

Figure 4: Example Conservation Buffer Site Search Scope

INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is currently proposing several bridge replacement projects in the Mitchell-Yancey County area, specifically bridge projects B-1443 & B-2848. As part of the mitigation strategy to help compensate for expected impacts caused by these projects, the NCDOT proposes to evaluate the North Toe River drainage basin for potential buffer restoration, enhancement, and preservation conservation sites.

Private Engineering/Consulting Firm proposes a preliminary riparian buffer study for four identified potential riparian buffer conservation sites within the River drainage basin in _____ and _____ Counties, NC.

- 1) _____ Property
- 2) _____ *et al.* Properties
- 3) _____ Property
- 4) _____ Property

Based on tax maps and preliminary investigations, these sites may include riparian buffer conservation potential along waterway lengths ranging from 1,200 to 25,800 linear feet of riparian buffer restoration, enhancement, and/or preservation.

In an effort to determine site suitability and landowner willingness, the project is expected to be subdivided into two phases: Agency and Landowner Coordination (Phase 1) and Fatal Flaw Study (Phase 2). The scope of services for Phase 2 will depend upon the results of Phase 1 planning. Agency and landowner coordination (Phase 1) will entail the generation of a mitigation strategy for use in discussion of the project with agency personnel and landowners. The primary goal of the Phase 1 study is to obtain an option for agreement within the property. Phase 2 will entail the preparation of a feasibility/fatal flaw document which evaluates potential off-site impacts, examines Threatened and Endangered species issues, coordinates with the State Historic Preservation Office, conducts a hazardous materials database review, and evaluates alternatives for mitigation.

The project is intended to include the following activities:

PHASE 1: AGENCY AND LANDOWNER COORDINATION

- 1) Project Coordination/Administration
- 2) Data Collection
- 3) In-field Site Visits
- 4) Landowner Discussions
- 5) Agency Packet Preparation and Site Visit

PHASE 2: FATAL FLAW STUDY

- 6) Hazardous Materials Screening
- 7) Federal Protected Species Review
- 8) Cultural Resources Review
- 9) Riparian Buffer Study Final Report

Private Engineering/Consulting Firm will undertake preliminary riparian buffer studies on the four sites to generally assess the potential for conservation and identify approximate conservation boundaries. Subsequently, Private Engineering/Consulting Firm will assist NCDOT with landowner contact concerning options/conservation easements or purchase of a property within the boundaries of an identified property. Future conceptual and/or detailed conservation studies/plans may be performed after land acquisition/protection tasks have been completed by NCDOT.

These riparian buffer studies will utilize a relatively rapid assessment procedure based primarily on professional judgement and visual observations in the field. The study represents an effort designed to provide an idea as to landowner interest, provide conceptual drawings to the landowner, show potential conservation easement boundaries, and give additional assurance that the site may provide mitigation credit. The evaluation will

consist primarily of field observations and best professional judgement concerning issues such as impacts to adjacent properties, restoration versus enhancement versus preservation areas, and potential modifications for conservation use.

PHASE 1: AGENCY AND LANDOWNER COORDINATION

1.0 Project Coordination/Meetings

This project will be administered and performed by the Cary office of Private Engineering/Consulting Firm. Mr./Ms. _____ will serve as project manager. Administrative tasks (monthly reports, phone calls, letters, etc.) are included under this task. Private Engineering/Consulting Firm personnel will be available for phone consultations with NCDOT, as needed. Two office meetings (in Raleigh) and two on-site review meetings with NCDOT personnel and regulatory agencies are included in this scope of work.

2.0 Data Collection

Private Engineering/Consulting Firm will review available information including but not limited to aerial photographs, property boundaries, NWI mapping, NRCS soils surveys, and available baseline mapping. Information gathered will be used in the final report.

3.0 In-field Site Visits

Upon completion of the data collection, Private Engineering/Consulting Firm personnel will perform in-field site visits for each site. Site visits will be conducted to review the general environmental settings including existing plant communities, Natural Resource Conservation Service (NRCS) soil map units, topography, and existing land use. A conservation boundary will be determined and located utilizing Global Positioning Technology (GPS) with reported sub-meter accuracy. The site boundary will be overlain on aerial photography to be utilized in landowner negotiations of a conservation easement; however survey grade plot information for recordation of potential easement boundaries will not be included in this scope of work. The data will be provided to NCDOT for property acquisition use. Private Engineering/Consulting Firm biologists will also locate and quantitatively describe plant community composition within a reference forest ecosystem (RFEs). The RFE's will be used to model restoration efforts of the riparian buffer site in relation to soils, hydrology, and vegetation.

Jurisdictional wetland mapping is not included in this scope of service. However, the location and acreage of potential wetland restoration/enhancement areas will be approximated on available mapping, based primarily on observed surface hydrology conditions, vegetation patterns, NRCS soil mapping, and drainage structures. This information will be provided to NCDOT. No soil sampling or quantitative measurements are proposed at the current time to support the identification of potential wetland mitigation areas.

4.0 Landowner Discussions

Private Engineering/Consulting Firm will assist with landowner negotiations, including a preliminary contact meeting and initial interviews. Subsequently, Private Engineering/Consulting Firm will be available for four on-site meetings with landowners and NCDOT personnel to walk the conservation area and to discuss technical aspects of riparian buffer conservation as related to existing land uses. If applicable, options for a conservation easement will be secured upon presentation of the basic conservation plan to the landowner.

5.0 Agency Packet Preparation and Site Visit

Private Engineering/Consulting Firm will prepare an agency packet containing a description of conservation strategies proposed at each site. The packet is expected to contain a brief site writeup, proposed conservation options, and a graphical depiction of the conservation plan. The agency packet is expected to be utilized during regulatory agency meetings held at the site. Riparian buffer conservation options outlined in the agency packet may be modified during the regulatory meetings. Modifications are expected to be addressed during the Phase 2 of the project.

PHASE 2: FATAL FLAW STUDY

6.0 Hazardous Materials Screening

Private Engineering/Consulting Firm will work with NCDOT to obtain computerized mapping of possible contaminated sites on file with NCDENR (it is assumed this information is available and can be generated by NCDOT in a map format). In addition, Private Engineering/Consulting Firm will check the following data bases:

Federal Agencies:

CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Act (Federal List of Superfund Sites)

NPL – National Priority List of Superfund Sites

FINDS – U.S. Environmental Protection Agency (EPA) Master List

ERNS – National Spill Report

RCRIS – Resource Conservation and Recovery Information System

PCS – Permit Compliance System (National Pollution Discharge Elimination System)

TRIS – Toxic Release Inventory System

North Carolina Department of Health, Environment, and Natural Resources:

Solid Waste Section:

Open dumps and Solid Waste Facilities Directory

Superfund Section:

Federal Superfund Sites List

State Superfund Sites List

Hazardous Waste Section:

Hazardous Waste Generators Inventory (Large Quantity and Small Quantity)

Treatment, Storage, Disposal Facilities Inventory

Division of Environmental Management:

UST Registrations

UST Leak/Pollution Incident List/Files

Spill Incident Files

Central Files – Air and Water Permitting

Regional Office Files (As Applicable)

Private Engineering/Consulting Firm will visit the riparian buffer conservation areas in an effort to assess and confirm areas of potential concern including: 1) evidence of past or present use or storage of hazardous or regulated materials and/or waste; 2) evaluating the presence of potentially illicit dumping of solid or hazardous waste; 3) inspect streams, ponds, or other surface water features for signs of degradation; 4) inspect soils and vegetation at select sample/entry points for signs of staining and/or stress; 5) verify topographic features. Additional field work may be necessary after site selection is finalized to quantify, or fully determine, the extent of potential contamination at a particular location. The influence of potential hazardous materials on conservation potential will also be evaluated.

7.0 Federal Protected Species Review

Private Engineering/Consulting Firm will review N.C. Natural Heritage file records and U.S. Fish and Wildlife listings for known presence of protected species. Evaluations to determine the presence or absence of protected species will involve a review of the literature, a check of agency record, and a field reconnaissance to determine habitat potential. This effort will not include extensive field surveys, but will be limited to an evaluation of habitat potential and obvious sightings in the field.

8.0 Cultural Resources Review

Private Engineering/Consulting Firm will review information on file with the State Historic Preservation Offices (SHPO) N.C. Department of Cultural Resources (the Office of State Archaeology [OSA] and the Survey & Planning Branch), to determine presence or absence of cultural resource sites within the property. Any additional effort associated with detailed cultural resource investigations is beyond this scope of service. The purpose of this task is to identify critical natural and cultural resource features which may be affected by riparian buffer conservation activities.

9.0 Riparian Buffer Final Report

Private Engineering/Consulting Firm will prepare a report incorporating collected information on the four riparian buffer sites. Private Engineering/Consulting Firm will discuss site suitability for riparian buffer mitigation based on observations generated by the riparian buffer study and discussions from interagency meetings. Significant issues of concern associated with riparian buffer potential will be included, along with recommendations for future mitigation studies. For suitable sites, the report will include mapping of potential riparian buffer conservation area boundaries on tax maps or other available sources.