) Logjam removal. Only those log accumulations that are obstructing flows to a degree that results in flooding or significant ponding or sediment deposition should be removed.
- (2) Removal of other logs.
  - Affixed logs. Isolated or single logs should not be disturbed if they are embedded, jammed, rooted, or waterlogged in the channel or the floodplain, if they are not subject to displacement by current, and if they are not presently blocking flows. Generally, embedded logs that are parallel to the channel are not considered to cause blockage problems and should not be removed. Affixed logs that are crossways to the flow of waters in the channel and are trapping debris to the extent that could result in significant flooding or sedimentation may be removed.
  - Free logs. All logs that are not rooted, embedded, jammed, or sufficiently waterlogged to resist movement by stream currents may be removed from the channel.
- (3) Protecting riparian vegetation. No rooted trees, whether alive or dead, should be cut unless:
  - They are leaning over the channel at an angle greater than 30 deg of vertical and they are dead or severely undercut, or damaged root systems are relying upon adjacent vegetation for support and it appears they will fall into the channel within 1 year and create blockage to flows; or
  - Their removal from the floodplain is required to secure access for equipment to a point where a significant blockage has been selected for removal.

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\* Source: State of New York (1986). The citation for this reference is included with those following the main text of this report.

Trees selected for removal should be cut well above the base, leaving the stump and roots undisturbed. Procedures for removing the felled portion should be the same as for other logs as discussed below.

(4) Equipment for log removal. First consideration should be given to the use of hand-operated equipment to remove log accumulations. When the use of hand-operated equipment is infeasible, vehicular equipment should be used in accordance with the following guidelines:

- Water-based equipment (e.g., a crane or winch mounted on a small, shallow draft barge or other vessel) should be used for removing material from the stream. A small crawler tractor with winch or similar equipment may be used to remove debris from the channel to selected disposal points.
- When stream conditions are inadequate for the use of water-based equipment, the smallest feasible equipment with tracking systems that minimize ground disturbance should be specified for use. Larger equipment may be employed from nonwooded areas where cables could be stretched down to the channel to drag out materials to be removed.
- Access routes for equipment should be selected to minimize disturbance to existing floodplain vegetation, particularly in the riparian zone. Equipment should be selected which will require little or no tree removal in forested areas.

(5) Log disposal practices. All logs or trees designated for removal from a stream or floodplain should be removed or secured in such a manner as to preclude their reentry into the channel by floodwaters. Generally, they should be transported well away from the channel and floodway and positioned parallel to the stream channel so as to reduce flood flow impediment. When large numbers of logs are removed at one location (e.g., logjams), their use for firewood may be most appropriate. Burying of removed material should not be permitted.

b. Practices for stream channel clearing.

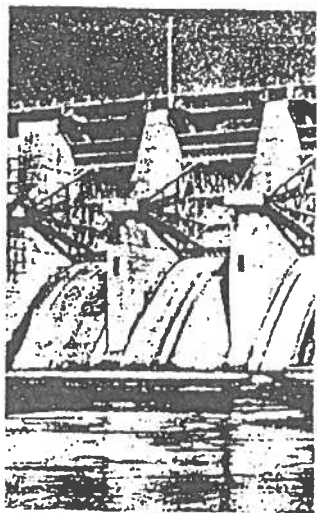
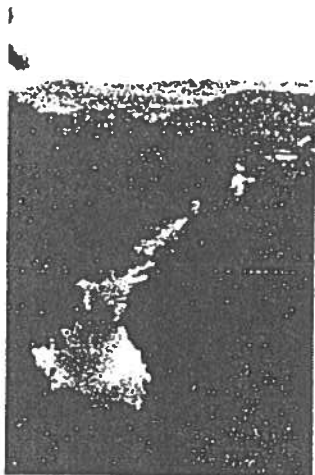
- (1) Small debris accumulation. Small debris accumulations should be left undisturbed unless they are collected around a log or blockage that should be removed. (Small debris accumulations will not constitute a significant blockage to flows. Upon removal of logs and other blockages under these BMPs and the following completion of the project, the changed water velocities will remove and disperse these small debris accumulations so that no significant blockage of water flows will result.)
- (2) Removal of sediment and soils. Major sediment plugs in the channel may be removed if they are presently blocking the channel to a degree that results in ponding and dispersed overland flow through poorly defined or nonexistent channels and, in the opinion of appropriate experts, will not be removed by natural stream or river forces after logs and other obstructions have been removed.

(3) Disposal of spoil material. Conventional excavating equipment may be required for sediment blockages. This equipment should be employed in a manner which will minimize environmental damages as follows:

- Access routes for equipment should be selected to minimize disturbance to existing floodplain vegetation, particularly in the riparian zone.
- Material disposal and necessary tree removal should be limited to one side of the original channel at any given location.
- To the maximum extent possible, excavating equipment should not be employed in the stream channel bed.
- Where feasible, excavated materials should be removed from the floodplain. If floodplain disposal is the only feasible alternative, the spoil material should be placed on the highest practical elevation and no material should be placed in any tributary or distributary channels which provide for ingress and egress of waters to and from the floodplain.
- No continuous spoil pile should be created. It is suggested that no pile exceed 50 ft in length or width and a gap of equal or greater length should be left between adjacent spoil piles.
- Spoil piles should be constructed as high as sediment properties allow.
- The placement of spoil material around the bases of mature trees should be avoided where possible.
- All disturbed areas should be reseeded or replanted with plant species which will stabilize soils and benefit fish and wildlife. Revegetation should be in accordance with County Soil and Water Conservation District recommendations.
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**US Army Corps  
of Engineers**



**ENVIRONMENTAL IMPACT  
RESEARCH PROGRAM**

TECHNICAL REPORT EL-92-35

**INCREMENTAL EFFECTS OF LARGE WOODY DEBRIS  
REMOVAL ON PHYSICAL AQUATIC HABITAT**

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## PART V: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Summary

LWD plays an important role as a component of aquatic habitat. Although LWD enters food webs as it decays, the major importance of debris lies in its structural characteristics and the way it influences channel flow patterns. Physical processes associated with debris in streams include the formation of pools and retention of fine sediment and organic matter.

Awareness of the adverse effects of complete LWD removal on channel stability and aquatic habitat has led to the development of guidelines for selective removal of LWD as a means of balancing habitat and conveyance objectives. These guidelines (Appendix A) involve the use of manual labor and small equipment to remove only the LWD that causes significant flow obstruction. Removal of bank vegetation and disturbance to stream habitats is minimized. Personnel within some Corps districts have already completed or are in the process of classifying the streams under their jurisdiction according to these guidelines. Use of these guidelines for project planning and design requires quantification of the hydraulic and environmental impacts of incremental LWD removal.

In this study, a simple method for quantifying LWD density and computing associated friction factors was developed and tested using data collected during an LWD removal project on the South Fork Obion River in western Tennessee. Physical conditions of both cleared and uncleared stream reaches were measured by collecting three types of data: LWD density, dye tracer tests (for computing reach mean hydraulic parameters), and physical habitat (depth, velocity, bed type, and cover) at selected transects. The LWD density was the important independent variable, while the dye tracer and physical habitat data were used to study macroscale and microscale effects of LWD, respectively. Macroinvertebrate samples were also collected at low flow conditions, and the results are presented in a companion report to this study (Payne and Miller in preparation).

### Conclusions

Removal of LWD from the study reach decreased near-bank-full friction factor by about one third. Impacts on physical aquatic habitat at base flow

were measurable and statistically significant, even though the Stream Obstruction Removal Guidelines (IAFWA 1983) were applied throughout project planning and implementation. Benefits of proposed LWD removal projects should be carefully analyzed in light of costs and environmental impacts. Findings of this study generally agreed with work by others in different types of streams. The simple procedure developed in this study for quantifying LWD density and its effect on channel resistance may be used for environmental impact assessment and hydraulic engineering analyses. Considerable refinement and site-specific adaptation may be in order, however. The method for prediction of channel roughness coefficients does not account for local losses because of bends or flow expansion and contraction at bridges, debris dams, or riffles.

#### Recommendations

To refine the methodology used in this study, additional data should be collected from two more stream LWD removal projects. Streams with higher LWD density and different types of bed sediment from that encountered in this study would be preferable. Physical data should be collected over a range of flows varying from normal low-flow to bank-full conditions. Concurrent biological data should be collected at base flow. Data should be collected to document preproject and postproject conditions. Investigation of additional methods of determining LWD density, such as using video recorders or low altitude aerial photography to count and measure the LWD formations, is recommended.



## Streamflow Rehabilitation Assistance Program

### Debris Removal & Processing Recommendations

**§ 139-65. Streamflow Rehabilitation Assistance Program**, the authorizing legislation for StRAP, states that *“The Commission shall ensure that debris removed from streams with funds provided under this Article are either removed from the 100-year floodplain or processed in such a manner that the debris would not pose a risk of blockage or significant impairment of normal streamflow during a subsequent flood event.”*

The Soil & Water Conservation Commission has determined that processing of debris may include any of the following activities:

- Chipping
- Cabling or strapping in a secured manner outside the immediate stream area (minimum of 30 ft. from top of the stream bank)
- Burning (Must comply with all required State Forest Service permits and only under appropriate Air Quality conditions)
- Other processing options approved by the Commission

#### **Removal from the floodplain**

- Debris removed from the stream can be hauled away from the floodplain. Debris can be loaded directly into a truck for removal or debris can be floated to a location appropriate for its removal from the stream or floodplain.
- Debris can be removed to a landfill (grantees should confirm that the landfill accepts woody debris), another property, or to another location on the same property as long as it is outside of the floodplain and landowner has granted permission for the debris to be deposited on the site.
- Equipment used for hauling debris from the floodplain should be used in a manner that minimizes the impact to the banks of the stream. Boat mounted equipment may be an effective option for accessing stream debris. Tracked or wheeled equipment should be kept out of the stream channel and may be employed from the bank by using a manipulator arm or cables to drag debris out of the stream channel.<sup>1</sup>
- If garbage (such as wooden construction materials) is contributing to blockages in the stream, it can be removed from the stream and disposed outside of the floodplain.

#### **Chipping or Burning Debris**

Debris can be left in the floodplain if it has been chipped or burned so that it does not pose a risk of contributing to future blockages if it is washed back into the stream. Wood chips can be left on site or hauled away.

- Wood chips can be placed on the floodplain starting at the top of the bank. Wood chips should not be placed below the top of the bank or in channels that drain from the floodplain into the stream.<sup>2</sup>

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<sup>1</sup> [NRCS Clearing and Snagging Code 326 Practice Standards](#)

<sup>2</sup> [USACE Best Management Practices for Selective Clearing and Snagging](#)

- Wheeled chippers and other equipment should be used in a manner that reduces impact to soil and vegetation.
- Wood chips should be distributed across the site in as thin a layer as practical to avoid inhibiting plant growth. Wood chips can be left in a pile at the landowner's request.
- Debris can be burned on site. The grantee/contractor is responsible for obtaining and possessing a valid burn permit (if applicable) and for following any other necessary laws or statutes related to burning.

### **Cabling/Strapping**

Cabling or strapping refers to the practice of anchoring logs and other woody debris in place so that it will not be washed back into the stream in subsequent flood events.

- Cabled/strapped debris should be set back at least 30 feet from the top of the stream bank.
- Woody debris cabled/strapped within the floodplain should be anchored in such a way that it will not significantly affect the flow capacity of the floodplain. Securing logs parallel to the direction of the stream flow can help reduce flood flow impediment.
- Cabling debris to an anchor will ensure woody debris will not be moved back into the stream channel during future flood events. The anchor point should be selected based on site-specific factors, such as availability of natural anchors and cost. Examples of anchors include live trees or soil anchors.
- **Live Trees-** Logs and debris may be cabled to live trees or fresh stumps. Fatal damage to live trees should be avoided. Wedging logs against the live tree before the cable/strap is attached will help ensure the attached log is as immobile as possible.
  - If a strap/cable is looped around a tree, leaving a small amount of slack in the loop around the live tree, and between the live tree and the log, may help protect the tree from girdling and prevent the cable from snapping if the anchored log shifts.
  - If stumps are used, the cable/strap should be secured in a way so that it will not slip off the top of the stump in future flood events.
- **Soil Anchors-** Soil anchors may be useful on sites with few live trees to serve as anchors or in other situations when live trees are not desirable as anchors. For technical guidance on use soil anchors, contractors should use refer to [\*NRCS Technical Supplement TS14E Soil Anchors.\*](#)
- **Cable Material:** A variety of cable, rope, or strap options can be used for securing large woody debris to an anchor point. Material with a break strength of approximately 1,700 pounds or higher should be used. A common example of an appropriate rope would be 1/4 inch braided nylon rope. Contractors should use thicker cables/ropes as necessary to sufficiently secure debris.
- Placing debris as close to the anchor as possible will reduce the amount of rope/cable needed and reduce the risk of landowners tripping over the cable.
- Logs can be anchored individually or in groups. If groups of logs & branches are anchored together, wrapping the cable or rope around the entire bundle of debris can secure the bundle to the anchor.