

APPENDIX I – CORRESPONDENCE

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HISTORIC PRESERVATION
PO Box 571, Jackson, MS 39203-0571
601-576-6940 • Fax 601-576-6955
mdah.state.ms.us

January 27, 2006

Mr. J. Bennett Graham
Tennessee Valley Authority
West Tower 11D
400 West Summit Hill Drive
Knoxville, Tennessee 37902

Dear Mr. Graham:

RE: Cultural Resource Survey of Proposed Severcorr Industrial Park Transmission Line, Access Roads, and Laydown Areas, Clay and Lowndes Counties, Mississippi

We have reviewed the December 28, 2005 cultural resources survey report of TRC for the above referenced undertaking pursuant to our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. We concur that no sites listed in or eligible for listing in the National Register of Historic Places will be affected. We have no reservations with the project.

There remains the remote possibility that unrecorded cultural resources may be encountered during construction. If this occurs, we would appreciate your contacting this office immediately in order that we may offer appropriate comments under 36 CFR 800.13 within forty-eight hours. If you need further information, please let us know.

Sincerely,

H. T. Holmes
State Historic Preservation Officer

A handwritten signature in cursive script that reads "Thomas H. Waggener".

BY: Thomas H. Waggener
Review and Compliance Officer

cc: Clearinghouse for Federal Programs



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mississippi Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213
January 26, 2006

RECEIVED
Environmental Policy and Planning

FEB 1 2006

Doc. Type: EA Administrative Record
Index Field: Conservation/Interagency Re
Project Name: SeverCorr 161 kV Trans Line
Project No.: 2006-11

Mr. Jon M. Loney
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1401

Dear Mr. Loney:

The U.S. Fish and Wildlife Service (Service) received your letter dated January 13, 2006, regarding the construction of the SeverCorr steel mill transmission line from West Point to the Golden Triangle Airport in Lowndes County, Mississippi. In previous correspondence to your agency, the Service recommended that a field survey for the federally listed threatened bald eagle (*Haliaeetus leucocephalus*) be conducted on the project site. Per that survey, two bald eagle nests were found along one of the proposed project alignments near Catalpa and Tibbee Creeks.

To avoid impacts to the bald eagle, you proposed a new alignment further to the east and a minimum of one mile from either of the identified eagle nesting areas. Much of the new route would be along existing transmission line right-of-way and would require removal of only a narrow strip of forested habitat. Consequently, based on the new project plan, your agency determined that the new route alignment would not likely adversely impact this species.

The Service concurs with your findings. However, if during construction of the project any additional evidence of bald eagle nesting sites is found, all work activities should cease until this office is notified.

This will conclude informal consultation as provided for in the Endangered Species Act (16 U.S.C. 1531 et seq.). However, the Service may provide additional comments regarding potential impacts to wetland resources during any U.S. Army Corps of Engineers public notice comment period. If you have any additional questions, please contact this office, telephone: (601) 321-1132.

Sincerely,

A handwritten signature in cursive script that reads "Kathy W. Luncford".

Kathy W. Luncford
Fish and Wildlife Biologist



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

February 16, 2006

Regulatory Division

SUBJECT: Nationwide Permit Authorization to Construct
Electric Transmission Line - Jurisdictional Number
MSNW06-00370-S

Mr. Todd C. Liskey
Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. Liskey:

Reference is made to your request to construct a 20.5-mile long 161-kV overhead transmission line to serve the SeverCorr steel mill located near the Golden Triangle Airport in Lowndes County, Mississippi. According to the work plan you submitted with your request, there will be no permanent loss of wetland habitat resulting from transmission line construction due to fill discharges or mechanized landclearing.

This letter verifies that your proposed activity is authorized by Nationwide Permits 12 and 25 in accordance with 33 CFR Part 330 of our regulations. A copy is enclosed with the appropriate sections marked for your reference. Further authorization from this office is not required provided the scope of work is in accordance with your submitted plans and the Nationwide Permit conditions.

By letter dated March 15, 2002, the Mississippi Department of Environmental Quality, Office of Pollution Control, has certified that work authorized by this Nationwide Permit will be in compliance with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act (33 USC 1341) and Section 49-17-29 of the Mississippi Code of 1972, subject to the attached conditions (enclosure 1), which must be adhered to by the permittee.

The statements contained herein do not convey any property rights, or any exclusive privileges, and do not authorize any injury to property or obviate the requirements to obtain other local, State or Federal assent required by law.

- 2 -

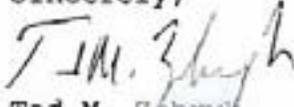
The District Engineer shall be notified promptly in writing at the commencement and completion of the work. The enclosed cards may be used for that purpose.

The enclosed Notice of Authorization must be posted at the site during construction of the permitted activity. If the scope of work or project location changes, you are urged to contact this office for a verification of this determination.

Please be advised that this jurisdictional determination reflects current policy and regulations. This Nationwide Permit authorization will expire March 19, 2007.

If you have any questions or require further information concerning this matter, please contact Mr. Tad M. Zebryk of the Inland Branch at (251) 694-3779.

Sincerely,



Tad M. Zebryk
Project Manager
Regulatory Division

UNITED STATES DEPARTMENT OF AGRICULTURE
LOWNDES COUNTY FARM SERVICE AGENCY
2282 MARTIN LUTHER KING DRIVE SUITE 3
COLUMBUS, MISS. 39705

3/28/05

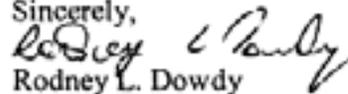
Dear Mr. Liskey:

In review of the map you provided regarding the transmission line for the Industrial Megasite, I find the line possibly crosses three farms that have acreage enrolled in the Conservation Reserve Program. Without exact location identified on an aerial map I can not say for sure if all three farms would be affected. I think I am safe in saying these three are the only possible problems. Two of these farms CRP acreage is grassland so it can be continued in CRP during and after the construction of the power line. There are certain things all parties must agree to but the program can continue on the affected acreage. The third farm owned by Henry Warden is in trees and this acreage would have to be terminated if the line or the ROW crosses the CRP acreage.

The three farms are owned by the people listed below:

- #1 Henry Warden
- #2 Marjorie Craddock, Eileen Craddock, and Beverly Yates
- #3 Lowndes County Industrial Development Authority

If you need additional information please feel free to call this office at 662-328-5921, X 104.

Sincerely,

Rodney L. Dowdy
County Executive Director
Lowndes County FSA

cc:Mildred Tharpe

William R. "Bill" Minor
Northern District Commissioner

Dick Hall
Central District Commissioner

Wayne H. Brown
Southern District Commissioner



Larry L. "Butch" Brown
Executive Director

Harry Lee James
Deputy Executive Director/
Chief Engineer

Brenda Znachko
Deputy Executive Director/
Administration

P. O. Box 1850 / Jackson, Mississippi 39215-1850 / Telephone (601) 359-7001 / FAX (601) 359-7110 / www.gaMDOT.com

April 6, 2005

Mr. Todd C. Liskey
Siting and Environmental
Design Department]
Tennessee Valley Authority (TVA)
1101 Market Street
Chattanooga, TN 37402-2801

Golden Triangle Industrial Megasite Transmission Line Project

Dear Mr. Liskey:

This is in reply to your correspondence of March 24, 2005, concerning the proposed Golden Triangle Industrial Megasite Transmission Line Project. The information that was submitted with your correspondence has been reviewed as requested. We do not foresee any conflicts with the project.

As the proposed project will cross US 82, MS 50 and MS 789 (Industrial Park Road), permits are required to cross these facilities. These permits can be obtained through the District Office, P. O. Box 2060, Tupelo, MS 38803-2060, and any questions concerning them should be directed to Mr. Paul Swindoll, District Engineer, (662) 842-1122, at that location.

If I can be of further assistance to you in this matter, please do not hesitate to give me a call.

Sincerely,

A handwritten signature in cursive script that reads "Harry Lee James".

Harry Lee James, P.E., PS
Deputy Executive Director

HLJ:clp

Mr. W. Paul Swindoll, District Engineer

UNITED STATES DEPARTMENT OF AGRICULTURE
LOWNDES COUNTY FARM SERVICE AGENCY
2282 MARTIN LUTHER KING DRIVE, SUITE 3
COLUMBUS, MS 39705-2609

April 8, 2005

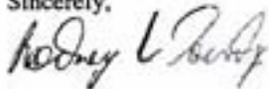
Todd C. Liskey
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Dear Mr. Liskey:

The acreage that is disturbed during construction of the power line on the land owned by Lowndes County Industrial Development Authority can be continued under the Conservation Reserve Program. The Lowndes County Industrial Development Authority will need to make a request to allow Tennessee Valley Authority the authority to construct a power line across land that is enrolled under the Conservation Reserve Program. They will need to provide the width of the right away and proposed construction dates. The Lowndes County Industrial Development Authority is required to re-establish the area disturbed in grass cover with no cost share from this office.

If you have any questions concerning this matter, please feel free to call this office at 662-328-5921, Ext. 2.

Sincerely,



Rodney L. Dowdy
County Executive Director

UNITED STATES DEPARTMENT OF AGRICULTURE
LOWNDES COUNTY FARM SERVICE AGENCY
2282 MARTIN LUTHER KING DRIVE, SUITE 3
COLUMBUS, MS 39705-2609

April 8, 2005

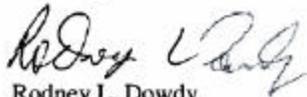
Todd C. Liskey
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Dear Mr. Liskey:

The acreage that is disturbed during construction of the power line on the land owned by Warden Farms, Inc., must be terminated from the Conservation Reserve Program. Refunds, interests and penalties may apply on the terminated acreage. Warden Farms, Inc. will need to request measurement service after the area is staked or surveyed to determine the acres that will be terminated from the Conservation Reserve Program.

If you have any questions concerning this matter, please feel free to call this office at 662-328-5921, Ext. 2.

Sincerely,



Rodney L. Dowdy
County Executive Director

APPENDIX II – TENNESSEE VALLEY AUTHORITY RIGHT-OF-WAY CLEARING SPECIFICATIONS

1. General - The clearing contractor shall review the environmental evaluation documents (Categorical Exclusion Checklist, Environmental Assessment, or Environmental Impact Statement) for the project or proposed activity, along with all clearing and construction appendices, conditions in applicable general and/or site-specific permits, the storm water pollution prevention plan, and any Tennessee Valley Authority (TVA) commitments to property owners. The contractor shall then plan and carry out operations using techniques consistent with good engineering and management practices as outlined in TVA's Best Management Practice (BMP) manual (Muncy, 1992, and revisions thereto). The contractor will protect areas that are to be left unaffected by access or clearing work at and adjacent to all work sites. In sensitive areas and their buffers, the contractor will retain as much native ground cover and other vegetation as possible.

If the contractor fails to use BMPs or to follow environmental expectations discussed in the prebid or prework meeting or present in contract specifications, TVA will order corrective changes and additional work as deemed necessary in TVA's judgment to meet the intent of environmental laws and regulations or other guidelines. Major violations or continued minor violations will result in work suspension until correction of the situation is achieved or other remedial action is taken at the contractor's expense. Penalty clauses may be invoked as appropriate.

2. Regulations - The clearing contractor shall comply with all applicable Federal, state, and local environmental and antipollution laws, regulations, and ordinances including without limitation all air, water, solid and hazardous waste, noise, and nuisance laws, regulations, and ordinances. The contractor shall secure or ensure that TVA has secured all necessary permits or authorizations to conduct work on the acres shown on the drawings and plan and profile for the contract. The contractor's designated project manager will actively seek to prevent, control, monitor, and safely abate all commonly recognized forms of workplace and environmental pollution. Permits or authorizations and any necessary certifications of trained or licensed employees shall be documented with copies submitted to TVA's right-of-way inspector or construction environmental engineer before work begins. The contractor will be responsible for meeting all conditions specified in permits. Permit conditions shall be reviewed in prework discussions.
3. Land and Landscape Preservation - The clearing contractor shall exercise care to preserve the condition of cleared soils by avoiding as much compacting and deep scarring as possible. As soon as possible after initial disturbance of the soil and in accordance with any permit(s) or other state or local environmental regulatory requirements, cover material shall be placed to prevent erosion and sedimentation of water bodies or conveyances to surface water or groundwater. In areas outside the clearing, use, and access areas, the natural vegetation shall be protected from damage. The contractor and his employees must not deviate from delineated access routes or use areas, and must enter the site at designated areas that will be marked. Clearing operations shall be conducted to prevent any unnecessary destruction, scarring, or defacing of the remaining natural vegetation and adjacent surroundings in the vicinity of the work. In sensitive public or environmental areas, appropriate buffer zones shall be observed and the methods of clearing or reclearing modified to protect the buffer and sensitive area. Some areas may require planting native

plants or grasses to meet the criteria of regulatory agencies or commitments to special program interests.

4. Streamside Management Zones - The clearing contractor must leave as many rooted ground cover plants as possible in buffer zones along streams and other bodies of water or wet-weather conveyances thereto. In such streamside management zones (SMZ), tall-growing tree species (trees that would interfere with TVA's National Electric Safety Code clearances) shall be cut, and the stumps may be treated to prevent resprouting. Low-growing trees identified by TVA as marginal electrical clearance problems may be cut, and then stump treated with growth regulators to allow low, slow-growing canopy development and active root growth. Only approved herbicides shall be used, and herbicide application shall be conducted by certified applicators from the TVA's Transmission, Operations, and Maintenance organization after initial clearing and construction. Cutting of trees within SMZs must be accomplished by using either hand-held equipment or other appropriate clearing equipment, such as a feller-buncher. The method will be selected based on site-specific conditions and topography to minimize soil disturbance and impacts to the SMZ and surrounding area. Disturbed soils in SMZs must be stabilized by appropriate methods immediately after the right-of-way is cleared. Stabilization must occur within the time frame specified in applicable storm water permits or regulations. Stumps within SMZs may be cut close to the ground but must not be removed or uprooted. Trees, limbs, and debris shall be immediately removed from streams, ditches, and wet areas using methods that will minimize dragging or scarring the banks or stream bottom. No debris will be left in the water or watercourse. Equipment will cross streams, ditches, or wet areas only at locations designated by TVA after the application of appropriate erosion control BMPs consistent with permit conditions or regulatory requirements.
5. Wetlands - In forested wetlands, tall trees will be cut near the ground, leaving stumps and roots in place. The cambium may be treated with herbicides applied by certified applicators from the TOM organization to prevent regrowth. Understory trees that must be initially cut and removed may be allowed to grow back or may be treated with tree growth regulators selectively to slow growth and increase the reclearing cycle. The decision will be situationally made based on existing ground cover, wetland type, and tree species since tall tree removal may "release" understory species and allow them to grow quickly to "electrical clearance problem" heights. In many circumstances, herbicides labeled for water and wetland use may be used in reclearing.
6. Sensitive Area Preservation - If prehistoric or historic artifacts or features that might be of archaeological significance are discovered during clearing or reclearing operations, the activity shall immediately cease within a 100-foot radius, and a TVA right-of-way inspector or construction environmental engineer and the Cultural Resources Program manager shall be notified. The site shall be protected and left as found until a determination about the resources, their significance, and site treatment is made by TVA's Cultural Resources Program. Work may continue beyond the finding zone and the 100-foot radius beyond its perimeter.
7. Water Quality Control - The contractor's clearing and disposal activities shall be performed using BMPs that will prevent erosion and entrance of spillage, contaminants, debris, and other pollutants or objectionable materials into drainage ways, surface water, or groundwater. Special care shall be exercised in refueling equipment to prevent spills. Fueling areas shall be remote from any sinkhole, crevice, stream, or other water body.

Open burning debris will be kept away from streams and ditches and shall be incorporated into the soil.

The clearing contractor will erect and (when TVA or contract construction personnel are unable) maintain BMPs such as silt fences on steep slopes and adjacent to any stream, wetland, or other water body. BMPs will be inspected by the TVA field engineer or other designated TVA or contractor personnel routinely and during periods of high runoff, and any necessary repairs will be made as soon as practicable. BMP inspections will be conducted in accordance with permit requirements. Records of all inspections will be maintained on site, and copies of inspection forms will be forwarded to the TVA construction environmental engineer.

8. Turbidity and Blocking of Streams - If temporary clearing activities must interrupt natural drainage, appropriate drainage facilities and erosion/sediment controls shall be provided to avoid erosion and siltation of streams and other water bodies or water conveyances. Turbidity levels in receiving waters or at storm water discharge points shall be monitored, documented, and reported if required by the applicable permit. Erosion and sediment control measures such as silt fences, water bars, and sediment traps shall be installed as soon as practicable after initial access, site or right-of-way disturbance in accordance with applicable permit or regulatory requirements.

Mechanized equipment shall not be operated in flowing water except when approved and, then, only to construct necessary stream crossings under direct guidance of TVA. Construction of stream fords or other crossings will only be permitted at approved locations and to current TVA construction access road standards. Material shall not be deposited in watercourses or within stream bank areas where it could be washed away by high stream flows. Any clearing debris that enters streams or other water bodies shall be removed as soon as possible. Appropriate U.S. Army Corps of Engineers and state permits shall be obtained for stream crossings.

9. Air Quality Control - The clearing or reclearing contractor shall take appropriate actions to limit the amount of air emissions created by clearing and disposal operations to well within the limits of clearing or burning permits and/or forestry or local fire department requirements. All operations must be conducted in a manner that prevents nuisance conditions or damage to adjacent land crops, dwellings, highways, or people.
10. Dust and Mud Control - Clearing activities shall be conducted in a manner that minimizes the creation of fugitive dust. This may require limitations as to type of equipment, allowable speeds, and routes utilized. Control measures such as water, gravel, etc., or similar measures may be used subject to TVA approval. On new construction sites and easements, the last 100 feet before an access road approaches a county road or highway shall be graveled to prevent transfer of mud onto the public road.
11. Burning - The contractor shall obtain applicable permits and approvals to conduct controlled burning. The contractor will comply with all provisions of the permit, notification, or authorization including burning site locations, controlled draft, burning hours, and such other conditions as stipulated. If weather conditions such as wind speed or wind direction change rapidly, the contractor's burning operation may be temporarily stopped by TVA's field engineer. The debris to be burned shall be kept as clean and dry as possible and stacked and burned in a manner that produces the minimum amount of smoke. Residue

from burning will be disposed of according to permit stipulations. No fuel starters or enhancements other than kerosene will be allowed.

12. Smoke and Odors - The contractor will properly store and handle combustible and volatile materials that could create objectionable smoke, odor, or fumes. The contractor shall not burn oil or refuse that includes trash, rags, tires, plastics, or other manufactured debris.
13. Vehicle Exhaust Emissions - The contractor shall maintain and operate equipment in a manner that limits vehicle exhaust emissions. Equipment and vehicles will be kept within the manufacturers' recommended limits and tolerances. Excessive exhaust gases will be eliminated, and inefficient operating procedures will be revised or halted until corrective repairs or adjustments are made.
14. Vehicle Servicing - Routine maintenance of personal vehicles will not be performed on the right-of-way. However, if emergency or "have to" situations arise, minimal/temporary maintenance to personal vehicles will occur in order to mobilize the vehicle to an off-site maintenance shop. Heavy equipment will be serviced on the right-of-way, except in designated sensitive areas. The clearing or reclearing contractor will properly maintain these vehicles with approved spill protection controls and countermeasures. If emergency maintenance in a sensitive or questionable area arises, the area environmental coordinator or construction environmental engineer will be consulted. All wastes and used oils will be properly recovered, handled, and disposed/recycled. Equipment shall not be temporarily stored in stream floodplains, whether overnight or on weekends or holidays.
15. Noise Control - The contractor shall take steps to avoid the creation of excessive sound levels for employees, the public, or the site and adjacent property owners. Concentration of individual noisy pieces as well as the hours and locations of operation should be considered.
16. Noise Suppression - All internal combustion engines shall be properly equipped with mufflers. The equipment and mufflers shall be maintained at peak operating efficiency.
17. Sanitation - A designated representative of TVA or the clearing contractor shall contact a sanitary contractor who will provide sanitary chemical toilets convenient to all principal points of operation for every working party. The facilities shall comply with applicable Federal, state, or local health laws and regulations. They shall not be located closer than 100 feet to any stream or tributary or to any wetland. The facilities shall be required to have proper servicing and maintenance, and the waste disposal contractor shall verify in writing that the waste disposal will be in state-approved facilities. Employees shall be notified of sanitation regulations and shall be required to use the toilet facilities.
18. Refuse Disposal - The clearing or reclearing contractor shall be responsible for daily cleanup and proper labeling, storage, and disposal of all refuse and debris on the site produced by his operations and employees. Facilities that meet applicable regulations and guidelines for refuse collection will be required. Only approved transport, storage, and disposal areas shall be used.
19. Brush and Timber Disposal (Reclearing) - The reclearing contractor shall place felled tree boles in neat stacks at the edge of the right-of-way, with crossing breaks at least every 100 feet. Property owner requests shall be reviewed with the project manager or right-of-way specialist before accepting them. Lop and drop activities must be specified in the contract

and on plan and profile drawings with verification with the right-of-way specialist before conducting such work. When tree trimming and chipping is necessary, disposal of the chips on the easement or other locations on the property must be with the consent of the property owner and the approval of the right-of-way specialist. No trees, branches, or chips shall remain in a surface water body or be placed at a location where washing into a surface water or groundwater source might occur.

20. Brush and Timber Disposal (Initial Clearing) - For initial clearing, trees are commonly part of the contractor's contract to remove as they wish. Trees may be removed from the site for lumber or pulpwood or they may be chipped or stacked and burned. All such activities must be coordinated with the TVA field engineer, and the open burning permits, notifications, and regulatory requirements must be met. Trees may be cut and left in place only in areas specified by TVA and approved by appropriate regulatory agencies. These areas may include sensitive wetlands or SMZs where tree removal would cause excessive ground disturbance or in very rugged terrain where windrowed trees are used as sediment barriers along the edge of the right-of-way.
21. Restoration of Site - All disturbed areas, with the exception of farmland under cultivation and any other areas as may be designated by TVA's specifications, shall be stabilized in the following manner unless the property owner and TVA's engineer specify a different method:
 - A. The subsoil shall be loosened to a minimum depth of 6 inches if possible and worked to remove unnatural ridges and depressions.
 - B. If needed, appropriate soil amendments will be added.
 - C. All disturbed areas will initially be seeded with a temporary ground cover such as winter wheat, rye, or millet, depending on the season. Perennials may also be planted during initial seeding if proper growing conditions exist. Final restoration and final seeding will be performed as line construction is completed. Final seeding will consist of permanent perennial grasses such as those outlined in TVA's "A Guide for Environmental Protection and Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities." Exceptions would include those areas designated as native grass planting areas. Initial and final restoration will be performed by the clearing contractor.
 - D. TVA holds the option, depending upon the time of year and weather condition, to delay or withdraw the requirement of seeding until more favorable planting conditions are certain. In the meantime, other stabilization techniques must be applied.

Revision July 2003

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APPENDIX III – TENNESSEE VALLEY AUTHORITY ENVIRONMENTAL QUALITY PROTECTION SPECIFICATIONS FOR TRANSMISSION LINE CONSTRUCTION

1. General – Tennessee Valley Authority (TVA) and/or the assigned contractor shall plan, coordinate, and conduct operations in a manner that protects the quality of the environment and complies with TVA's environmental expectations discussed in the preconstruction meeting. This specification contains provisions that shall be considered in all TVA and contract construction operations. If the contractor fails to operate within the intent of these requirements, TVA will direct changes to operating procedures. Continued violation will result in a work suspension until correction or remedial action is taken by the contractor. Penalties and contract termination will be used as appropriate. The costs of complying with the Environmental Quality Protection Specifications are incidental to the contract work, and no additional compensation will be allowed. At all structure and conductor pulling sites, protective measures to prevent erosion will be taken immediately upon the end of each step in a construction sequence, and those protective measures will be inspected and maintained throughout the construction and right-of-way rehabilitation period.
2. Regulations - TVA and/or the assigned contractor shall comply with all applicable Federal, state, and local environmental and antipollution laws, regulations, and ordinances related to environmental protection and prevention, control, and abatement of all forms of pollution.
3. Use Areas - TVA and/or the assigned contractor's use areas include but are not limited to site office, shop, maintenance, parking, storage, staging, assembly areas, utility services, and access roads to the use areas. The construction contractor shall submit plans and drawings for their location and development to the TVA engineer and project manager for approval. Secondary containment will be provided for fuel and petroleum product storage pursuant to 29CFR1910.106(D)(6)(iii)(OSHA).
4. Equipment - All major equipment and proposed methods of operation shall be subject to the approval of TVA. The use or operation of heavy equipment in areas outside the right-of-way, access routes, or structure, pole, or tower sites will not be permitted without permission of the TVA inspector or field engineer. Heavy equipment use on steep slopes (greater than 20 percent) and in wet areas will be held to the minimum necessary to construct the transmission line. Steps will be taken to limit ground disturbance caused by heavy equipment usage, and erosion and sediment controls will be instituted on disturbed areas in accordance with state requirements.

No subsurface ground-disturbing equipment or stump-removal equipment will be used by construction forces except on access roads or at the actual structure, pole, or tower sites, where only footing locations and controlled runoff diversions shall be created that disturb the soil. All other areas of ground cover or in-place stumps and roots shall remain in place. (Note: Tracked vehicles disturb surface layer of the ground due to size and function.) Some disking of the right-of-way may occur for proper seedbed preparation.

Unless ponding previously occurred (i.e., existing low-lying areas), water should not be allowed to pond on the structure sites except around foundation holes; the water must be directed away from the site in as dispersed a manner as possible. At tower or structure sites, some means of upslope interruption of potential overland flow and diversion around

the footings should be provided as the first step in construction-site preparation. If leveling is necessary, it must be implemented by means that provide for continuous gentle, controlled, overland flow or percolation. A good grass cover, straw, gravel, or other protection of the surface must be maintained. Steps taken to prevent increases in the moisture content of the in-situ soils will be beneficial both during construction and over the service life of any structure.

5. Sanitation - A designated TVA or contractor representative shall contact a sanitary contractor who will provide sanitary chemical toilets convenient to all principal points of operation for every working party. The facilities shall comply with applicable Federal, state, or local health laws and regulations. They shall not be located closer than 100 feet to any stream or tributary or to any wetland. The facilities shall be required to have proper servicing and maintenance, and the waste disposal contractor shall verify in writing that the waste disposal will be in state-approved facilities. Employees shall be notified of sanitation regulations and shall be required to use the toilet facilities.
6. Refuse Disposal - Designated TVA and/or contractor personnel shall be responsible for daily inspection, cleanup, and proper labeling, storage, and disposal of all refuse and debris produced by his operations and by his employees. Suitable refuse collecting facilities will be required. Only state-approved disposal areas shall be used. Disposal containers such as dumpsters or roll-off containers shall be obtained from a proper waste disposal contractor. Solid, special, construction/demolition, and hazardous wastes as well as scrap are part of the potential refuse generated and must be properly managed with emphasis on reuse, recycle, or possible give away, as appropriate, before they are handled as waste. Contractors must meet similar provisions on any project contracted by TVA.
7. Landscape Preservation - TVA and its contractors shall exercise care to preserve the natural landscape in the entire construction area as well as use areas, in or outside the right-of-way, and on or adjacent to access roads. Construction operations shall be conducted to prevent any unnecessary destruction, scarring, or defacing of the natural vegetation and surroundings in the vicinity of the work.
8. Sensitive Areas Preservation - Certain areas on site and along the right-of-way may be designated by the specifications or the TVA engineer as environmentally sensitive. These areas include but are not limited to areas classified as erodible, geologically sensitive, scenic, historical and archaeological, fish and wildlife refuges, water supply watersheds, and public recreational areas such as parks and monuments. Contractors and TVA construction crews shall take all necessary actions to avoid adverse impacts to these sensitive areas and their adjacent buffer zones. These actions may include suspension of work or change of operations during periods of rain or heavy public use; hours may be restricted or concentrations of noisy equipment may have to be dispersed. If prehistoric or historic artifacts or features are encountered during clearing or construction operations, the operations shall immediately cease for at least 100 feet in each direction, and TVA's right-of-way inspector or construction superintendent and Cultural Resources Program shall be notified. The site shall be left as found until a significance determination is made. Work may continue elsewhere beyond the 100-foot perimeter.
9. Water Quality Control - TVA and contractor construction activities shall be performed by methods that will prevent entrance or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into flowing caves, sinkholes, streams, dry watercourses, lakes, ponds, and underground water sources.

The clearing contractor will erect and (when TVA or contract construction personnel are unable) maintain Best Management Practices (BMPs) such as silt fences on steep slopes and adjacent to any stream, wetland, or other water body. Additional BMPs may be required for areas of disturbance created by construction activities. BMPs will be inspected by the TVA field engineer or other designated TVA or contractor personnel routinely and during periods of high runoff, and any necessary repairs will be made as soon as practicable. BMP inspections will be conducted in accordance with permit requirements. Records of all inspections will be maintained on site, and copies of inspection forms will be forwarded to the TVA construction environmental engineer.

Acceptable measures for disposal of waste oil from vehicles and equipment shall be followed. No waste oil shall be disposed of within the right-of-way, on a construction site, or on access roads.

10. Turbidity and Blocking of Streams - Construction activities in or near SMZs or other bodies of water shall be controlled to prevent the water turbidity from exceeding state or local water quality standards for that stream. All conditions of a general storm water permit, aquatic resource alteration permit, or a site-specific permit shall be met including monitoring of turbidity in receiving streams and/or storm water discharges and implementation of appropriate erosion and sediment control measures.

Appropriate drainage facilities for temporary construction activities interrupting natural site drainage shall be provided to avoid erosion. Watercourses shall not be blocked or diverted unless required by the specifications or the TVA engineer. Diversions shall be made in accordance with TVA's "A Guide for Environmental Protection and Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities."

Mechanized equipment shall not be operated in flowing water except when approved and, then, only to construct crossings or to perform required construction under direct guidance of TVA. Construction of stream fords or other crossings will only be permitted at approved locations and to current TVA construction access road standards. Material shall not be deposited in watercourses or within stream bank areas where it could be washed away by high stream flows. Appropriate U.S. Army Corps of Engineers and state permits shall be obtained.

Wastewater from construction or dewatering operations shall be controlled to prevent excessive erosion or turbidity in a stream, wetland, lake, or pond. Any work or placing of equipment within a flowing or dry watercourse requires the prior approval of TVA.

11. Clearing - No construction activities may clear additional site or right-of-way vegetation or disturb remaining retained vegetation, stumps, or regrowth at locations other than the structure sites and conductor setup areas. TVA and the construction contractor(s) must provide appropriate erosion or sediment controls for areas they have disturbed that have previously been restabilized after clearing operations. Control measures shall be implemented as soon as practicable after disturbance in accordance with applicable Federal, state, and/or local storm water regulations.
12. Restoration of Site - All construction disturbed areas, with the exception of farmland under cultivation and any other areas as may be designated by TVA's specifications, shall be stabilized in the following manner unless the property owner and TVA's engineer specify a different method:

- A. The subsoil shall be loosened to a minimum depth of 6 inches if possible and worked to remove unnatural ridges and depressions.
 - B. If needed, appropriate soil amendments will be added.
 - C. All disturbed areas will initially be seeded with a temporary ground cover such as winter wheat, rye, or millet, depending on the season. Perennials may also be planted during initial seeding if proper growing conditions exist. Final restoration and final seeding will be performed as line construction is completed. Final seeding will consist of permanent perennial grasses such as those outlined in TVA's "A Guide for Environmental Protection and Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities." Exceptions would include those areas designated as native grass planting areas. Initial and final restoration will be performed by the clearing contractor.
 - D. TVA holds the option, depending upon the time of year and weather condition, to delay or withdraw the requirement of seeding until more favorable planting conditions are certain. In the meantime, other stabilization techniques must be applied.
13. Air Quality Control - Construction crews shall take appropriate actions to minimize the amount of air pollution created by their construction operations. All operations must be conducted in a manner that avoids creating a nuisance and prevents damage to lands, crops, dwellings, or persons.
14. Burning - Before conducting any open burning operations, the contractor shall obtain permits or provide notifications as required to state forestry offices and/or local fire departments. Burning operations must comply with the requirements of state and local air pollution control and fire authorities and will only be allowed in approved locations and during appropriate hours and weather conditions. If weather conditions such as wind direction or speed change rapidly, the contractor's burning operations may be temporarily stopped by the TVA field engineer. The debris for burning shall be piled and shall be kept as clean and as dry as possible, then burned in such a manner as to reduce smoke. No materials other than dry wood shall be open burned. The ash and debris shall be buried away from streams or other water sources and shall be in areas coordinated with the property owner.
15. Dust and Mud Control - Construction activities shall be conducted to minimize the creation of dust. This may require limitations as to types of equipment, allowable speeds, and routes utilized. Water, straw, wood chips, dust palliative, gravel, combinations of these, or similar control measures may be used subject to TVA's approval. On new construction sites and easements, the last 100 feet before an access road approaches a county road or highway shall be graveled to prevent transfer of mud onto the public road.
16. Vehicle Exhaust Emissions - TVA and/or the contractors shall maintain and operate equipment to limit vehicle exhaust emissions. Equipment and vehicles that show excessive emissions of exhaust gasses and particulates due to poor engine adjustments or other inefficient operating conditions shall not be operated until corrective repairs or adjustments are made.
17. Vehicle Servicing - Routine maintenance of personal vehicles will not be performed on the right-of-way. However, if emergency or "have to" situations arise, minimal/temporary

maintenance to personal vehicles will occur in order to mobilize the vehicle to an off-site maintenance shop. Heavy equipment will be serviced on the right-of-way except in designated sensitive areas. The Heavy Equipment Department within TVA or the construction contractor will properly maintain these vehicles with approved spill prevention controls and countermeasures. If emergency maintenance in a sensitive or questionable area arises, the area environmental coordinator or construction environmental engineer will be consulted. All wastes and used oils will be properly recovered, handled, and disposed/recycled. Equipment shall not be temporarily stored in stream floodplains, whether overnight or on weekends or holidays.

18. Smoke and Odors - TVA and/or the contractors shall properly store and handle combustible material that could create objectionable smoke, odors, or fumes. The contractor shall not burn refuse such as trash, rags, tires, plastics, or other debris.
19. Noise Control - TVA and/or the contractor shall take measures to avoid the creation of noise levels that are considered nuisances, safety, or health hazards. Critical areas including but not limited to residential areas, parks, public use areas, and some ranching operations will require special considerations. TVA's criteria for determining corrective measures shall be determined by comparing the noise level of the construction operation to the background noise levels. In addition, especially noisy equipment such as helicopters, pile drivers, air hammers, chippers, chain saws, or areas for machine shops, staging, assembly, or blasting may require corrective actions when required by TVA.
20. Noise Suppression - All internal combustion engines shall be properly equipped with mufflers as required by the Department of Labor's "Safety and Health Regulations for Construction." TVA may require spark arresters in addition to mufflers on some engines. Air compressors and other noisy equipment may require sound-reducing enclosures in some circumstances.
21. Damages - The movement of construction crews and equipment shall be conducted in a manner that causes as little intrusion and damage as possible to crops, orchards, woods, wetlands, and other property features and vegetation. The contractor will be responsible for erosion damage caused by his actions and especially for creating conditions that would threaten the stability of the right-of-way or site soil, the structures, or access to either. When property owners prefer the correction of ground cover condition or soil and subsoil problems themselves, the section of the contract dealing with damages will apply.

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APPENDIX IV – TENNESSEE VALLEY AUTHORITY TRANSMISSION CONSTRUCTION GUIDELINES NEAR STREAMS

Even the most carefully designed transmission line project eventually will affect one or more creeks, rivers, or other type of water body. These streams and other water areas are protected by state and Federal law, generally support some amount of fishing and recreation, and, occasionally, are homes for important and/or endangered species. These habitats occur in the stream and on strips of land along both sides (the streamside management zone [SMZ]) where disturbance of the water, land, or vegetation could have an adverse effect on the water or stream life. The following guidelines have been prepared to help Tennessee Valley Authority (TVA) Transmission Construction staff and their contractors avoid impacts to streams and stream life as they work in and near SMZs. These guidelines expand on information presented in “A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities.”

Three Levels of Protection

During the preconstruction review of a proposed transmission line, TVA Resource Stewardship staff will have studied each possible stream impact site and will have identified it as falling into one of three categories: (A) standard stream protection, (B) protection of important permanent streams, or C) protection of unique habitats. These category designations are based on the variety of species and habitats that exist in the stream as well as state and Federal requirements to avoid harming certain species. The category designation for each site will be marked on the plan and profile sheets. Construction crews are required to protect streams and other identified water habitats using the following pertinent set(s) of guidelines:

(A) Standard Stream Protection

This is the standard (basic) level of protection for streams and the habitats around them. The purpose of the following guidelines is to minimize the amount and length of disturbance to the water bodies without causing adverse impacts on the construction work.

Guidelines:

1. All construction work around streams will be done using pertinent Best Management Practices (BMPs) such as those described in “A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities,” especially Chapter 6, Standards and Specifications.
2. All equipment crossings of streams must comply with appropriate state permitting requirements. Crossings of all drainage channels, intermittent streams, and permanent streams must be done in ways that avoid erosion problems and long-term changes in water flow. Crossings of any permanent streams must allow for natural movement of fish and other aquatic life.
3. Cutting of trees within SMZs must be accomplished by using either hand-held equipment or other appropriate clearing equipment (e.g., a feller-buncher) that would result in minimal soil disturbance and damage to low-lying vegetation. The method will be selected based on site-specific conditions and topography to minimize soil disturbance

and impacts to the SMZ and surrounding area. Stumps can be cut close to ground level but must not be removed or uprooted.

4. Other vegetation near streams must be disturbed as little as possible during construction. Soil displacement by the actions of plowing, disking, blading, or other tillage or grading equipment will not be allowed in SMZs; however, a minimal amount of soil disturbance may occur as a result of clearing operations. Shorelines that have to be disturbed must be stabilized as soon as feasible.

(B) Protection of Important Permanent Streams

This category will be used when there is one or more specific reason(s) why a permanent (always-flowing) stream requires protection beyond that provided by standard BMPs. Reasons for requiring this additional protection include the presence of important sports fish (trout, for example) and habitats for Federal endangered species. The purpose of the following guidelines is to minimize the disturbance of the banks and water in the flowing stream(s) where this level of protection is required.

Guidelines:

1. Except as modified by guidelines 2-4 below, all construction work around streams will be done using pertinent BMPs such as those described in "A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities," especially Chapter 6, Standards and Specifications.
2. All equipment crossings of streams must comply with appropriate state (and, at times, Federal) permitting requirements. Crossings of drainage channels and intermittent streams must be done in ways that avoid erosion problems and long-term changes in water flow. Proposed crossings of permanent streams must be discussed in advance with Resource Stewardship staff and may require an on-site planning session before any work begins. The purpose of these discussions will be to minimize the number of crossings and their impact on the important resources in the streams.
3. Cutting of trees within SMZs must be accomplished by using either hand-held equipment or other appropriate clearing equipment (e.g., a feller-buncher) that would result in minimal soil disturbance and damage to low-lying vegetation. The method will be selected based on site-specific conditions and topography to minimize soil disturbance and impacts to the SMZ and surrounding area. Cutting of trees near permanent streams must be limited to those required to meet National Electric Safety Code and danger tree requirements. Stumps can be cut close to ground level but must not be removed or uprooted.
4. Other vegetation near streams must be disturbed as little as possible during construction. Soil displacement by the actions of plowing, disking, blading, or other tillage or grading equipment will not be allowed in SMZs; however, a minimal amount of soil disturbance may occur as a result of clearing operations. Shorelines that have to be disturbed must be stabilized as soon as possible and revegetated as soon as feasible.

(C) Protection of Unique Habitats

This category will be used when, for one or more specific reasons, a temporary or permanent aquatic habitat requires special protection. This relatively uncommon level of protection will be appropriate and required when a unique habitat (for example, a particular spring run) or protected species (for example, one that breeds in a wet-weather ditch) is known to occur on or adjacent to the construction corridor. The purpose of the following guidelines is to avoid or minimize any disturbance of the unique aquatic habitat.

Guidelines:

1. Except as modified by Guidelines 2-4 below, all construction work around the unique habitat will be done using pertinent BMPs such as those described in "A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities," especially Chapter 6, Standards and Specifications.
2. All construction activity in and within 30 meters (100 feet) of the unique habitat must be approved in advance by Resource Stewardship staff, preferably as a result of an on-site planning session. The purpose of this review and approval will be to minimize impacts on the unique habitat. All crossings of streams also must comply with appropriate state (and, at times, Federal) permitting requirements.
3. Cutting of trees within 30 meters (100 feet) of the unique habitat must be discussed in advance with Resource Stewardship staff, preferably during the on-site planning session. Cutting of trees near the unique habitat must be kept to an absolute minimum. Stumps must not be removed, uprooted, or cut shorter than 0.30 meter (1 foot) above the ground line.
4. Other vegetation near the unique habitat must be disturbed as little as possible during construction. The soil must not be disturbed by plowing, disking, blading, or grading. Areas that have to be disturbed must be stabilized as soon as possible and revegetated as soon as feasible, in some cases with specific kinds of native plants. These and other vegetative requirements will be coordinated with Resource Stewardship staff.

Additional Help

If you have questions about the purpose or application of these guidelines, please contact your supervisor or the environmental coordinator in the local Transmission Service Center.

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Comparison of Guidelines Under the Three Stream and Water Body Protection Categories (page 1)

Guidelines	A: Standard	B: Important Permanent Streams	C: Unique Water Habitats
1. Reference	<ul style="list-style-type: none"> All TVA construction work around streams will be done using pertinent BMPs such as those described in "A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities," especially Chapter 6, BMP Standards and Specifications. 	<p>Except as modified by guidelines 2-4 below, all construction work around streams will be done using pertinent BMPs such as those described in "A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities," especially Chapter 6, BMP Standards and Specifications.</p>	<ul style="list-style-type: none"> Except as modified by guidelines 2-4 below, all construction work around the unique habitat will be done using pertinent BMPs such as those described in "A Guide for Environmental Protection and Best Management Practices for TVA Construction and Maintenance Activities," especially Chapter 6, BMP Standards and Specifications.
2. Equipment Crossings	<ul style="list-style-type: none"> All crossings of streams must comply with appropriate state and Federal permitting requirements. Crossings of all drainage channels, intermittent streams, and permanent streams must be done in ways that avoid erosion problems and long-term changes in water flow. Crossings of any permanent streams must allow for natural movement of fish and other aquatic life. 	<ul style="list-style-type: none"> All crossings of streams must comply with appropriate state and Federal permitting requirements. Crossings of drainage channels and intermittent streams must be done in ways that avoid erosion problems and long-term changes in water flow. Proposed crossings of permanent streams must be discussed in advance with Resource Stewardship staff and may require an on-site planning session before any work begins. The purpose of these discussions will be to minimize the number of crossings and their impact on the important resources in the streams. 	<ul style="list-style-type: none"> All crossings of streams also must comply with appropriate state and Federal permitting requirements. All construction activity in and within 30 meters (100 feet) of the unique habitat must be approved in advance by Resource Stewardship staff, preferably as a result of an on-site planning session. The purpose of this review and approval will be to minimize impacts on the unique habitat.

Comparison of Guidelines Under the Three Stream and Water Body Protection Categories (page 2)

Guidelines	A: Standard	B: Important Permanent Streams	C: Unique Water Habitats
3. Cutting Trees	<ul style="list-style-type: none"> • Cutting of trees within SMZs must be accomplished by using either hand-held equipment or other appropriate clearing equipment (e.g., a feller-buncher) that would result in minimal soil disturbance and damage to low-lying vegetation. The method will be selected based on site-specific conditions and topography to minimize soil disturbance and impacts to the SMZ and surrounding area. • Stumps can be cut close to ground level but must not be removed or uprooted. 	<ul style="list-style-type: none"> • Cutting of trees with SMZs must be accomplished by using either hand-held equipment or other appropriate clearing equipment (e.g., a feller-buncher) that would result in minimal soil disturbance and damage to low-lying vegetation. The method will be selected based on site-specific conditions and topography to minimize soil disturbance an impacts to the SMZ and surrounding area. • Cutting of trees near permanent streams must be limited to those meeting National Electric Safety Code and danger tree requirements. • Stumps can be cut close to ground level but must not be removed or uprooted. 	<ul style="list-style-type: none"> • Cutting of trees within 30 meters (100 feet) of the unique habitat must be discussed in advance with Resource Stewardship staff, preferably during the on-site planning session. Cutting of trees near the unique habitat must be kept to an absolute minimum. • Stumps must not be removed, uprooted, or cut shorter than one foot above the ground line.
4. Other Vegetation	<ul style="list-style-type: none"> • Other vegetation near streams must be disturbed as little as possible during construction. • Soil displacement by the actions of plowing, disking, blading, or other tillage or grading equipment will not be allowed in SMZs; however, a minimal amount of soil disturbance may occur as a result of clearing operations. • Shorelines that have to be disturbed must be stabilized as soon as feasible. 	<ul style="list-style-type: none"> • Other vegetation near streams must be disturbed as little as possible during construction. • Soil displacement by the actions of plowing, disking, blading, or other tillage or grading equipment will not be allowed in SMZs; however, a minimal amount of soil disturbance may occur as a result of clearing operations. • Shorelines that have to be disturbed must be stabilized as soon as possible and revegetated as soon as feasible. 	<ul style="list-style-type: none"> • Other vegetation near the unique habitat must be disturbed as little as possible during construction. • The soil must not be disturbed by plowing, disking, blading, or grading. • Areas that have to be disturbed must be stabilized as soon as possible and revegetated as soon as feasible, in some cases with specific kinds of native plants. These and other vegetative requirements will be coordinated with Resource Stewardship staff

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APPENDIX V – TENNESSEE VALLEY AUTHORITY RIGHT-OF-WAY VEGETATION MANAGEMENT

Tennessee Valley Authority (TVA) must manage its rights-of-way and easements to ensure emergency maintenance access and routine access to structures, switches, conductors, and communications equipment. In addition, TVA must ensure National Electrical Safety Code electrical clearances between tall-growing vegetation and any other structures. Trees located off right-of-way trees that could fall or be cut into a transmission line are also very important.

These requirements are imperative to the maintenance of the transmission system and, in some cases, underbuilt distribution lines. It is seldom understood by customers or the general public that electricity must continuously be produced and transmitted on an instant-to-instant basis to serve the demand placed on the system by continuously changing electrical load. When a switch is turned on, electricity must flow instantaneously. With increasingly complex and diverse electronic equipment controlled by computers, microchips, and other systems that respond to microsecond interruptions, any disturbance on transmission or distribution lines instantaneously affects the overall reliability of critical devices, especially production devices; security systems; process controls; medical devices; water purification and sewage treatment systems; fire and safety protection systems; communication and control systems; etc. These systems have little tolerance of even a few microseconds of interruption.

Each year, TVA must assess the conditions of the vegetation on and along its rights-of-way. This is accomplished by aerial inspections of each line, periodic walking inspections, information from aerial photographs, information from TVA field personnel, property owners, and the general public. Information is developed regarding vegetation species present, the mix of species, the observed growth, the seasonal growing conditions, and the density of the tall vegetation. TVA also evaluates the proximity, height, and growth rate of trees that may be adjacent to the right-of-way and that may be a danger to the line or structures. TVA right-of-way program administrators develop a vegetation-reclearing plan that is specific to each line segment; it is based on terrain conditions, species mix, growth, and density. They evaluate accessibility, right-of-way, and adjacent sensitive areas, land use and development, and a series of additional parameters. To the maximum extent possible, line segments from substation busbar to substation busbar should be recleared in the same year so a line can be made as reliable as reasonably possible.

Complicating factors are the rich diversity of tall-growing and climbing vegetation species in the power service area. The long growing season with abundant rain greatly accelerates growth in the moderate to rich soils of the TVA power service area. In addition, many rapid growing species are accelerated growers when competing vegetation is removed or reduced. Diverse geographic features, slopes, and conditions along line easements create many sensitive environmental and public interest areas on or adjacent to rights-of-way.

For the above reasons, TVA uses an integrated vegetation management approach. In farming areas of right-of-way crops and pasture, TVA encourages property owner management of the right-of-way using low-growing crops year after year. In dissected terrain with rolling hills and interspersed woodlands traversed by the rights-of-way, TVA uses mechanical mowing to a large extent.

When slopes become hazardous to farm tractors and rotary mowers, TVA may use a variety of herbicides specific to the species present with a variety of possible application techniques. When scattered small segments of tall-growing vegetation are present but accessibility along the right-of-way is difficult or the path to such segments is very long compared to the amount present, herbicides may be used.

In very steep terrain, in sensitive environmental areas, in extensive wetlands, at stream banks, and in sensitive property owner land use areas, hand clearing may be utilized. Hand clearing is recognized as one of the most hazardous occupations documented by the Occupational Health and Safety Administration. For that reason, TVA is actively looking at better control methods including use of low-volume herbicide applications, occasional singletree injections, and tree-growth regulators.

TVA does not encourage individual property owner tree reclearing activity because of the high hazard potential of hand clearing, possible interruptions of the line, and electrical safety considerations for untrained personnel that might do the work. Private property owners may reclear the right-of-way with trained reclearing professionals.

TVA's experience initially was completely with hand clearing. World War II manpower shortages forced TVA to look toward developments in herbicide research. An era of near exclusive use of herbicides existed. Then, because of the discovery of residue accumulations with many pesticides and price increases of herbicides, high-volume applications lost favor, and TVA sought other modes of vegetation control. Farm equipment of greater power and efficiency allowed use of tractor-mounted rotary mowers. These mowers not only cut the tall saplings and seedlings on the right-of-way, they shatter the stump and the supporting near-surface root crown. The tendency of resistant species is to resprout from the root crown, and shattered stumps produce a multistem dense stand in the immediate area. Repeated use of the mowers on short-cycle reclearing with many original stumps regrowing in the above manner creates a single-species thicket or monoculture. With the original large root system and multiple stems, the resistant species can and usually do produce regrowth at the rate of 5-10 feet in a year. In years with high rainfall, the growth can reach 12-15 feet in a single year.

These created, dense, monoculture stands can become nearly impenetrable for even large tractors. Such stands have low diversity, little wildlife food or nesting potential, and become a property owner concern. They tend to spread off the right-of-way into more desirable species areas. Increasingly, TVA is receiving complaints about the shatter sapling debris density. The potential exists for insect invasion or fungus infection resulting from the easy invasion of damaged specimens or debris. Once started, such infestations or invasions can spread into valuable timber of the same or related species off the right-of-way.

Therefore, TVA has been working with universities (such as Mississippi State University, University of Tennessee, Purdue University, and others), chemical companies, other utilities, and personnel of the U.S. Department of Transportation, U.S. Fish and Wildlife Service, and U.S. Forest Service to explore other means of dealing with problem vegetation. The results have been strong recommendations to use species-specific, low-volume herbicide applications in more situations. Research, demonstrations, and other right-of-way programs show a definite improvement of rights-of-way treated with selective low-volume applications of new herbicides using a variety of application techniques and timing.

The above-named universities strongly recommend low-volume herbicide applications since their research demonstrates much wider plant diversity after such applications. They report better ground erosion protection and the development of more wildlife food plants and cover plants. In most situations, there is increased development of wild flowering plants and shrubs. In conjunction with herbicides, the diversity and density of low-growing plants provide control of tall-growing species through competition.

Wildlife managers are specifically requesting the use of herbicides in place of rotary mowing in order to avoid damage to nesting and tunneling wildlife. This method retains groundcover year-round with a better mix of food species and associated high-protein insect populations for birds in the right seasons. Most also report less damage to soils (even when compared with rubber-tired equipment).

Property owners interested in tree production are requesting use of low-volume applications rather than hand or mechanical clearing because of the insect and fungus problems in damaged vegetation and debris left on rights-of-way. The insect and fungus invasions such as pine tip moth, oak leaf blight, sycamore and dogwood blight, etc., are becoming widespread across the nation.

Some property owners have special interests. In those cases, TVA attempts to work with them to either have them sign agreements in which they maintain the right-of-way in right-of-way crops or pasture or they do the actual right-of-way maintenance. Some may choose to use low-growing trees or fruit trees, sod, vegetable crops, or other low vegetation types.

TVA discusses with property owners the potential to sign an agreement to manage their land for wildlife under the auspices of "Project Habitat," a joint TVA/American Cyanamid wildlife organization. The property owner maintains the right-of-way in wildlife food and cover with emphasis on quail, turkey, deer, or related forms. A variation used in or adjacent to developing suburban areas is to sign agreements with the developer and residents to plant and maintain wildflowers on the right-of-way.

TVA places strong emphasis on developing rights-of-way in the above manner. When the property owners do not agree to these opportunities, TVA must maintain the right-of-way in the most environmentally acceptable, cost and vegetation effective and efficient manner possible.

Approved Herbicides for Usage on TVA Rights-of-Way

<u>Trade Name</u>	<u>Active Ingredients</u>	<u>Label Signal Word</u>
Accord	Glyphosate/Liquid	Caution
Arsenal	Imazapyr/Liquid/Granule	Caution
Escort	Metsulfuron Methyl/dry flowable	Caution
Garlon	Triclopyr/Liquid	Caution
Garlon 3A	Triclopyr/Liquid	Danger
Diuron	Diuron/Flowable powder	Caution
Spike 40P	Tebuthiuron/Pellet	Caution
Spike 80W	Tebuthiuron/Wettable powder	Caution
Transline	Clopyralid/Liquid	Caution
Pathfinder II	Triclopyr/RTU	Caution
Krenite UT	Fosamine Ammonium	Warning
Vanquish	Diglycolamine	Caution

Approved Herbicides for Bare Ground Areas

<u>Trade Name</u>	<u>Active Ingredients</u>	<u>Label Signal Word</u>
Chopper	Imazapyr/RTU	Caution
Topsite	Diuron/Imazapyr	Caution
Roundup	Glyphosate/Liquid	Caution
SpraKil SK-26	Tebuthiuron and Diuron	Caution
Sahara	Diuron/Imazapyr	Caution
Roundup Pro	Glyphosate	Caution
Endurance	Prodiamine	Caution
Predict	Norflurazon	Caution

Tree growth regulators (TGRs) are being considered for use on tall trees that have special circumstances where they must be trimmed on a regular cycle.

Approved TGRs for Use on TVA Property

<u>Trade Name</u>	<u>Active Ingredients</u>	<u>Label Signal Word</u>
TGR	Flurprimidol	Caution
Profile 2SC	TGR-paclobutrazol	Caution

The herbicide Pathway is being considered for use following initial clearing. Test plots have been established to determine the effectiveness of Pathway. Pathway is a mix of Picloram and 2,4-D and carries a "Warning" signal word.

These herbicides have been evaluated in extensive studies at universities in support of registration applications and label requirements. Most have been reviewed in the U.S. Forest Service (USFS) Vegetation Management Environmental Impact Statements (EISs), and those evaluations are incorporated here by reference. The result of these reviews has been a consistent finding of limited environmental impact beyond that of control of the target vegetation. All the listed herbicides have been found to be of low-environmental toxicity to resources (including buffer zones for listed threatened or endangered species) when applied by trained applicators following the label and registration procedures.

Those not addressed in the USFS EISs or their supporting research have been peer reviewed in university research, addressed in U.S. Environmental Protection Agency (USEPA) literature reviews, or are discussed in documents on file at USEPA and U.S. Fish and Wildlife Service libraries. On the basis of this literature and TVA's reviews, the approved list above has been compiled and is reviewed again each year as new information is published.

The rates of application utilized are those listed on the USEPA-approved label and consistent with the revised application rates of the USFS Vegetation Management EIS Record of Decision. These typical application rates, in pounds/acre of active ingredient, are as follows:

Herbicide	Application Method					
	Aerial Liquid	Aerial Granule	Mechanical Liquid	Mechanical Granule	Manual Hand	Manual Foliar
2,4-D amine	2.0		2.5			2.0
2,4-D ester	2.5		4.0			2.0
2,4-DP	3.0		4.0			1.0
Dicamba			2.0			2.0
Krenite	6.0		7.8			
Glyphosate	1.5		1.5			1.0
Hexazinone	4.0	4.0	4.0	4.0	4.0	4.0
Imazapyr	0.75		0.75			0.75
Fuel oil	0.5		2.0			1.5
Limonene	0.9		0.9			0.9
Picloram	0.5		0.7			0.4
Sulfomet	0.13		0.17			0.06
Tebuthiuron	1.0	1.0	1.0	1.0		4.0
Triclopyr amine	4.0		4.0			4.0
Triclopyr ester	4.0		4.0			4.0

TVA currently uses primarily low-volume applications of foliar and basal applications of Accord (Glyphosate) and Accord (Glyphosate)-Arsenal (Imazapyr) tank mixes. Glyphosate is one of the most widely used herbicidal active ingredients in the world and has been continuously the subject of numerous exhaustive studies and scrutiny to determine its potential impacts on humans, animals, and the environment.

Accord, labeled for vegetation management in forestry and utility rights-of-way applications, has a full aquatics label and can be applied to emergent weeds in all bodies of fresh and brackish water. There is no restriction on the use of treated water for irrigation, recreation, or domestic purposes.

Accord is applied to the foliage of actively growing plants. The active ingredient is absorbed through the leaves and rapidly moves throughout the plant. Glyphosate prevents the plant from producing amino acids that are unique to plants and are building blocks of plant proteins. The plant, unable to make proteins, stops growing and dies.

The favorable environmental fate characteristic of Accord herbicide and its major metabolite (breakdown product) aminomethylphosphonic acid (AMPA) is well known. Continuing research is underway with more than 400 studies conducted to date in the laboratory and under field use conditions. These studies show rapid breakdown, little soil or plant debris retention, and little vertical movement into soil below the surface.

Glyphosate is naturally degraded by microbes in soil and water under both aerobic (with oxygen) and anaerobic (without oxygen) conditions. AMPA is further degraded in soil and sediments to phosphorus, nitrogen, hydrogen, and carbon dioxide. Glyphosate binds

rapidly and completely to a wide range of soils and sediment when introduced into the environment. This essentially eliminates movement in the soil. The average half-life of glyphosate in soils is less than 45 days. Half-life for the dissipation of glyphosate in environmental waters ranges from 1.5 to 14 days.

Glyphosate is nontoxic to birds, mammals, and bees and has been shown not to bioaccumulate since it acts in plants through an enzyme system that does not exist in animals or humans.

Arsenal (Imazapyr) has been similarly tested, and it is found to have low-leaching potential in soils. When available on or in the soil, it is broken down rapidly by soil microbes to naturally occurring compounds. When not available, Imazapyr is bound tightly to soil colloids and is unavailable for movement. The half-life in soil is 25 to 65 days.

Extensive chronic and acute toxicity studies have made Arsenal a USEPA-classified herbicide as practically nontoxic to humans, mammals, birds, fish, aquatic invertebrates, and insects. The chronic studies demonstrate that Imazapyr is non-teratogenic, non-mutagenic, and not a carcinogen.

The mode of action suppresses amino acids of the plant via an enzyme system containing acetohydroxy acid synthase. This enzyme system does not exist in other forms of life including humans and animals.

Revision July 2003

**APPENDIX VI – FEDERALLY AND STATE-LISTED PLANT
SPECIES REPORTED FROM CLAY AND LOWNDES COUNTIES IN
MISSISSIPPI**

Common name	Scientific name	Status ^a	
		Federal	State
Alabama grape-fern	<i>Botrychium jenmanii</i>	--	NOST (S1?)
Allegheny-spurge	<i>Pachysandra procumbens</i>	--	NOST (S3)
American bladdernut	<i>Staphylea trifolia</i>	--	NOST (S3)
American colombo	<i>Swertia caroliniensis</i>	--	NOST (S2S3)
American ginseng	<i>Panax quinquefolius</i>	--	NOST (S3)
Ashe hawthorn	<i>Crataegus ashei</i>	--	NOST (S1)
Balsam ragweed	<i>Senecio pauperculus</i>	--	NOST (SR)
Barbed rattlesnake-root	<i>Prenanthes barbata</i>	--	NOST (S1)
Big shellbark hickory	<i>Carya laciniosa</i>	--	NOST (S2S3)
Blue ash	<i>Fraxinus quadrangulata</i>	--	NOST (S2)
Burning bush	<i>Euonymus atropurpureus</i>	--	NOST (S2S3)
Bur oak	<i>Quercus macrocarpa</i>	--	NOST (S2)
Canada moonseed	<i>Menispermum canadense</i>	--	NOST (S3S4)
Canada wild-ginger	<i>Asarum canadense</i>	--	NOST (S2S3)
Carolina anglepod	<i>Matalea carolinensis</i>	--	NOST (S3)
Clustered poppy-mallow	<i>Callirhoe triangulata</i>	--	NOST (S1S2)
Crested coralroot	<i>Hexalectris spicata</i>	--	NOST (S2)
Crested fringed orchid	<i>Platanthera cristata</i>	--	NOST (S3)
Earleaf false-foxglove	<i>Tomanthera auriculata</i>	--	NOST (S1)
Eastern eulophus	<i>Perideridia americana</i>	--	NOST (S1S2)
Eastern purple coneflower	<i>Echinacea purpurea</i>	--	NOST (S3S4)
Giant chickweed	<i>Stellaria pubera</i>	--	NOST (S2S3)
Great Plains ladies'-tresses	<i>Spiranthes magnicamporum</i>	--	NOST (S2S3)
Green violet	<i>Hybanthus concolor</i>	--	NOST (S2)
Hairy woodrush	<i>Luzula acuminata</i>	--	NOST (S3)
Lance-leaved buckthorn	<i>Rhamnus lanceolata</i>	--	NOST (S2)
Large-flowered evening-primrose	<i>Oenothera grandiflora</i>	--	NOST (S1)
Limestone adder's-tongue	<i>Ophioglossum engelmannii</i>	--	NOST (S1)
Lobed tickseed	<i>Coreopsis auriculata</i>	--	NOST (S2S3)
Mead's sedge	<i>Carex meadii</i>	--	NOST (S3S4)
Mountain holly	<i>Ilex montana</i>	--	NOST (S3?)
Narrow flowered beard tongue	<i>Penstemon tenuiflorus</i>	--	NOST (S3S4)
Nebraska sedge	<i>Carex jamesii</i>	--	NOST (S1S2)
Nettle-leaf sage	<i>Salvia urticifolia</i>	--	NOST (S2S3)
Ohio buckeye	<i>Aesculus glabra</i>	--	NOST (S2)
Ovate catchfly	<i>Silene ovata</i>	--	NOST (S1S2)
Painted sedge	<i>Carex picta</i>	--	NOST (S2S3)
Prairie-iris	<i>Nemastylis geminiflora</i>	--	NOST (S2)
Prairie parsley	<i>Polytaenia nuttallii</i>	--	NOST (S2)
Prairie scorpion-weed	<i>Phacelia strictiflora</i>	--	NOST (SR)
Price's potato bean	<i>Apios priceana</i>	LT	NOST (S1)

Common name	Scientific name	Status ^a	
		Federal	State
Pumpkin ash	<i>Fraxinus profunda</i>	--	NOST (S3)
Rattle-vetch	<i>Astragalus canadensis</i>	--	NOST (S2)
Rough rattlesnake-root	<i>Prenanthes aspera</i>	--	NOST (S2)
Scarlet indian-paintbrush	<i>Castilleja coccinea</i>	--	NOST (S1)
Shinners' false-foxglove	<i>Agalinis pseudaphylla</i>	--	NOST (S2)
Shootingstar	<i>Dodecatheon meadia</i>	--	NOST (S2)
Slender sedge	<i>Carex gracilescens</i>	--	NOST (S2S3)
Slender toothwort	<i>Dentaria heterophylla</i>	--	NOST (S2S3)
Small palafoxia	<i>Palafoxia callosa</i>	--	NOST (S1)
Small-toothed sedge	<i>Carex microdonta</i>	--	NOST (S2?)
Smoother sweet-cicely	<i>Osmorhiza longistylis</i>	--	NOST (S3)
Southern lady's-slipper	<i>Cypripedium kentuckiense</i>	--	NOST (SU)
Southern meadow-rue	<i>Thalictrum debile</i>	--	NOST (S1S2)
Spreading bladder-pod	<i>Lesquerilla gracilis</i>	--	NOST (S2)
Stiff greenthreads	<i>Thelesperma filifolium</i>	--	NOST (S1)
Three birds orchid	<i>Triphora trianthophora</i>	--	NOST (S2S3)
Three-flowered hawthorn	<i>Crataegus triflora</i>	--	NOST (S1)
Turk's-cap lily	<i>Lilium superbum</i>	--	NOST (S3S4)
Vase-vine leather-flower	<i>Clematis beadleii</i>	--	NOST (S1)
White dog's tooth violet	<i>Erythronium albidum</i>	--	NOST (S2)
White heath aster	<i>Aster ericoides</i>	--	NOST (S2)
White turtlehead	<i>Chelone glabra</i>	--	NOST (S3)
Wild hyacinth	<i>Camassia scilloides</i>	--	NOST (S2S3)
Wire sedge	<i>Carex tenax</i>	--	NOST (S3S4)
Yellow lady's-slipper	<i>Cypripedium pubescens</i>	--	NOST (S2S3)

^a Status code: **NOST** - Mississippi Natural Heritage Program does not assign status codes to state-listed species; this designation indicates the species is tracked by the Mississippi Natural Heritage Program due to its rarity in the state; **S1** - critically imperiled in Mississippi with 5 or fewer occurrences; **S2** - imperiled with 6 to 20 occurrences; **S3** - rare or uncommon with 21 to 100 occurrences; **S4** - widespread, abundant, and apparently secure with more than 101 occurrences; **SR** - species is reported from the state, but without persuasive documentation that would provide a basis for either accepting or rejecting the report; **SU** - that species is possibly in peril in Mississippi but status is uncertain; **LT**=federally listed as threatened.

APPENDIX VII – FEDERALLY AND STATE-LISTED AQUATIC ANIMAL SPECIES REPORTED FROM CLAY, LOWNDES, AND OKTIBBEHA COUNTIES, MISSISSIPPI^a

Common Name	Scientific Name	Status	
		Federal	State
Crayfish			
Pearl riverlet crayfish	<i>Hobbseus attenuatus</i>	--	NOST (S2)
Oktibbeha rivulet crayfish	<i>Hobbseus orconectoides</i>	--	NOST (S1)
Tombigbee riverlet crayfish ^b	<i>Hobbseus petilus</i>	--	NOST (S2)
Mississippi flatwoods crayfish	<i>Procambarus cometes</i>	--	NOST (S1)
Fish			
Crystal darter	<i>Crystallaria asprella</i>	--	END (S1)
Alabama shiner ^b	<i>Cyprinella callistia</i>	--	NOST (S2)
Backwater darter	<i>Etheostoma zonifer</i>	--	NOST (S1)
Chestnut lamprey	<i>Ichthyomyzon castaneus</i>	--	NOST (S3)
Fluvial shiner ^b	<i>Notropis edwardraneyi</i>	--	NOST (S1)
Frecklebelly madtom ^b	<i>Noturus munitus</i>	--	END (S2)
Freckled darter ^b	<i>Percina lenticula</i>	--	NOST (S2)
Alabama sturgeon	<i>Scaphirhynchus suttkusi</i>	END	END (S1)
Mussels			
Rock pocketbook	<i>Arcidens confragosus</i>	--	NOST (S2)
Alabama spike	<i>Elliptio arca</i>	--	NOST (S3)
Delicate spike	<i>Elliptio arctata</i>	--	END (S1)
Southern combshell	<i>Epioblasma penita</i>	END	END (S1)
Orange-nacre mucket ^b	<i>Lampsilis perovalis</i>	THR	END (S1)
Black sandshell	<i>Ligumia recta</i>	--	NOST (S2)
Alabama moccasinshell	<i>Medionidus acutissimus</i>	THR	END (S1)
Southern hickorynut	<i>Obovaria jacksoniana</i>	--	NOST (S2)
Alabama hickorynut	<i>Obovaria unicolor</i>	--	NOST (S3)
Rough fatmucket	<i>Lampsilis straminea straminea</i>	--	NOST (S3)
Southern clubshell ^b	<i>Pleurobema decisum</i>	END	END (S1S2)
Ovate clubshell ^b	<i>Pleurobema perovatum</i>	END	END (S1)
Ridged mapleleaf	<i>Quadrula rumphiana</i>	--	NOST (S2)
Alabama creekmussel	<i>Strophitus connasaugaensis</i>	--	NOST (S1)
Southern creekmussel	<i>Strophitus subvexus</i>	--	NOST (S2)
Squawfoot	<i>Strophitus undulatus</i>	--	NOST (S1)
Deertoe	<i>Truncilla truncata</i>	--	NOST (S3)
Tapered pondhorn	<i>Unio meris declivis</i>	--	NOST (S2)
Snail			
Cylinder elimia	<i>Elimia cylindracea</i>	--	NOST (SNR)

^a The proposed project is located in Clay and Lowndes Counties; however, parts of Oktibbeha County were located within the 10-mile search radius for the proposed project. Since USFWS requests that data be presented by the entire county for projects that could potentially affect federally listed species, all sensitive aquatic species for the three counties have been listed.

^b Species occurs within 10 miles of the proposed project area.

Status abbreviations: **END** = Endangered; **THR** = Threatened; **NOST** = No assigned status by state of Mississippi; **SNR** = Not rated; **S1** - critically imperiled in Mississippi with 5 or fewer occurrences; **S2** - imperiled with 6 to 20 occurrences; **S3** - rare or uncommon with 21 to 100 occurrences

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APPENDIX VIII – SUMMARY OF STREAM CROSSING LOCATIONS ON THE PROPOSED TRANSMISSION LINE AND ASSOCIATED ACCESS ROADS

Stream Name	Location	Watercourse Type ^a	Commitments
unnamed tributary of Town Creek	new right-of-way	Intermittent	Category A ^b
unnamed conveyance to Town Creek	new right-of-way	WWC	Standard BMPs
unnamed tributary of Town Creek	rebuild right-of-way	Intermittent	Category A
unnamed tributary of Town Creek	rebuild right-of-way	Intermittent	Category A
unnamed tributary of Town Creek	rebuild right-of-way	Intermittent	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Intermittent	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Intermittent	Category A
McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed conveyance to McGee Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Intermittent	Category A
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of McGee Creek	rebuild right-of-way	Perennial	Category A
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
unnamed tributary of Spring Creek	rebuild right-of-way	Intermittent	Category A
unnamed conveyance to Spring Creek	rebuild right-of-way	WWC	Standard BMPs
Spring Creek	rebuild right-of-way	Perennial	Category A
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
unnamed tributary of Spring Creek	rebuild right-of-way	Perennial	Category A
unnamed tributary of Spring Creek	rebuild right-of-way	Intermittent	Category A
unnamed tributary of the Spring Creek embayment of Columbus Reservoir	rebuild right-of-way	Perennial /Pond	Category A
unnamed conveyance to the Spring Creek embayment of Columbus Reservoir	rebuild right-of-way	WWC	Standard BMPs
Spring Creek embayment of Columbus Reservoir	rebuild right-of-way	Columbus Lake Crossing	Standard BMPs
Tibbee Creek embayment of Columbus Reservoir	rebuild right-of-way	Columbus Lake Crossing	Standard BMPs
unnamed cove of Columbus Reservoir	rebuild right-of-way	Perennial	Category A
unnamed tributary of Columbus Reservoir	rebuild right-of-way	Intermittent	Category A
unnamed conveyance to Columbus Reservoir	rebuild right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
unnamed tributary of Oak Slush Creek	rebuild right-of-way	Perennial	Category A
unnamed pond	rebuild right-of-way	Pond	Standard BMPs
Oak Slush Creek	rebuild right-of-way	Perennial	Category A
unnamed conveyances to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs

West Point-SeverCorr 161-kV Transmission Line

Stream Name	Location	Watercourse Type^a	Commitments
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed tributary of Oak Slush Creek	rebuild right-of-way	Intermittent	Category A
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed tributary of Oak Slush Creek	rebuild right-of-way	Perennial	Category A
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	rebuild right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Oak Slush Creek	new right-of-way	WWC	Standard BMPs
Mayo Slough	new right-of-way	Perennial	Category A
unnamed conveyance to Mayo Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Mayo Slough	new right-of-way	WWC	Standard BMPs
unnamed tributary of Mayo Slough	new right-of-way	Perennial	Category A
unnamed conveyance to Mayo Slough	new right-of-way	WWC	Standard BMPs
unnamed tributary of Motley Slough	new right-of-way	Intermittent	Category A
unnamed tributary of Motley Slough	new right-of-way	Intermittent	Category A
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed tributary of Motley Slough	new right-of-way	Perennial	Category A
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed conveyance to Motley Slough	new right-of-way	WWC	Standard BMPs
unnamed tributary of Motley Slough	new right-of-way	Perennial	Category A
unnamed tributary of Motley Slough	new right-of-way	Intermittent	Category A
unnamed tributary of Motley Slough	new right-of-way	WWC	Standard BMPs

^a WWC = wet-weather conveyance; perennial or intermittent stream type determined by level of flow and evidence of aquatic life at time of site visit

^b All Category A SMZ widths are 50 feet

^c Lowndes County-Golden Triangle Megasite

^d N/A = not applicable