



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: June 7, 2006
Comment Deadline: July 7, 2006
Corps Action ID #: 200620159

The Wilmington District, Corps of Engineers (Corps) has received an application from the Western Wake Regional Wastewater Management Facilities Project Partners, which includes the Towns of Apex, Cary, Holly Springs, and Morrisville, North Carolina. The Partners are seeking Department of the Army authorization to **temporarily** impact an estimated 22.4 acres of forested wetlands, 4300 linear feet of streams, and a 60-foot by 400-foot area within the Cape Fear River; and **permanently** impact an estimated 12.9 acres of wetlands, 1,435 linear feet of perennial streams and a 18-foot by 400-foot area within the Cape Fear River associated with the construction of the Western Wake Regional Wastewater Management Facilities which includes a water reclamation facility, raw and effluent transmission lines, pumping stations, and an outfall structure in Wake and Chatham, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at www.saw.usace.army.mil/wetlands

Applicant: Western Wake Regional Wastewater Management
Facilities Project Partners
c/o Mr. Kim Fisher
Town of Cary
420 James Jackson Avenue
Cary, North Carolina 27513

Authority

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of Section 404 of the Clean Water Act.

Location

There are five main portions to this project: the Western Wake Water Reclamation Facility (WRF); the West Cary Pump Station; Beaver Creek Pump Station; the outfall structure; and several miles of effluent/raw water force main and gravity fed transmission routes.

The proposed location for the Western Wake Water Reclamation Facility (WRF) is a 235 acre site between Old US 1 and US 1 in the New Hill Township. The northeast corner of this site is approximately 0.2 miles west of the intersection between New Hill Holeman Road and Old US 1, Wake County, North Carolina. The site contains unnamed stream channels and adjacent wetlands which drain to White Oak Creek, a tributary to the Cape Fear River (Latitude and Longitude in Decidegrees: 35.68 N; 78.94 W).

The West Cary Pump Station is an existing, permitted facility providing the Town of Cary with needed wastewater service. It is located on Green Level West Road approximately 0.5 miles west of the intersection between Green Level Church Road and Green Level West Road, Wake County, North Carolina. The project partners do not anticipate having to expand the footprint of this facility for its conversion into the Western Wake Regional Wastewater Management Facilities.

Two alternative sites are considered for the Beaver Creek Pump Station. Each site is located within an area bounded by Richardson Road, the American Tobacco Trail, Olive Chapel Road, and a line running east to west 0.3 miles south of the intersection between Olive Chapel Road and Richardson Road connecting perpendicular to the American Tobacco Trail, Wake County, North Carolina. No aquatic impacts are proposed for either site.

The proposed location for the outfall structure is within the Cape Fear River below Buckhorn dam, approximately 2.0 miles south of the intersection between NC 42 and Buckhorn Road, Chatham County, North Carolina (Latitude and Longitude in Decidegrees: 35.54 N; 78.99 W).

The route of the transmission line begins at the West Cary Pump Station and travels west along Green Level West Road to Wimberly Road. It then turns south and follows Wimberly Road to Green Level Church Road. The transmission line travels a short distance west along Green Level Church road and then continues due south cross country (crosses under US 64) and enters the Reedy Branch Gravity Sewer which follows Reedy Branch to a point due north of Richardson Road. It then continues due south and runs along Richardson Road to the Beaver Creek Pump Station. The Beaver Creek Gravity Line would run parallel to Beaver Creek, collecting raw wastewater from the western and eastern sides of the wastewater transmission lines and also connect to the Beaver Creek Pump Station.

The transmission line leaves the Beaver Creek Pump Station follows Richardson Road to a point and then continues cross country to Olive Humie Road, then turns west and follows Olive Humie Road to New-Hill Olive Chapel Road before turning south and following New-Hill Olive Chapel Road to the Western Wake Water Reclamation Facility site. The majority of the Utley Creek Effluent Force Main would follow exiting rights-of-way on New Hill Road and the proposed Ballentine Road before entering the southern edge of the Western Wake Water Reclamation Facility.

The effluent line leaves Western Wake Water Reclamation Facility and travels due west along the Dixie Pipeline right-of-way to Christian Chapel Church Road. The effluent line then follows Christian Chapel Church Road to NC 42 and then enters a powerline right-of-way to Buckhorn Road. This line follows Buckhorn Road and ends in the Cape Fear River.

As noted above, in general the force main lines would be installed adjacent to existing public roads and/or existing natural gas and electrical corridors. Maps are attached which show the applicants' preferred route for the lines, as described above. The preferred route utilizes "Alternative A, Alternative 1 and Alternative a" whenever an alternative is depicted. The alternative routes are also depicted on the attached maps and their impact justification is provided later in this notice.

The gravity sewer lines are proposed for installation within FEMA regulated 100-year floodplain rather than the road rights-of-way. One line will connect the Town of Apex to the Beaver Creek Pump Station and will run approximately 17,000 feet and parallel Beaver Creek. The second line, the Reedy Branch Gravity Line, will connect the West Cary Pump Station to the Beaver Creek Pump Station and run parallel to Reedy Branch.

Existing Site Conditions

The existing site conditions for the Water Reclamation Facility is 235 acres of contiguous land containing 10 perennial and 2 intermittent tributaries to White Oak Creek, 3.8 acres of jurisdictional forested wetlands, and 2.1 acres of open water ponds. The forested wetlands are comprised of tag alders (*Alnus serrulata*), button bush (*Cephalanthus occidentalis*), sycamore (*Plantanus occidentalis*) and black gum (*Nyssa sylvatica*). The uplands contain a majority of pine and hardwood mix tree species including loblolly (*Pinus taeda*), slash (*P. elliottii*), and longleaf pine (*P. palustris*), White Oak (*Quercus alba*), southern red oak (*Q. alcate*), post oak (*Q. stella*), sweetgum (*Liquidambar styraciflua*), and yellow poplar (*Liriodendron tulipifera*). A smaller percentage of the uplands are composed of fallow pasture grass.

The West Cary Pump Station is an existing permitted facility with no proposed changes to the footprint.

The alternatives considered for the Beaver Creek Pump Station contain a majority of managed herbaceous cover and mixed hardwoods and pines as described above. No impacts are expected to aquatic resources at either site.

The majority of the force main transmission lines are expected to run along road rights-of-way and/or utility corridors. The gravity sewer lines will be located within the FEMA 100-year floodplain.

The outfall structure will be located within the Cape Fear River below Buckhorn Dam. This area of the River is classified as WS-IV and WS-V to protect drinking water and industrial water supplies.

A U.S. Army Corps of Engineers jurisdictional determination has been completed for the Western Wake Water Reclamation Facility site and has verified the aquatic features listed above. However, wetland and stream features existing on the pumping stations, transmission lines, and outfall structure sites have been estimated using National Wetland Inventory maps and GIS programs. A complete U.S. Army Corps of Engineers jurisdictional determination will be completed on these areas.

Applicant's Stated Purpose

The Project is being implemented by the Partners to provide wastewater service for planned growth and development and to comply with regulatory mandates issued by the North Carolina Environmental Management Commission (EMC) and the Department of Environment and Natural Resources (NC DENR). The Towns of Apex, Cary and Morrisville obtain their drinking water from Jordan Lake in the Cape Fear River Basin and discharge treated effluent to locations within the Neuse River Basin. Obtaining water from one basin and discharging it to another river basin is known as an interbasin transfer (IBT), and it requires a permit from the EMC. In July 2001, the EMC granted the communities their IBT certificate but placed a requirement in it to return wastewater to the Cape Fear River Basin by January 1, 2011. Thus, these communities must construct wastewater transmission and disposal facilities in order to comply with the terms and conditions of the IBT certificate issued by the EMC.

The Town of Holly Springs currently discharges wastewater into Utley Creek of the Cape Fear River Basin. The North Carolina Division of Water Quality desires to limit the amount of effluent discharged to Utley Creek; therefore, any increase in discharge from this treatment facility is conditional upon the ability of Holly Springs to utilize the outfall structure listed within this proposal by the year 2011.

Project Description

Wastewater flows from Cary, Morrisville, and the Wake County portion of Research Triangle Park (RTP South) will enter into the system at the West Cary Pump Station. Wastewater flow from Apex will enter the system along the alignment of the West Reedy Branch Gravity Sewer and at the Beaver Creek Pump Station. Wastewater flow from Holly Springs will leave the Utley Creek Wastewater Treatment Plant and enter into the system at the Effluent Pump Station located at the Western Wake Water Reclamation Facility. The combined effluent from the Partners will be discharged to the Cape Fear River downstream of Buckhorn Dam. The attached figures illustrate the general location of the proposed Western Wake Water Reclamation Facility and supporting infrastructure.

The proposed Project will be implemented in two phases: The Phase 1 facilities, which must be operational by January 1, 2011, will provide treatment capacity of 18 million gallons per day (mgd) at the WRF, and a discharge capacity of 24 mgd to the Cape Fear

River below Buckhorn Dam. The capacity of these facilities will meet the needs of the Project Partners until 2020. The Phase 1 facilities include the following infrastructure:

- 1) 31 mgd peak flow capacity at West Cary Pump Station (no increase from existing permitted footprint anticipated)
- 2) 36 inch force main from West Cary Pump Station
- 3) 48 inch gravity line along Beaver Creek
- 4) 40 mgd peak flow capacity at Beaver Creek Pump Station
- 5) 42 inch force main from Beaver Creek Pump Station
- 6) 36 inch force main from the Utley Creek Wastewater Treatment Plant
- 7) 18 mgd maximum month capacity at Western Wake Water Reclamation Facility
- 8) 48 inch effluent force main
- 9) Effluent discharge structure and 60 inch diffuser in Cape Fear River

The Phase 2 facilities, which are projected to be online by July 1, 2020, will provide treatment capacity of 30 mgd at the WRF and a discharge capacity of 38 mgd to the Cape Fear River below Buckhorn Dam. These flows will be sufficient as shown in the current land use plans but additional growth could occur. If wastewater discharges beyond the 38 mgd are required, the partners will request an NPDES permit modification in accordance with rules and regulations. The capacity of these facilities will meet the needs of the Project Partners until 2030. The Phase 2 facilities include the following infrastructure:

- 1) 44 mgd peak flow capacity at West Cary Pump Station (no increase from existing permitted footprint anticipated)
- 2) Parallel 24 inch force main from West Cary Pump Station
- 3) 58 mgd peak flow capacity at Beaver Creek Pump Station
- 4) Parallel 36 inch force main from Beaver Creek Pump Station
- 5) 30 mgd maximum month capacity at Western Wake Water Reclamation Facility
- 6) Parallel 42 inch effluent force main

The type of materials, construction methodologies, and equipment to be used for construction will be finalized in the final design stage of this project.

Construction of the Western Wake Water Reclamation Facility would be expected to permanently impact 0.42 acre of wetlands, 1,435 linear feet of perennial streams, and temporarily impact 0.32 acre of wetlands, and 500 linear feet of perennial streams.

As stated above, no impacts to waters of the U.S. are expected during the construction/conversion of the West Cary Pump Station and the Beaver Creek Pump Station.

Transmission lines, both force mains and gravity lines, will impact streams and wetlands. As previously indicated, wetland impacts for these lines are estimated from the National

Wetland Inventory Maps and stream impacts from GIS capabilities. Total temporary impacts from these lines are estimated at 20.3 acres of forested wetlands and 3,800 linear feet of stream channel. Permanent impacts are expected to total 12.4 acres of forested wetlands. Stream crossing impacts are considered temporary via the open cut method because the stream bed and bank will be re-established after installation. Named streams expected to be impacted via line crossings are White Oak Creek, Reedy Branch, Beaver Creek, Little Beaver Creek, Thomas Creek, Big Branch, and Little White Oak Creek, and White Oak Creek (separate stream). Trenchless technology is being considered for crossings at the White Oak Creek, Beaver Creek, Little Beaver Creek, and other unnamed perennial crossings. Since this decision has not been finalized, total impacts listed within this notice includes these crossings as an impact.

The line from the Beaver Creek Pump Station to the Western Wake Water Reclamation Facility includes Alternative A and Alternative 1 as indicated on the attached maps. Alternative B and Alternative 2 were evaluated, but not chosen by the applicant as the preferred line due to additional impacts as shown below:

a) Alternative Segment A would impact 1 perennial stream and 0.84 acres of wetlands vs. Alternative Segment B which would impact 4 perennial streams, 2 intermittent streams, and 1.1 acres of wetlands;

b) Alternative Segment 1 would impact 1 perennial stream, 3 intermittent streams, and 1.2 acres of wetlands vs. Alternative Segment 2 which would impact 3 perennial streams, 8 intermittent streams, and 1.1 acres of wetlands.

The line connecting the Western Wake Water Reclamation Facility to the outfall structure includes Alternative "a" on the attached maps. Alternative "b" was evaluated, but dismissed by the applicant due to concerns from the North Carolina Department of Transportation.

The outfall structure is expected to temporarily impact 1.8 acres of forested wetlands and an area within the Cape Fear River of 60 feet by 400 feet. Permanent impacts from this structure would include 0.03 acres of wetlands and an area within the Cape Fear River of 18 feet by 400 feet. The applicant states that blasting within the stream bed may be necessary to install the outfall structure, but further information is needed before this can be confirmed.

To mitigate for permanent impacts to the 12.9 acres of wetland and 1,435 linear feet of stream impacts, the applicant proposes to utilize the North Carolina Ecosystem Enhancement Program (NCEEP) at a 2:1 ratio.

Other Required Authorizations

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives

State certification required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice in the NCDWQ Central Office in Raleigh serves as application to the NCDWQ for certification. A waiver will be deemed to occur if the NCDWQ fails to act on this request for certification within sixty days of the date of the receipt of this notice in the NCDWQ Central Office. Additional information regarding the Clean Water Act certification may be reviewed at the NCDWQ Central Office, 401 Oversight and Express Permits Unit, 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for certification under Section 401 of the Clean Water Act should do so in writing delivered to the North Carolina Division of Water Quality (NCDWQ), 1650 Mail Service Center, Raleigh, North Carolina 27699-1650 Attention: Ms Cyndi Karoly by July 7, 2006.

In addition, written permission is required from the U.S. Army Corps of Engineers for the proposed transmission lines to cross federal property contained within the Jordan Lake property boundary.

Essential Fish Habitat

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The Corps' initial determination is that the proposed project will not adversely impact EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

The Corps has consulted the latest published version of the National Register of Historic Places and is not aware that any registered properties, or properties listed as being eligible for inclusion therein are located within the project area. However, three areas that are registered properties, or properties listed as being eligible for inclusion therein, are located near the project Western Wake Water Reclamation Facility site. It has not yet been determined if the eligible properties are within the permit area for this project; however, the Corps will coordinate with the State Historical Preservation Office regarding potential effects. Presently, unknown archeological, scientific, prehistoric, or historical data may be located within the project area and/or could be affected by the proposed work.

Endangered Species

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps has determined pursuant to the Endangered Species Act of 1973, that the proposed project will have no effect on federally listed endangered or threatened species or their formally designated critical habitat.

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidate State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

A public hearing on the Draft Environmental Impact Statement for this proposal has been scheduled for June 15, 2006, at 7:00 pm in the Apex Town Hall at 73 Hunter Street, Apex, North Carolina. A U.S. Army Corps of Engineers representative will be present at this hearing to note any comments or concerns on this project.

In addition, any person may request, in writing, within the comment period specified in this notice, that an additional public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, July 7, 2006. Comments should be submitted to Mr. Monte Matthews, Raleigh Regulatory Field Office, 6508 Falls of Neuse Road, Suite 120, Raleigh, North Carolina, 27615.

Figure 1 of 13
 Western Wake Regional Wastewater Management
 Facilities Service Area

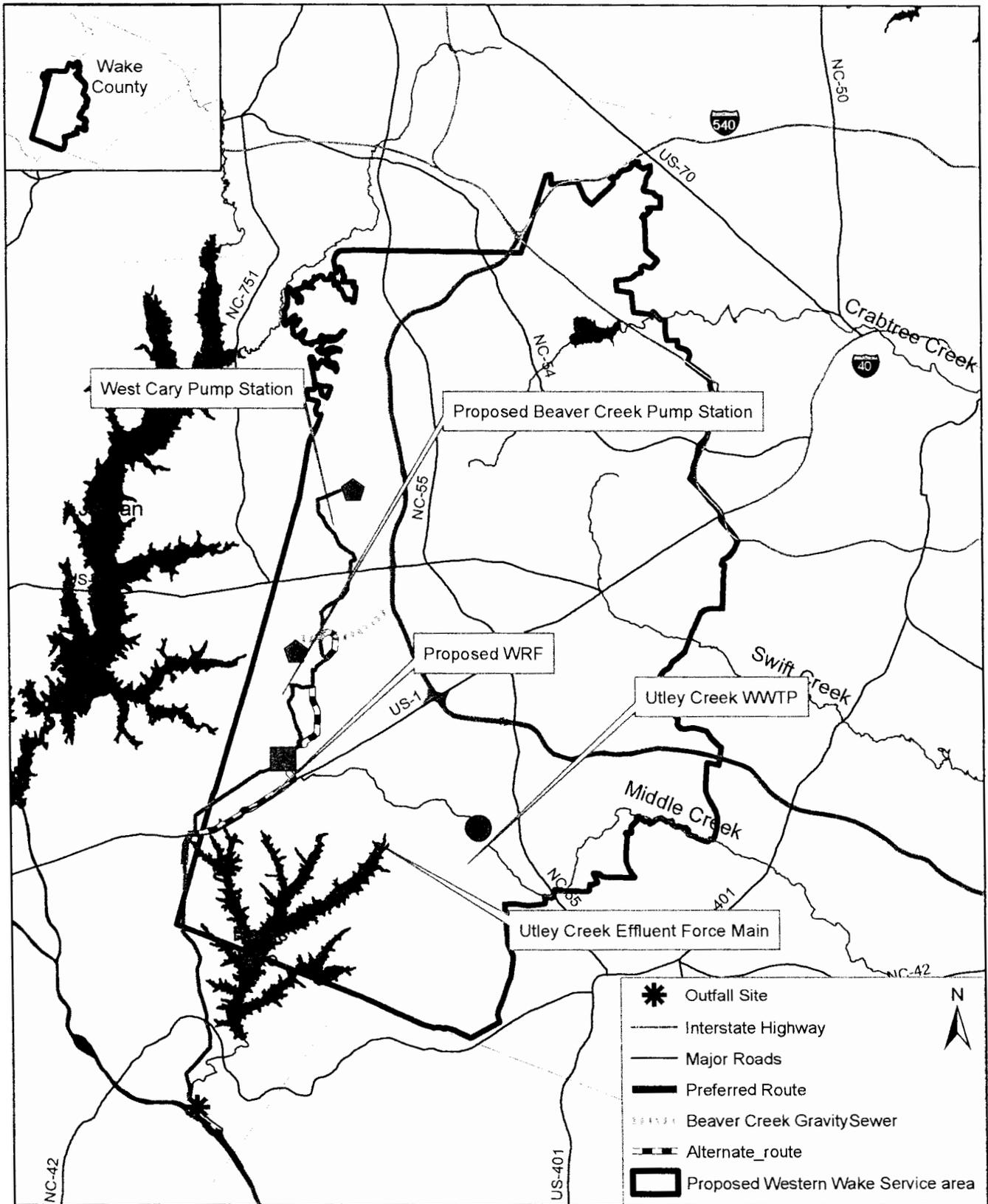


Figure 2 of 13
Existing WRF Site Conditions

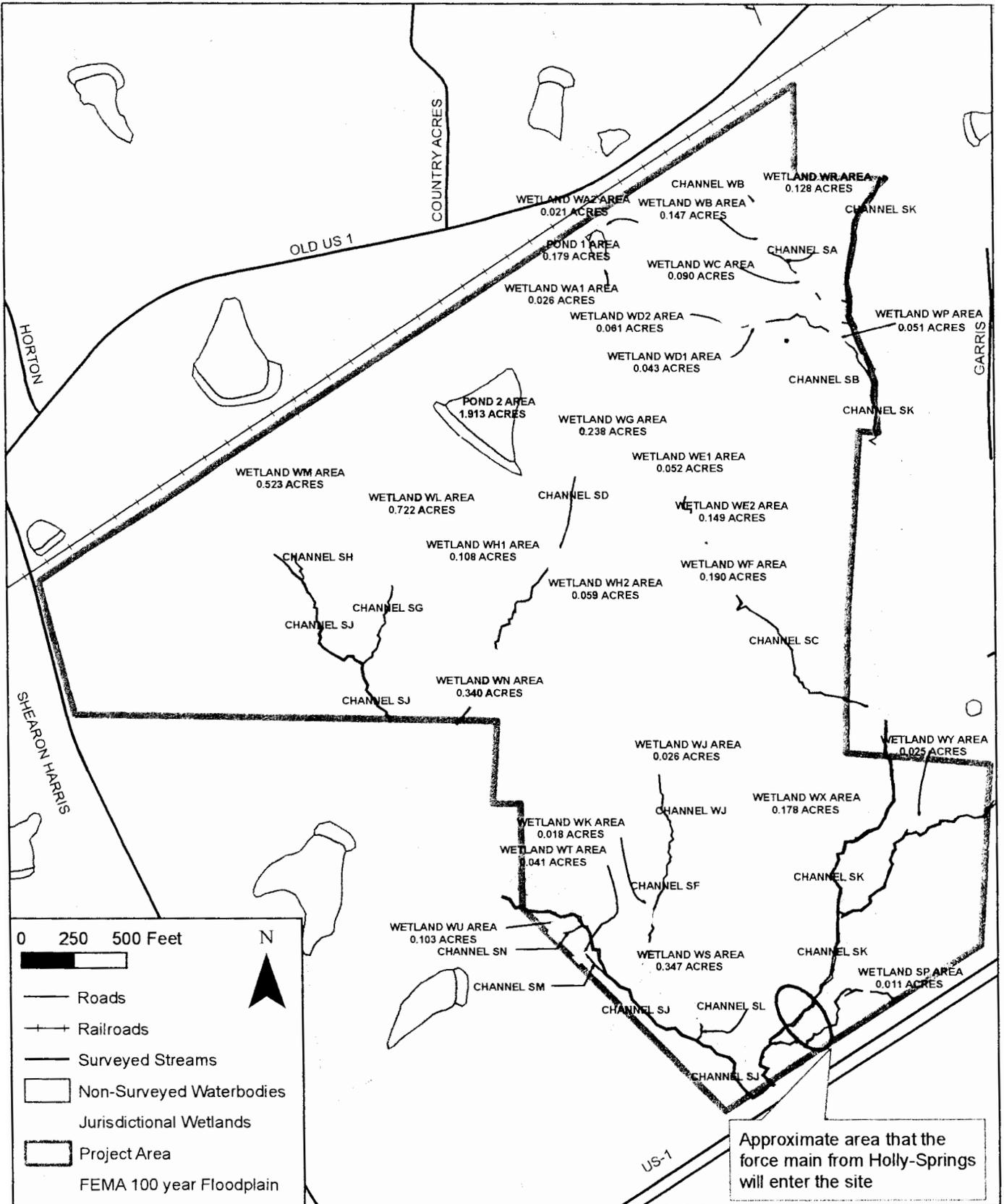


Figure 3 of 13
Holly Springs Utley Creek Transmission Line

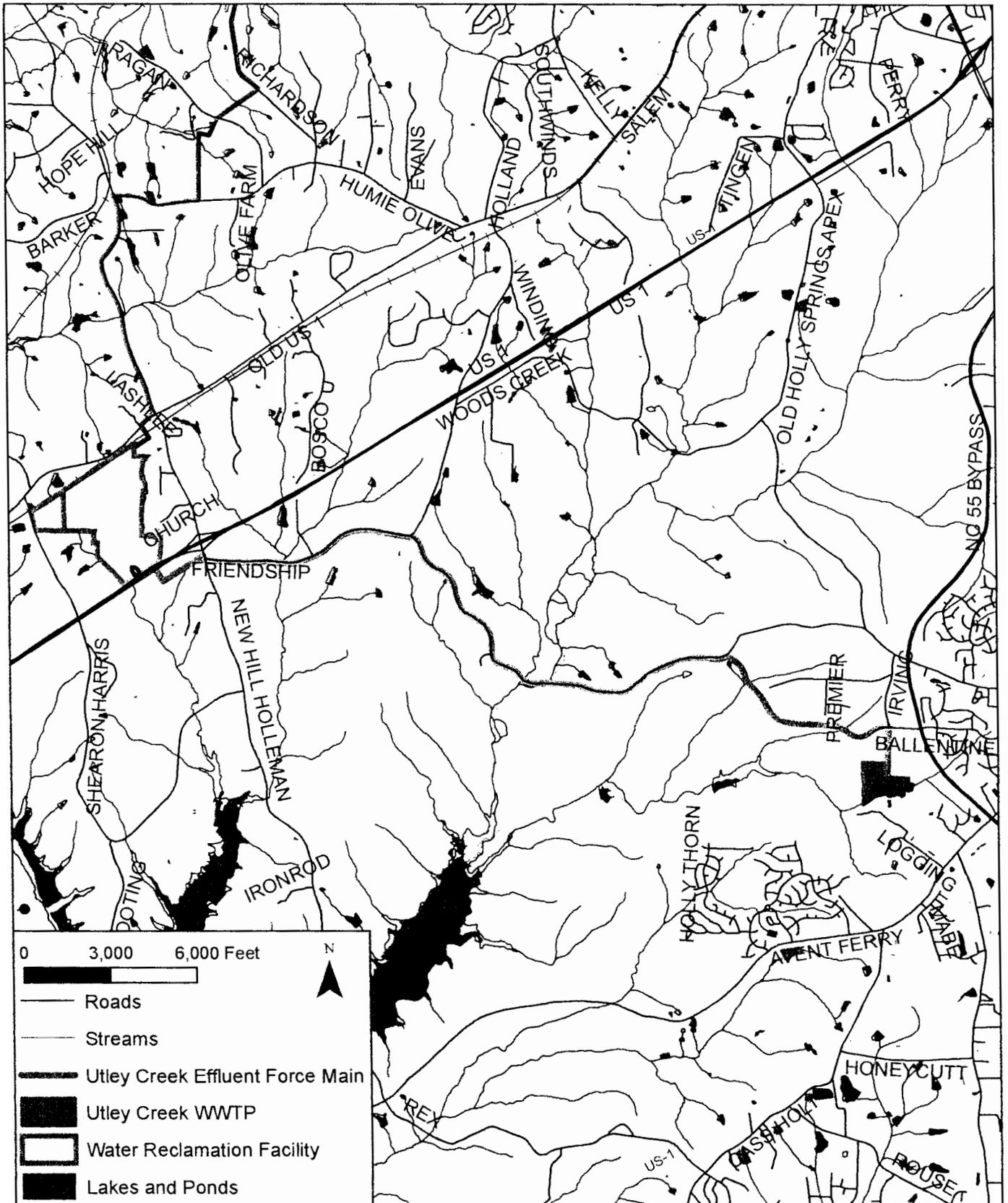


Figure 4 of 13
 Floodplains, Hydric Soils, and National Wetland Inventory
 Sites Along Preferred Transmission Routes

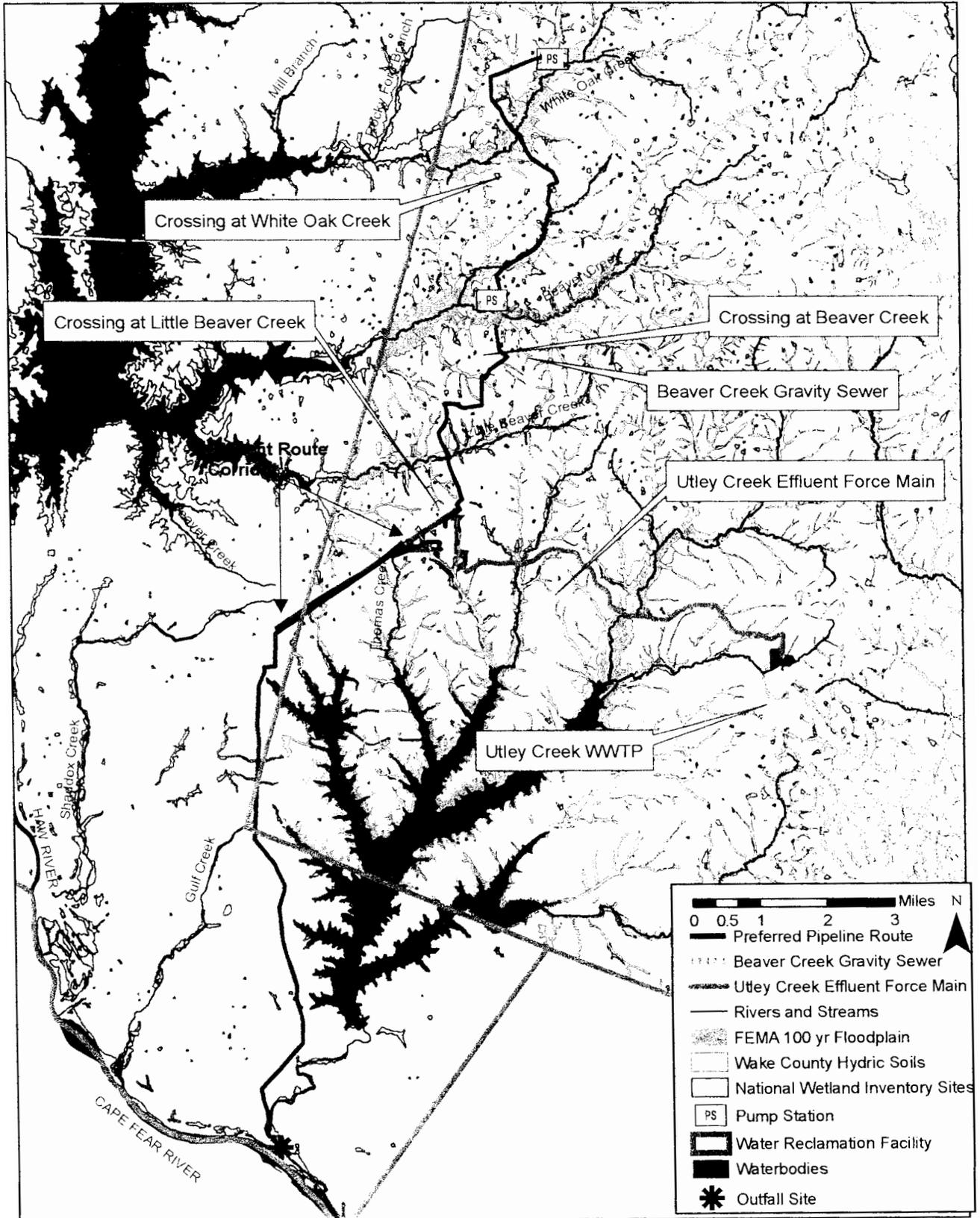


Figure 5 of 13
Raw Wastewater Transmission Routes Evaluated

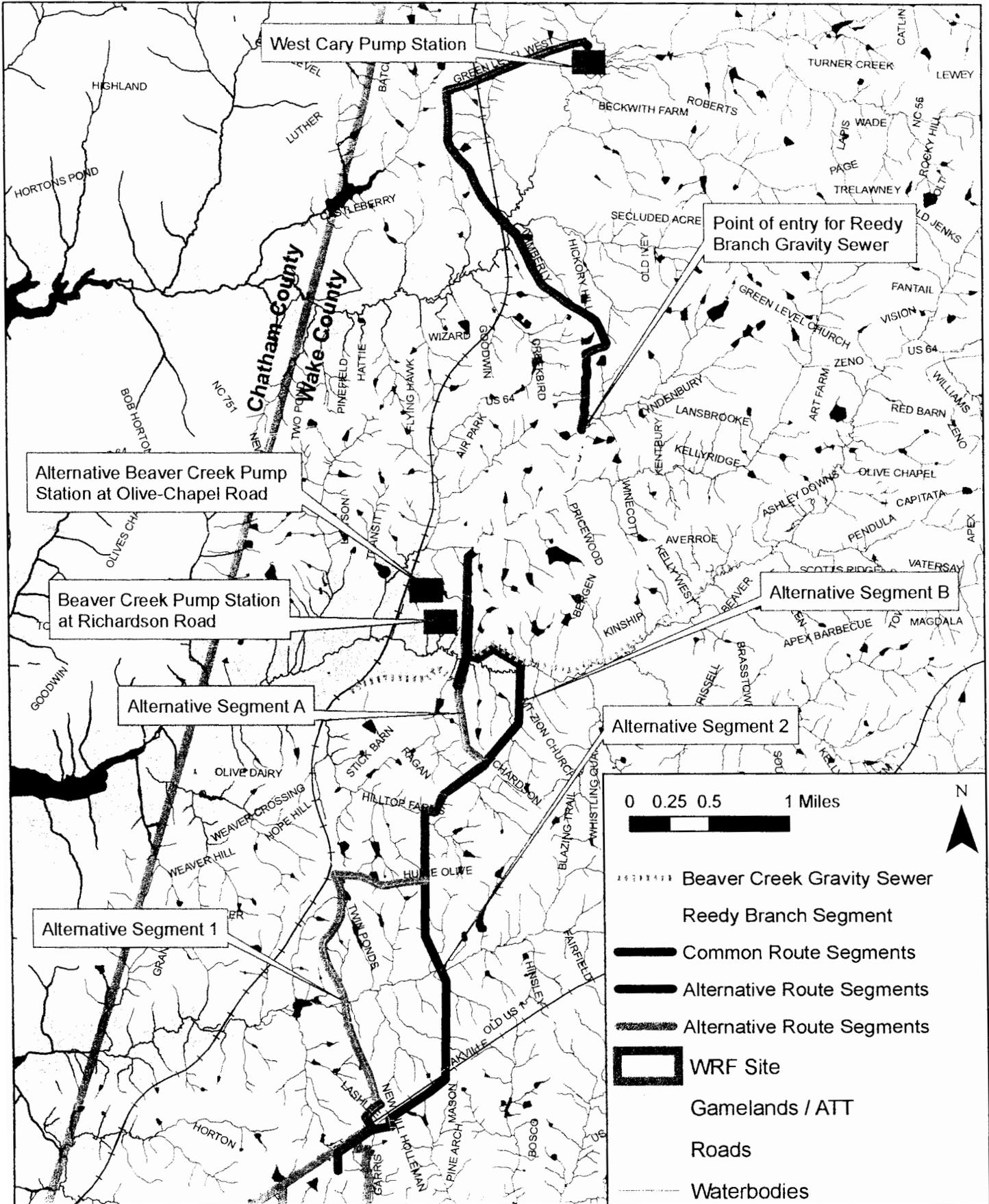


Figure 7 of 13
Approximate Location of Stream Crossings
From the West Cary PS to the Beaver Creek PS

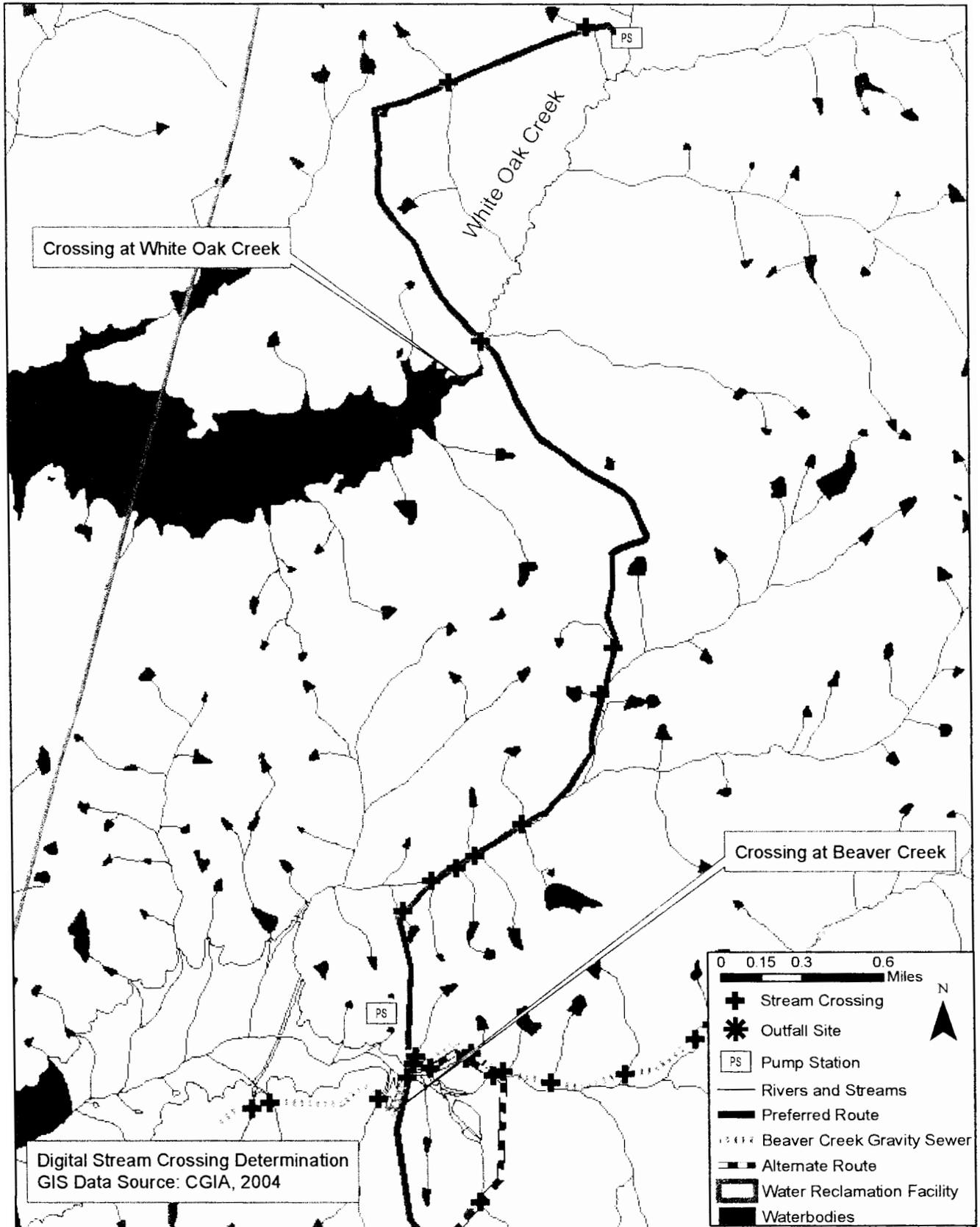


Figure 8 of 13
Approximate Location of Stream Crossings
From Beaver Creek PS to WRF Site

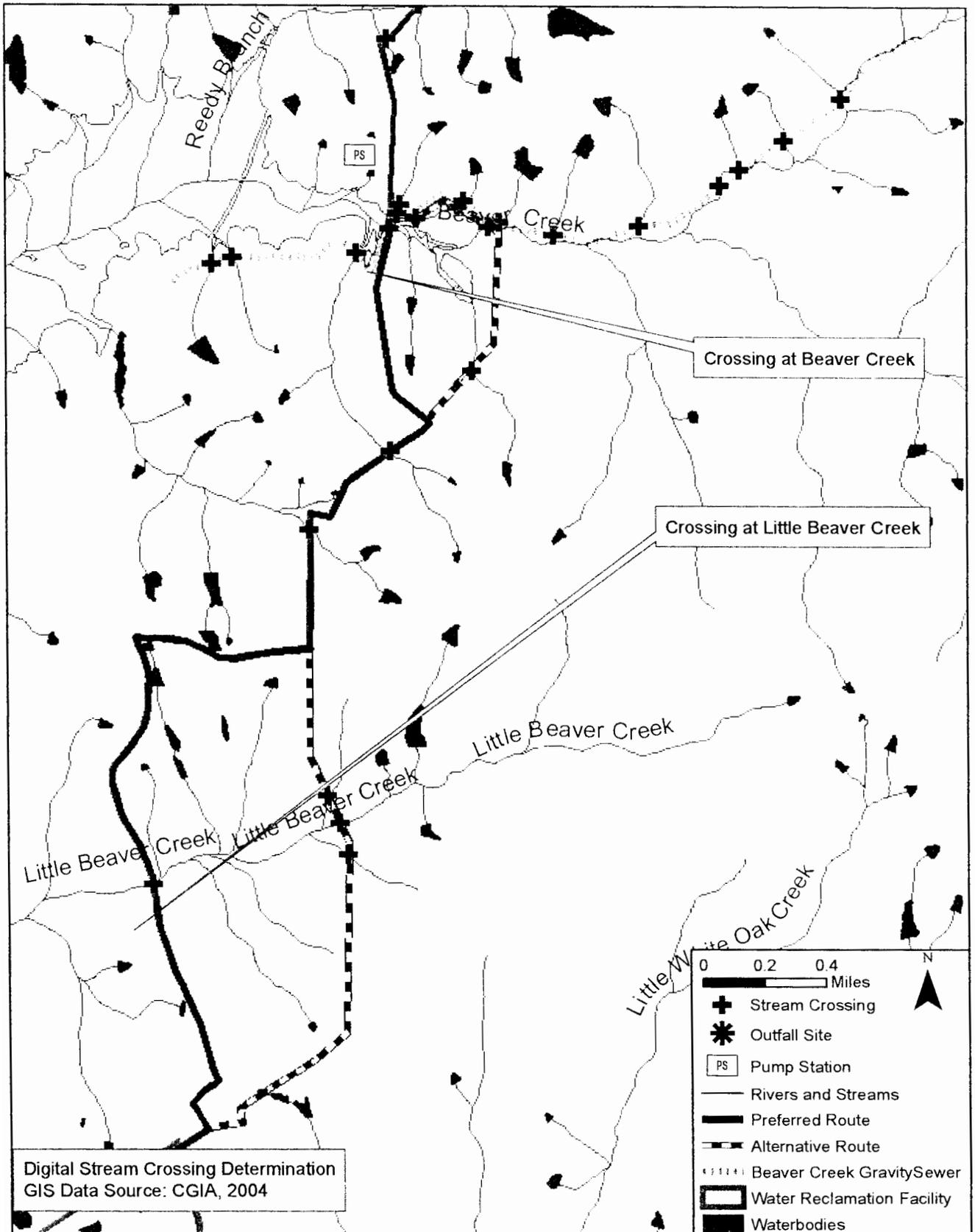


Figure 9 of 13
 Approximate Location of Stream Crossings
 From the WRF to the End of Alternative Effluent Routes

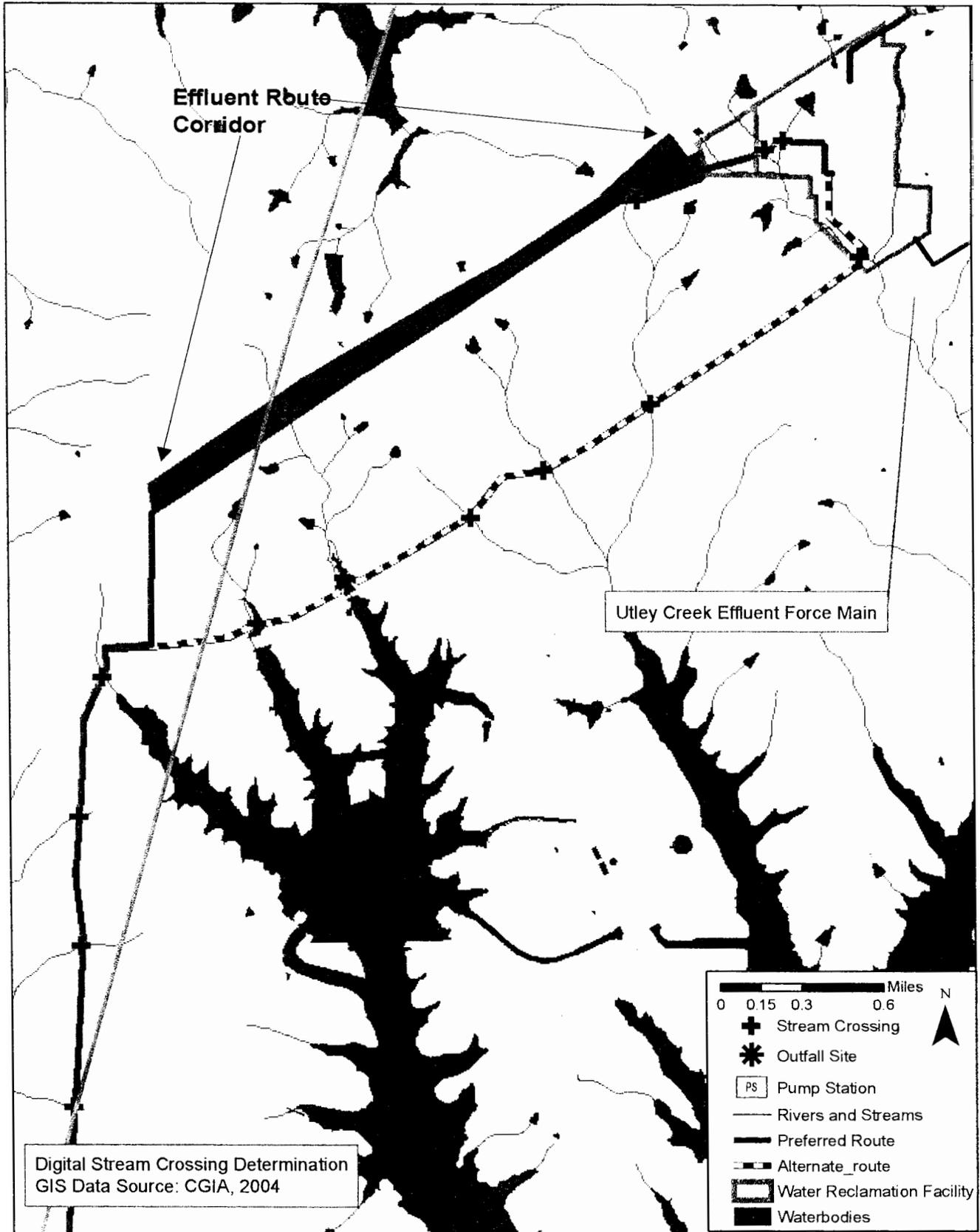


Figure 10 of 13
Approximate Location of Stream Crossings
From End of Alternative Effluent Routes to Outfall

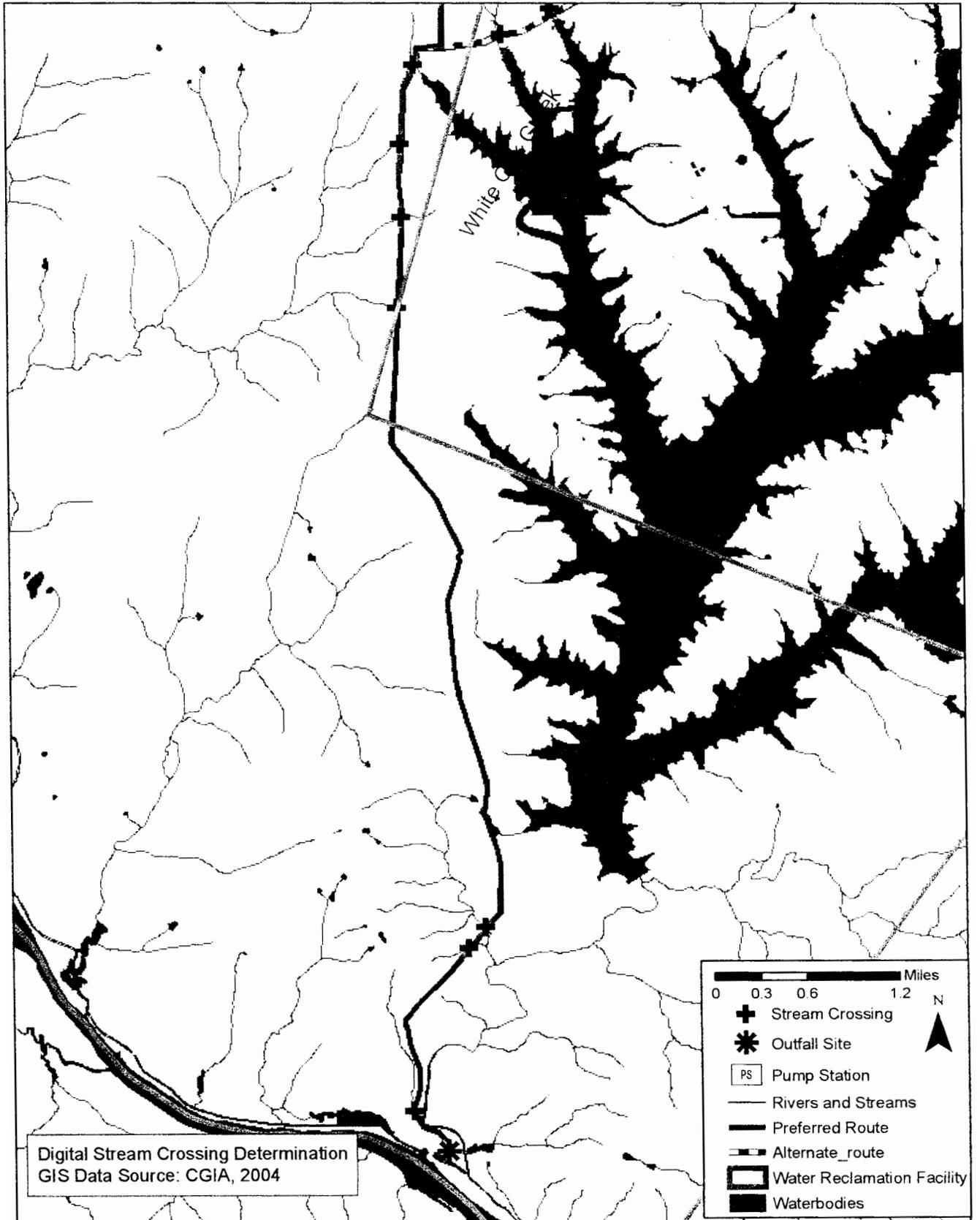
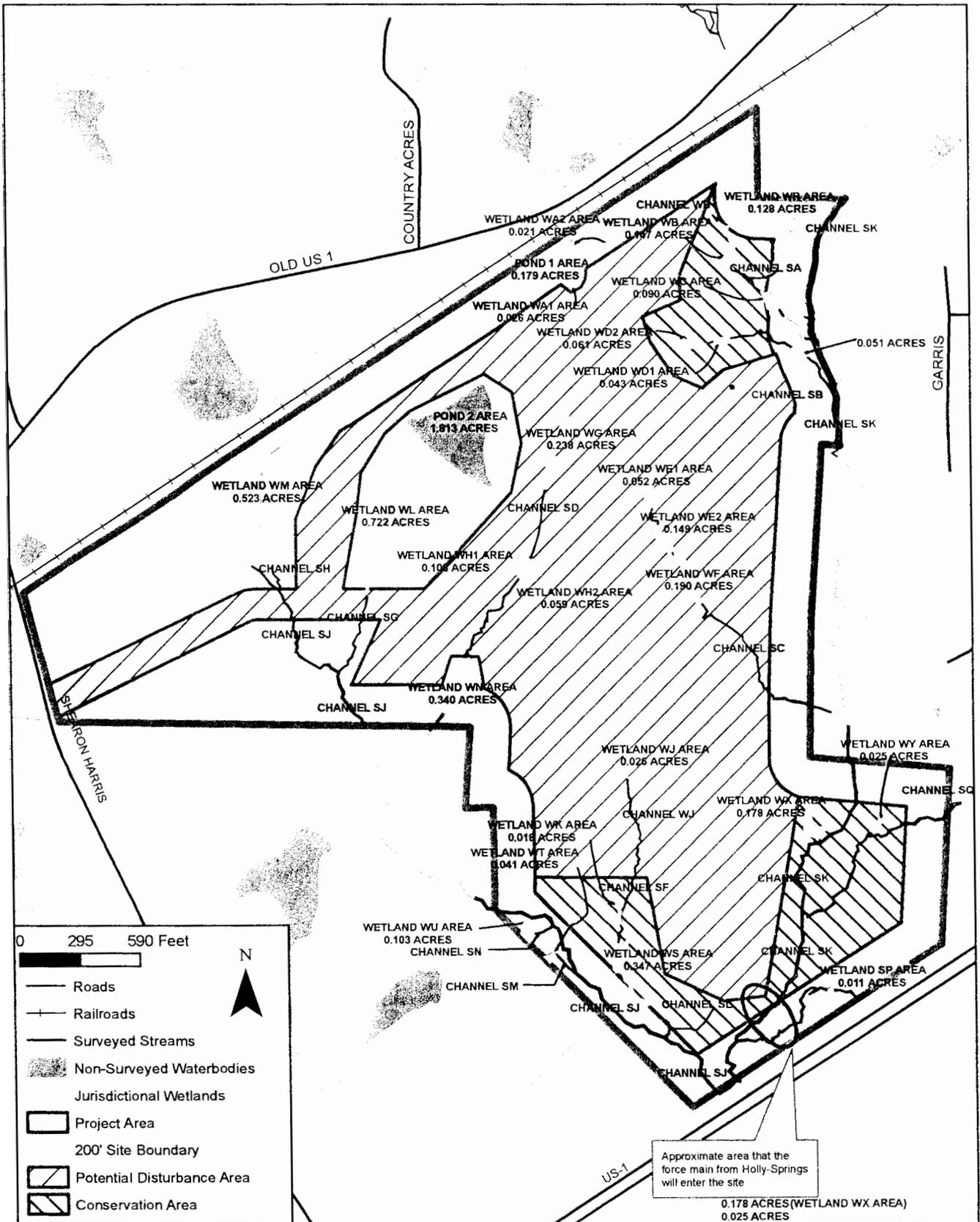


Figure 11 of 13
 Western Wake WRF Site - Potential Disturbance Area



WESTERN WAKE

Figure 12 of 13
Typical Stream Crossing

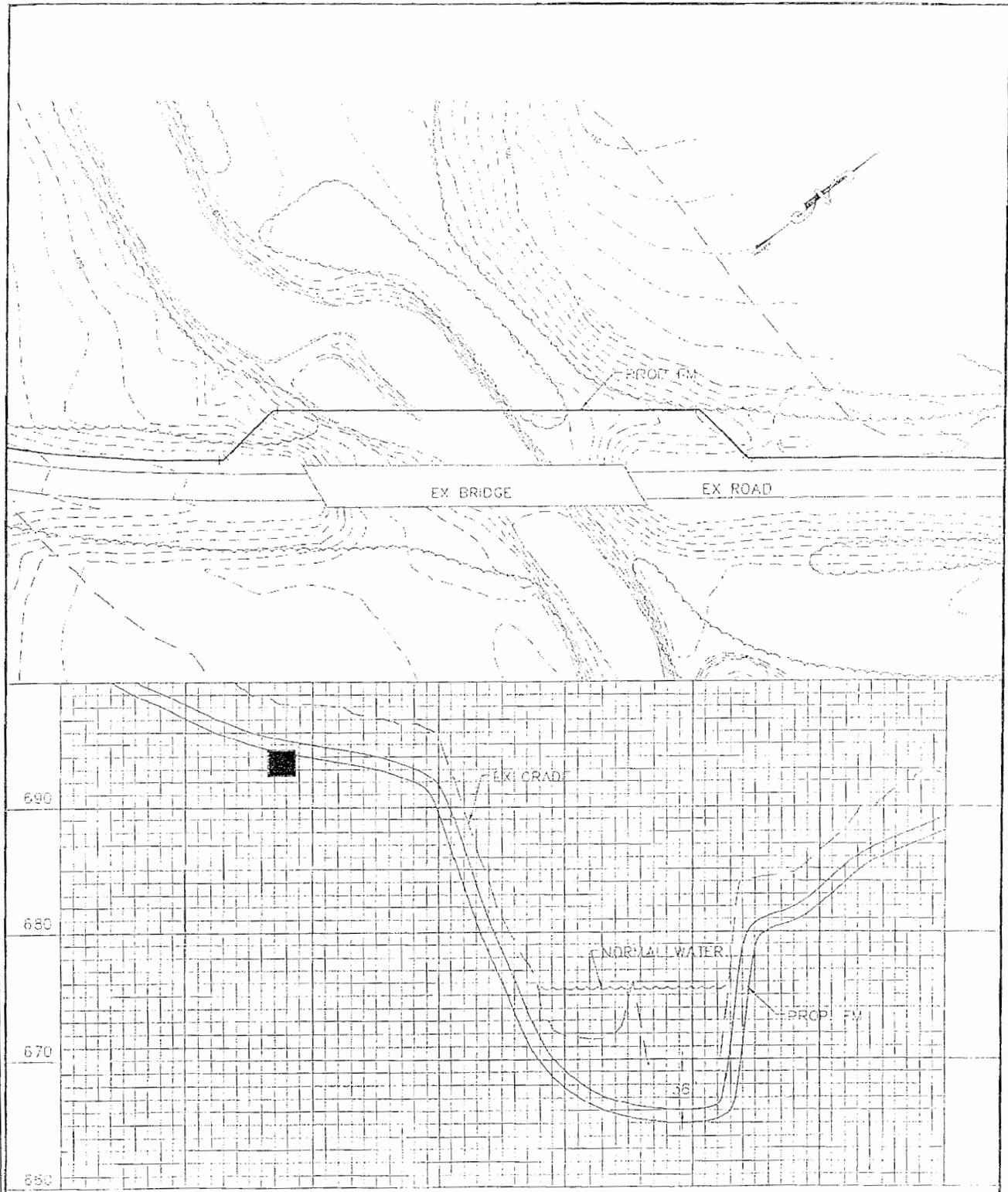
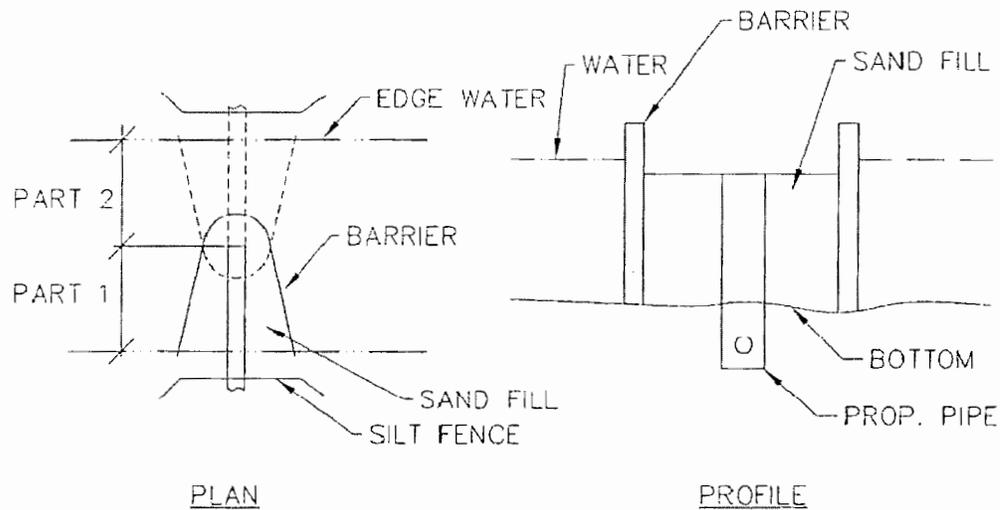


Figure for reference only, Not a design

Not to scale



CONSTRUCTION SEQUENCE

- 1 CONSTRUCTION SHALL BE PERFORMED DURING LOW FLOW PERIODS.
- 2 CROSSINGS SHALL BE ACCOMPLISHED IN A MANNER THAT WILL NOT PROHIBIT THE STREAM FLOW.
- 3 THE BANK OPPOSITE OF THE COFFER DAM SHALL BE PROTECTED BY SAND BAGS. THE MINIMUM LENGTH OF PROTECTION REQUIRED IS 25 FT ON EACH SIDE OF THE COFFER DAM, AT A HEIGHT OF 24" ABOVE WATER LEVEL. THE EXTENT OF PROTECTION MAY VARY AS DIRECTED BY THE ENGINEER ON AN INDIVIDUAL BASIS.
- 4 INSTALL NON-ERRODIBLE BARRIER AROUND 1/2 OF CROSSING.
- 5 INSTALL FILTER FABRIC AROUND INSIDE BARRIER.
- 6 PLACE SAND FILL INSIDE BARRIER.
- 7 EXCAVATE PIPE TRENCH.
- 8 INSTALL PIPE.
- 9 BACKFILL WITH CONCRETE AND/OR EXCAVATED MATERIAL TO ORIGINAL PROFILE.
- 10 REMOVE SAND FILL.
- 11 REMOVE FILTER FABRIC AND BARRIER.
- 12 IMMEDIATELY REVEGETATE STREAM BANK BY SEEDING AND MULCHING.
- 13 INSTALL TEMPORARY SILT FENCE.
- 14 RELOCATE TO OPPOSITE SIDE OF STREAM AND REPEAT ABOVE STEPS.
- 15 AFTER WATER MAIN HAS BEEN INSTALLED AND COFFER DAMS REMOVED, CONTRACTOR SHALL INSTALL CLASS I RIP RAP WITH FILTER FABRIC AND STONE UNDERLAYMENT TO STABILIZE STREAM BED.

COFFER DAM STREAM CROSSING

NO SCALE