

FINAL ENVIRONMENTAL ASSESSMENT

(File No. 200400466)

Tennessee Wildlife Resources Agency

Proposed Channel Fill and Adjacent Wetland Fill, Unnamed Tributaries to the Tennessee River
Mile 522.8 – 523.7, Right Bank,
Rhea County, Tennessee

U.S. ARMY CORPS OF ENGINEERS
Nashville District, Regulatory Branch

Cooperating Agency
Tennessee Valley Authority

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Date

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1.0 Proposed Activity

Background. The Tennessee Wildlife Resources Agency (TWRA) submitted a joint application on 3 February 2005, for a Department of the Army permit pursuant to Section 404 of the Clean Water Act, a Section 10 of the Rivers and Harbors Act of 1899, and a TVA permit pursuant to Section 26a of the TVA Act for the proposed placement of permanent fill in approximately 0.75 acres of wetlands and the placement of 1,321 cubic yards of fill material at four locations in unnamed tributaries to the Tennessee River mile 521.8 – 522.7 right bank. The TWRA proposes to construct four sub-impoundments and associated water control structures to allow the applicant to operate a waterfowl impoundment complex (green tree reservoir) at the Yuchi Refuge. Pool elevations of the sub-impoundments would range from 682.5 to 690 feet msl. and seasonally impound up to 91 acres a full pool. TWRA prepared an EA dated February 2004 in support of their TVA /DA application which described the proposal in further detail.

The refuge is a 2,475 acre tract of land located on Smith Bend of the Tennessee River in a sparsely populated area of Rhea County. Approximately 1,000 acres of the refuge consists of river bottom agricultural fields, upland fields, wetlands, and the balance of 1,475 acres is in upland forest. Public Notice 05-36 was published on 9 June 2005, advertising the proposal. The impacts associated with the proposal are located on a large tract of land currently owned by the State of Tennessee. TWRA currently maintains a license on approximately 101 acres of TVA land which front the refuge along Chickamauga Reservoir. TVA retains ownership below elevation 685.44 at the four proposed tributary fill locations. The tributaries that would be impacted are approximately ten feet in width as they intersect at the river and fluctuate with the pool elevation of the Tennessee River. The forested wetlands impacted provide cover, plant diversity, wildlife habitat, and filtration of water. A memorandum for record with photographs of the impact area was completed 1 May 2004 (Appendix A). See Appendix B for Public Notice 05-36 containing a location map and detailed plans of the proposal. The applicant also submitted a wetland mitigation plan for the proposed impacts (Appendix C).

The Public Notice advertised the proposal requested by the applicant. The State of Tennessee issued water quality certification (NRS 04-026) for the proposed work on 4 August 2005. The certification provides assurance that water quality standards will not be violated if the work is conducted in accordance with the conditions set forth in the 401 Water Quality Certification. A copy is attached to this environmental assessment as Appendix D. Department of the Army authorization would require that the conditions of the state's Section 401 Water Quality Certification be followed.

Decision Required. Section 10 of the Rivers and Harbors Act of 1899 prohibits the alteration or obstruction of any navigable waters of the United States unless authorized by the Secretary of the Army acting through the Chief of Engineers. Mile 521.8 – 522.7 (Chickamauga Lake), Tennessee River is a navigable water of the United States as defined by 33 CFR Part 329.

Section 301 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States unless authorized by the Department of the Army pursuant to Section 404 of the same Act. The Tennessee River at Mile 521.8 – 522.7, is a water of the United States as defined by 33 CFR Part 328.

Section 26a of the TVA Act of the TVA Act requires that TVA approval be obtained prior to the construction, operation or maintenance of a structure or construction activity affecting navigation, flood control or public lands in, along or across the Tennessee River or its tributaries.

TVA approval and a Section 10 and 404 permit is required for the work; therefore, the Corps of Engineers and TVA must decide on one of the following:

- a. issuance of a permit for the proposal
- b. issuance of a permit with modifications or conditions
- c. deny the permit

Scope of Analysis: The proposed action consists of the placement of fill in 0.75 acres of wetlands and placement of a total of 1,321 cubic yards of fill below elevation 682.5 at four locations in unnamed tributaries to the Tennessee River. We have determined that the scope of analysis for this permit application should be limited to the "Permit Area", which includes the wetlands, the fill locations, the areas of temporary inundation, and five borrow areas on this property owned by the TWRA. The applicant stated that they could not complete this project but for the filling of the wetlands.

Other Approvals Required. Other federal, state and local approvals required for the proposed work are as follows:

- a. Water quality certification from the State of Tennessee, in accordance with Section 401(a)(1) of the Clean Water Act. The State issued water quality certification for the proposal on 4 August 2005.
- b. Tennessee Valley Authority (TVA) approval under Section 26a of the TVA Act. In addition to other provisions of its approval, TVA would require the applicant to employ best management practices to control erosion and sedimentation, as necessary, to prevent adverse aquatic impacts. TVA is a cooperating agency in this review.

TVA's considered the effects of access roads, equipment staging areas and the full pool area to be periodically inundated in their cultural review. Impacts regarding loss of flood control storage and loss of power storage were evaluated. TVA also evaluated

(x) substrate – Approximately 280' (~70' at each location) of stream substrate would be permanently filled with borrow material for the construction of the water control structures.

(x) currents, circulation or drainage patterns – Drainage patterns associated with the wetlands would be impacted by the placement of fill in the wetlands and the construction of the water control structures at the four locations. Current would be impacted by the water control structures as the structures are designed to catch and retain runoff during the winter (between November and February) for waterfowl management. Current if present would pass through a 36" stop log riser that would be removed to drain the management area for the planting of crops after the winter waterfowl season.

(x) suspended particulates, turbidity – All wetland work and the construction of the water control structures would be performed in accordance with the parameters set forth in the 401 Water Quality Certification issued by the State to prevent violations of water quality criteria. TVA would require the TWRA to employ best management practices to control erosion and sedimentation, as necessary, to prevent adverse impacts. A buffer zone around the 690 contour will be maintained in warm season grasses to reduce the potential for soil erosion along the edges of the sub-impoundments.

(x) water quality (temperature, color, odor, nutrients, etc) – Minor water quality impacts from the stream and wetland fill would occur during construction; however, long-term, water quality effects on the Tennessee River and its tributaries would be negligible. The state of Tennessee provided the Corps of Engineers a copy of the 401 Water Quality Certification issued to the applicant on 4 August 2005, certifying that water quality standards will not be violated if the work is conducted in accordance with the certification.

Potential impacts to dissolved oxygen from the discharge from dewatering the impoundments each February are not expected with the proper operations of the structures. Dewatering during colder months, slow water releases and a stoplog structure which promotes oxygenation of release waters will minimize low dissolved oxygen releases. Gradual release will minimize sedimentation problems and solids and nutrients from waterfowl are expected to settle in the impoundments.

() flood control functions - Flood control functions would have a minor positive impact due to the creation of the water control structures and the ability of the site to retain a additional amounts of runoff during the winter season that would not enter the Tennessee River. Minor storage losses resulting of the introduction of fill for the construction of the water control structures, however, this would be offset by the creation of the green tree reservoir effect above.

The project will result in approximately 261 acre-feet of flood control storage which meets TVA's established criteria in guidelines for handling flood control loss associated with waterfowl sub-impoundments.

- () storm, wave and erosion buffers
- () shore erosion and accretion patterns
- () baseflow

Biological Characteristics and Anticipated Changes. The relevant blocks are checked with a description of the impacts.

(x) special aquatic sites (wetlands, mudflats, pool and riffle areas, vegetated shallows, sanctuaries and refuges, as defined in 40 CFR 230.40-45) – There would be 0.75 acres of permanent impact to special aquatic sites. These impacts would be offset by the restoration of 3.0 acres of wetlands onsite.

(x) habitat for fish and other aquatic organisms – There would be a permanent loss of approximately 280' of stream bed as a result of the proposed work. Upstream migration of aquatic organisms from the river would be temporarily blocked during the winter months when water is held behind the water control structures, however, there would be little effect during the spawning season and summer months on aquatic organisms.

Proper operation and dewatering of the sub-impoundments each year are expected to have insignificant impact to mussel species or sauger spawning to the Hunter Shoals sanctuary in Chickamauga Reservoir (TRM 520.0 – 529.9) which runs adjacent to the proposed project area.

(x) wildlife habitat – There would be a permanent loss of approximately 0.75 acres of low quality habitat associated with the wetland impacts. The proposed wetland impact site is virtually devoid of trees and consists primarily of grasses and small volunteer trees. Wildlife habitat would benefit from the project by the construction of the water control structures and the ability to provide additional feeding and rest area for migrating waterfowl.

Filling and dewatering of the impoundments would begin after the onset of and end prior to the vegetative dormancy period. Crops to be left for waterfowl as discussed in the TWRA EA will be planted using the no till method. No harvest will be done although some of the crops will be knocked down using a tractor and bushog to make it more available for waterfowl. Critical overwinter habitat for waterfowl and shorebirds would be significantly improved with an estimated use during peak periods over 2,000 individuals.

endangered or threatened species – There would be no effect on threatened or endangered species.

biological availability of possible contaminants in dredged or fill material

Human Use Characteristics and Anticipated Impacts. The relevant blocks are checked with a description of the impacts.

water related recreation – The four unnamed tributaries to be impacted by the placement of the water control structures do not support boat traffic. Therefore, water related recreation impacts would be non-existent.

aesthetics – The placement of stream and wetland fill would be a change in the immediate area. The use of the property for wildlife management would be consistent with the current use of this large tract of land owned and managed by the TWRA.

traffic/transportation patterns

energy consumption or generation - The project will result in the loss of approximately 11.2 acre-feet of power storage.

navigation

safety

air quality - It has been determined that the proposed activity would not exceed de minimus levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR part 93.153 (See Section 5.2). There may be fugitive dust particles and diesel fumes escaping the site resulting from activities related to the construction of the water control structures. These levels would not be expected to be any higher or lower from other similar activities in the general area not requiring a Department of the Army permit.

noise - Noise impacts would be temporary in nature and occurring only during construction.

historic properties and cultural values – The THC issued a final letter dated 18 July 2005 stating that after review of the documentation submitted, it is their opinion that no National Register of Historic Places listed or eligible properties would be affected by the proposed undertaking and they have no objection to the issuance of the permit.

land use classification

conservation – Approximately 0.75 acres of regulated wetlands would be impacted by the proposal and 3.0 acres of wetlands would be restored to off-set the impacts onsite.

economics - The local economy would benefit from increased sales of materials and goods associated with hunting waterfowl in the area provided the area receives increased usage by waterfowl as a result of the construction of the water control structures.

food and fiber production

general environmental concerns

mineral needs

consideration of private property

floodplain values – FEMA Region IV requested that any fill placement in the streams should avoid possible effects on floodways. However, the agency recognized that local floodway issues pertain to the Rhea County Floodway Administrator. Rhea County did not require the applicant to complete any studies related to the proposal.

other

Cumulative and Secondary Impacts. This is a very rural area and it is unlikely that we will receive additional requests for DA permits in the future in this area. We cannot predict if DA permit applications in this area will be submitted. There are other wetlands/streams in the area, but we cannot predict when other properties will become available or if the proposals could avoid wetlands/streams present. Any permits issued in this general area in the past would have required adequate compensatory mitigation reducing those project impacts to an insignificant level. Considering past, present, and future proposals, there would be only minimal cumulative impacts associated with the stream and wetland fill at the proposed location.

4.0 Alternatives

Introduction. This section discusses alternatives as required by 33 CFR 320.4(a)(2) and 40 CFR 230.10. The relevant environmental issues identified in Chapter 3.0 were used to formulate the alternatives. The alternatives that were given detailed consideration are listed in the following section.

Description of Alternatives.

- a. No Action. - This alternative would involve denying the applicant's request to place fill in 0.75 acres of regulated wetlands and fill in 280' of stream. The applicant's purpose and need would not be met. There would be no impact to the existing low quality wetland and unnamed tributaries resulting from this proposal.
- b. The Applicant's Final Proposed Action. This alternative involves issuance of the permit with appropriate mitigation. The applicant would place fill in 0.75 acres of low quality wetlands and 280' of unnamed tributaries connected to the Tennessee River. Mitigation for the impact would be provided by restoring 3.0 acres of wetlands to offset the wetland loss.
- c. Other Available Sites. The applicant could potentially purchase land elsewhere in the area that does not have streams or wetlands. However, the applicant currently owns the property and the proposal utilizes the presence of the streams and wetlands to create the green tree reservoir effect during the winter season. Based on our review, other sites may be available, but do not appear to meet the site criteria established by the applicant. The purchase of additional land that does not meet their requirements would not be economically practicable. Because of the minimal environmental impact identified, and the possibility that other sites would have equal or greater impact on undisturbed sites, further discussion of off-site alternatives is not warranted.

Appropriate Mitigation Not Included in Proposed Action. Mitigation measures that would minimize impacts to the environment include use of appropriate erosion control during all phases of the permitted action.

Comparison of Alternatives.

- a. No Action. This alternative consists of denying the applicant's request to perform the proposed work. With this alternative, there would be no impact to the wetlands adjacent to the Tennessee River or the unnamed tributaries. The anticipated benefits of developing the property would not occur.
- b. The Applicant's Final Proposal. This alternative would involve the issuance of the permit authorizing the applicant to place fill in 0.75 acres of low quality wetlands. This alternative would allow for the construction of the proposed water control structures. The applicant would mitigate for the wetland impact by restoring 3.0 acres of wetlands onsite. The proposed stream impacts at the four locations are minimal and would not have long

term impacts on the aquatic resources at these impact sites. The water control structures would provide seasonal benefits for migrating waterfowl through the operation of green tree reservoirs. The applicant would inundate approximately 91-acres above the structures each year during the November to February period and dewater the sub-impoundments each Spring.

5.0. Findings

Consideration of Public Comments – Three letters were received in response to the public notice. Comments were received from the USFWS, FEMA, and THC (Appendix E). FEMA stated that the introduction of fill into the streams should avoid possible adverse impacts on the floodways. The USFWS stated that they believe the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. There would be no historic properties affected by the project.

Public Hearing Request - There were no requests for a public hearing.

Clean Air Act General Conformity Rule Review.

Construction of the water control structures would result in minor emissions of air pollutants. During construction activities, combustion exhaust would be emitted from fuel-burning engines in vehicles and construction equipment. Fugitive dust could result from disturbance of ground surfaces, movement of spoil, and placement of fill for the base of structures. Best management practices would minimize such emissions. These emissions would be small, temporary, intermittent, and transitory during the construction period, and would have no significant impact on air quality. Impacts of day to day operations would be limited to very small amounts of fuel-burning vehicle exhaust associated with employees at the refuge.

Section 176(c) of the Clean Air Act (CAA) requires that federal agencies assure that activities they engage in (e.g., agency actions, permits, licenses, etc.) conform to federally approved CAA state implementation plans.

The proposed project has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act, and it has been determined that the activities proposed under this permit will not exceed de minimus levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility, and cannot be practicably controlled by the Corps, and, for these reasons, a conformity determination is not required for a permit.

404 (b)(1) Determination

General: The purpose of Section 404(b)(1) of the Clean Water Act is to restore and maintain the chemical and physical, and biological integrity of the waters of the United States through the control of discharges of dredged or fill material. Controls are established through restrictions placed on the discharges in Guidelines published in 40 CFR 230.

Restrictions on the Discharge: Section 230.10 requires that the discharge meet certain restrictions in order to be authorized. The project is to be evaluated and comply with the following restrictions: (a) there would be no other practicable alternatives to the proposal that would have less adverse impacts on the aquatic environment, (b) that the discharge would not adversely impact water quality, violate State water quality standards, toxic effluent standards, or jeopardize the continued existence of a threatened or endangered species as identified under the Endangered Species Act, (c) the discharge would not cause or contribute to the significant degradation of waters of the United States, and (d) the project would be designed in such a manner as to minimize to the extent possible the adverse impacts on the aquatic environment. Evaluation of the guidelines is attached to this document as Appendix G.

Factual Determination: Based on the probable impacts addressed above, compliance with the restrictions, and all other information concerning the fill materials to be used, the proposed work complies with the Guidelines and the intent of Section 404(b)(1) of the Clean Water Act.

Water Quality Certification. Water quality certification from the state of Tennessee in accordance with Section 401(a)(1) of the CWA is required for this activity. The State issued water quality certification for the proposal on 4 August 2005.

Environmental Justice. In compliance with Executive Order (EO) No. 12898 (February 11, 1994), environmental justice must be taken into account in making a decision on this application for a DA permit. The EO directs certain federal agencies, including the Corps of Engineers, to take into account the potential of agency actions to have a disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. The environmental justice analysis is to consider the potential for above normal impacts to minorities or low-income people living in the vicinity of the action. There are no minority or low-income communities in the immediate area. Therefore, the proposed work would not affect minority or low-income populations at any higher rate than others in the project area.

Permit Condition Consideration. The following special permit conditions are typically included in most DA permits, and are necessary to comply with federal law, while affording appropriate and practicable environmental protection:

. The work must be in accordance with any plans attached to this permit or submitted in support of the proposed action. *Justification: Prevent permit noncompliance [33 CFR 326.4(d)].*

. You must have a copy of this permit available on the site and ensure all contractors are aware of its conditions and abide by them. *Recommended at 33 CFR 325, Appendix A.*

. The disturbance to riparian vegetation shall be kept to a minimum during construction. *Environmental protection.*

. Appropriate silt control (hay bales, silt fence) shall be utilized in all phases of the proposal. *Environmental protection.*

. Wetland mitigation work shall be conducted in accordance with mitigations plans submitted by TWRA dated 4 April 2005, for this project. *Justification: Environmental protection*

. All work performed must be in accordance with the Tennessee Department of Environment and Conservation, Water Pollution Control certification (NRS 04-026) issued 4 August 2005 for the permitted activity. *Justification: Environmental protection*

. The permittee shall monitor the wetland mitigation area and guarantee its success for five (5) consecutive years. Required vegetative plantings shall have a 75% survival rate during the monitoring period. Annual monitoring reports for the wetland mitigation shall be submitted to this office accompanied by the data from the approved monitoring plan. The reports should also contain information regarding any remedial action necessary to correct any deficiencies regarding the wetland mitigation site and water control structures. *Justification: Environmental protection*

. Deed Restrictions: As a part of the applicant's wetland mitigation plan, the mitigation site shall be indentured into a Restrictive Covenant that will become an attachment to the deed and run with the property. The Restrictive Covenant shall protect in perpetuity the aesthetic, educational, and ecological values of the mitigation site. The Restrictive Covenant shall be provided to this office for review and approval before recordation. *Justification: Environmental protection*

. This permit shall be recorded in the Miscellaneous Document Book with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title and interest in real property for the mitigation site. A certified copy of the record shall be furnished to this office within 30 days of recording. *Justification: Environmental protection*

. The applicant shall restore 3.0 acres of wetlands to mitigate for the loss of 0.75 acres of wetlands onsite. *Justification: Environmental protection*

. A pre-construction meeting must be held among representatives of the Nashville District Corps of Engineers, permittee, and contractor to discuss the conditions of this permit. The contractor must present its method of operation for the work at this meeting. You should contact Carl Olsen of this office, telephone number (615) 369-7513, to arrange the required

pre-construction meeting. *Justification: Clarify the permit conditions and authorized work.*

Findings of No Significant Impact. Based on a full consideration of the EA and information obtained from cooperating federal/state agencies, I have concluded that issuance or denial of the requested permit would not constitute a major federal action that would significantly affect the quality of the human environment. This constitutes a Findings of No Significant Impact (FONSI); therefore, the preparation of an Environmental Impact Statement is not required. This FONSI was prepared in accordance with paragraph 7a of Appendix B, 33 CFR 325 dated 3 February 1988 (effective 4 March 1988).

Public Interest Determination. I have reviewed the application, responses to the Public Notice, and the EA. The applicant submitted a completed archaeological survey in response to the request by the THC, and the THC issued a final letter of no objection based on the survey. We have taken agency comments and the permit action by TDEC into consideration. We believe that the mitigation proposed by the applicant is appropriate. The placement of fill in portions of the small tributaries to the river are minimal in impact and would provide substantial benefits to migrating waterfowl in this area. The benefits of the operation of the green tree reservoirs would offset the minor impacts associated with the construction of the water control structures. There would be no obstruction to aquatic organisms during times when the TWRA is not holding water for the green tree reservoir effect. The stream loss due to fill is minor and each water control structure is independent of the other and at separate locations. These tributaries are very small and not easily accessible by boat during normal summer pool elevations.

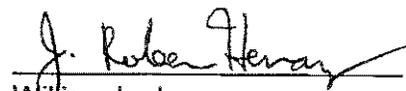
The TDEC issued water quality certification for the proposal on 4 August 2005. The wetlands impacted are predominantly herbaceous with small volunteer tree species. The proposed work would result in only minor adverse environmental impacts. The environment would benefit from the creation of the additional wetlands that would be protected in perpetuity and vegetated with natural vegetation and the creation of a green tree reservoir complex to provide a feeding and rest area for migrating waterfowl.

Having weighed the potential benefits that may be accrued against the reasonably foreseeable detrimental effects, I conclude that permit issuance would not be contrary to the public interest.

FOR THE COMMANDER:

20 Oct 05

Date

FOR 
William L. James
Chief, Eastern Regulatory Section

APPENDIX A

May 1, 2004

MEMORANDUM FOR RECORD

SUBJECT: File No. 200400466, Tennessee Wildlife Resources Agency, Pre-Application Meeting and Onsite Inspection Required for Processing, Proposed Water Control Structures, Wetlands Adjacent to and Unnamed Tributaries to the Tennessee River, Mile 522.8, Right Bank, Rhea County, Tennessee

1. I inspected the proposed impact site with members of TWRA, USFWS, EPA, TDEC, and TVA on April 28, 2004. The TWRA proposes to place four water control structures instream on unnamed tributaries to the Tennessee River on the Yuchi Refuge and one water control structure in wetlands also located on the refuge. The unnamed tributaries are approximately 10' wide at the location of the proposed water control structures. The structure placed in wetlands would occur in an area that is predominated by herbaceous plants and small volunteer tree species. The water control structures would be used to flood field and forested areas in the winter time to provide resting and feeding areas for migrating waterfowl.
2. Pictures of the site inspection were taken and are included below.



Carl R. Olsen
Project Manager

4/28/04 @ Yuchi Refuge

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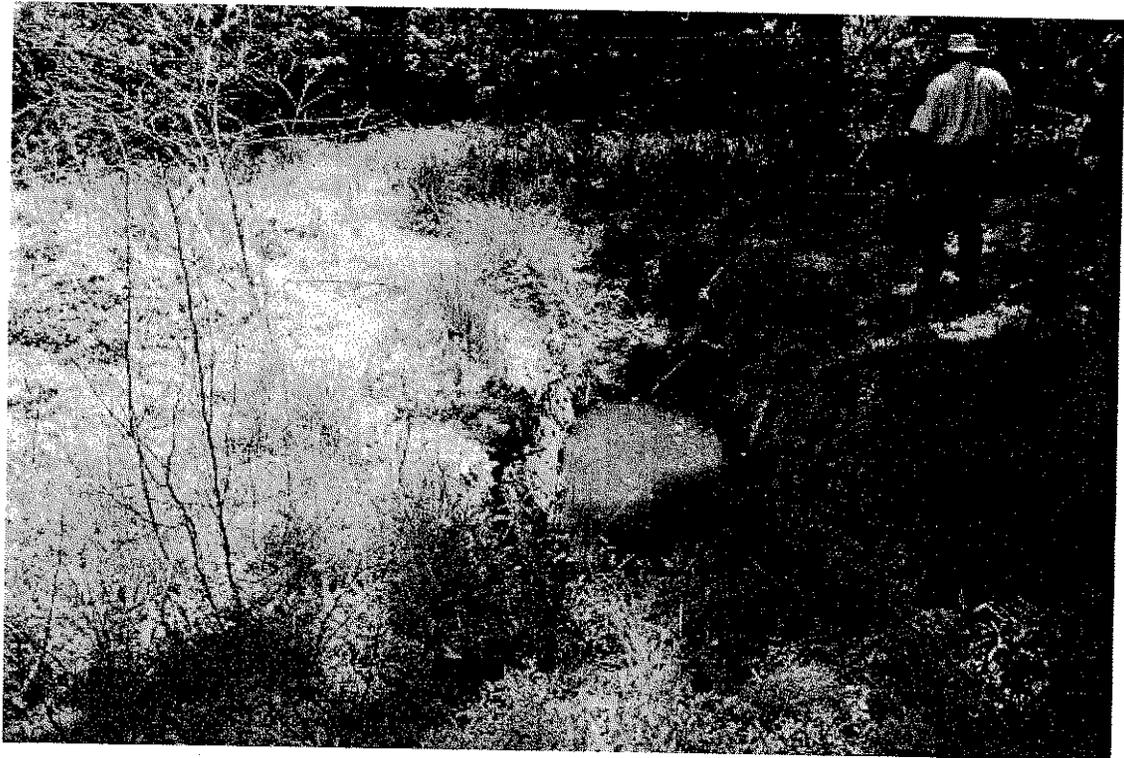
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~~John~~

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APPENDIX B



US Army Corps
of Engineers

Public Notice

Public Notice No. 05-36

Date: June 9, 2005

Nashville District

Application No. 200400466

Please address all comments to:

Nashville District Corps of Engineers, Regulatory Branch
3701 Bell Road, Nashville, TN 37214

JOINT PUBLIC NOTICE
US ARMY CORPS OF ENGINEERS
TENNESSEE VALLEY AUTHORITY
AND
STATE OF TENNESSEE

SUBJECT: Proposed Channel Fill and Adjacent Wetland Fill, Unnamed Tributaries to the Tennessee River, Mile 522.8 – 523.7, Rhea County, Tennessee

TO ALL CONCERNED: The application described below has been submitted for a Department of the Army Permit pursuant to **Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (33 U.S.C. 1344)**. Before a permit can be issued, certification must be provided by the State of Tennessee, Division of Water Pollution Control, pursuant to Section 401(a)(1) of the CWA, that applicable water quality standards will not be violated. By copy of this notice, the applicant hereby applies for the required certification.

APPLICANT: Tennessee Wildlife Resources Agency
464 Industrial Blvd.
Crossville, Tennessee 38555

LOCATION: Unnamed Tributaries to Tennessee River, Mile 522.8 – 523.7 R, Rhea County, Tennessee
USGS: Decatur, Tennessee Quadrangle
Lon: 84-49-3.2520 Lat: 35-32-48.1200

DESCRIPTION: The applicant proposes to place approximately 1,321 cubic yards of fill below normal summer pool elevation of 682.5 at four locations in unnamed tributaries to the Tennessee River (Structure #1 = 336cy, Structure #2 = 328cy, Structure #3 = 325cy, Structure #4 = 332cy). The applicant also proposes to place fill in 0.75 acres of adjacent wetlands at a fifth location. The purpose of the stream and wetland fill is to construct water control structures to allow the applicant to operate a waterfowl impoundment complex at the Yuchi Refuge. The structures would hold water for migratory waterfowl from mid November to late February providing a resting and feeding area between other refuges. This proposal is located in an undeveloped area owned by the applicant.

Mitigation: The applicant proposes to mitigate for the loss of approximately 0.75 acres of wetlands by restoration of 3+ acres of wetlands by construction of a rock berm to restore hydrology to the site by impeding water flow. Mast producing Oaks and a small percentage of Bald Cypress would be planted in the mitigation area. All mitigation would be performed onsite and protected by deed restriction. Mitigation areas would be monitored for a period of five years with submission of annual reports of site conditions and recommendations.

Representative plans of the proposed work are attached to this notice.

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the 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 work must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore 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. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b)(1) of the CWA (40 CFR Part 230). A permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; 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 and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

An Environmental Assessment will be prepared by this office prior to a final decision concerning issuance or denial of the requested Department of the Army Permit.

The National Register of Historic Places has been consulted and no properties listed in the National Register are known which would be affected by the proposed work. No new sites were identified in an archaeological survey conducted by the applicant that may be eligible for listing on the National Register. This survey is being reviewed by the Corps and TVA for compliance with Section 106 of the National Historic Preservation Act of

1966, as amended. Upon completion of review, consultation with the State Historic Preservation Officer will be initiated. This review constitutes the full extent of cultural resources investigations unless comment to this notice is received documenting that significant sites or properties exist which may be affected by this work, or that adequately documents that a potential exists for the location of significant sites or properties within the permit area. Copies of this notice are being sent to the office of the State Historic Preservation Officer and the U.S. Department of the Interior, National Park Service - Atlanta.

Based on available information, the proposed work will not destroy or endanger any Federally-listed threatened or endangered species or their critical habitats, as identified under the Endangered Species Act. Therefore, we have reached a no effect determination and initiation of formal consultation procedures with the U.S. Fish and Wildlife Service is not planned at this time.

Other Federal, State, and/or local approvals required for the proposed work are as follows:

Water quality certification from the State of Tennessee in accordance with Section 401(a)(1) of the Clean Water Act.

Tennessee Valley Authority (TVA) approval under Section 26a of the TVA Act. In addition to other provisions of its approval, TVA would require the applicant to employ best management practices to control erosion and sedimentation, as necessary, to prevent adverse aquatic impacts

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Written statements received in this office on or before July 9, 2005, will become a part of the record and will be considered in the determination. Any response to this notice should be directed to the Regulatory Branch, Attention: Carl R. Olsen, at the above address, telephone (615) 369-7513. It is not necessary to comment separately to TVA since copies of all comments will be sent to that agency and will become part of its record on the proposal. However, if comments are sent to TVA, they should be mailed to:

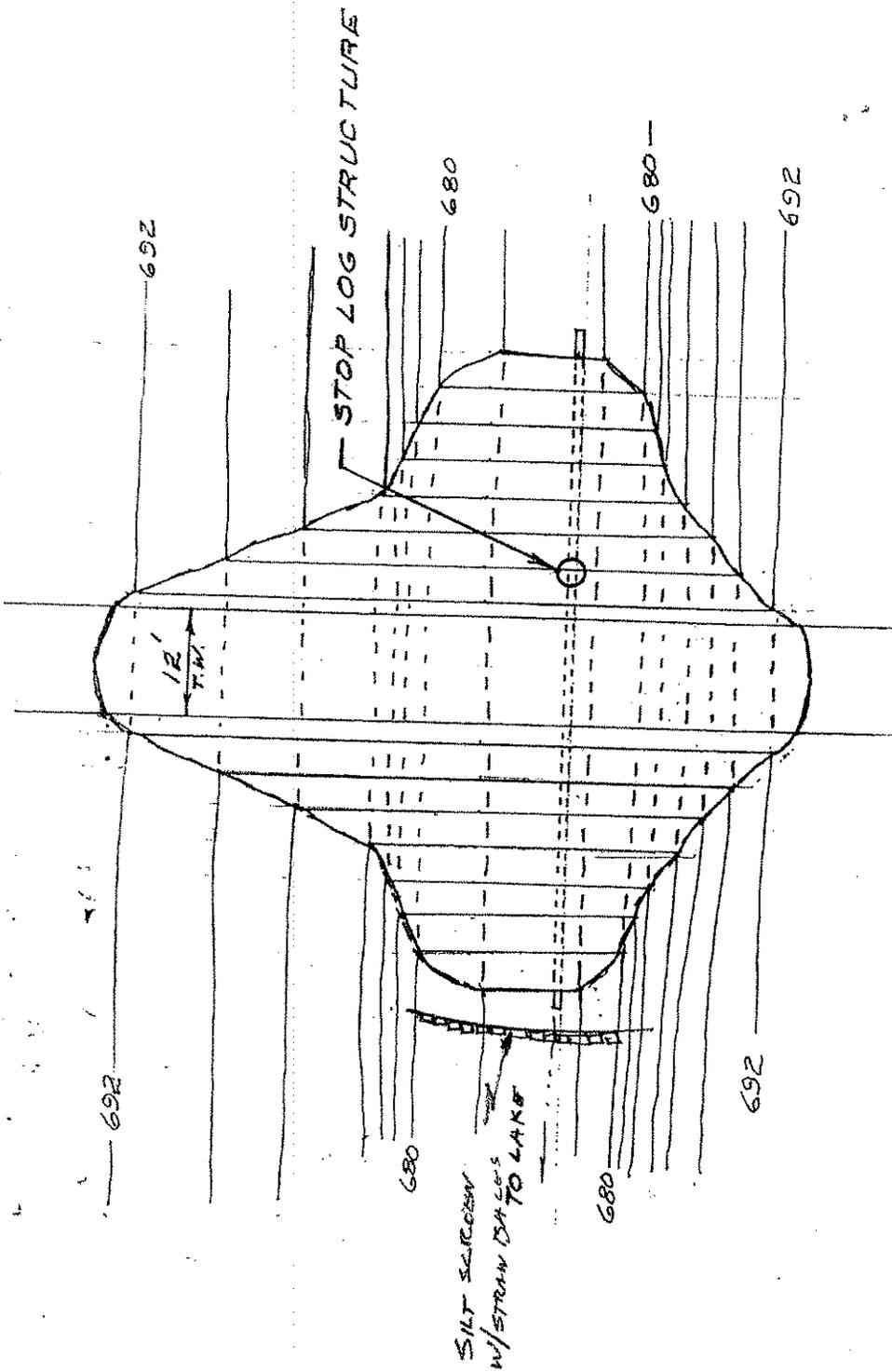
Tennessee Valley Authority
Mr. Dan Fisher
CHICKAMAUGA/HIWASSEE WATERSHED TEAM
1101 Market Street (PSC 1E)
Chattanooga, Tennessee 37402-2801



Yuchi Waterfowl Project

- Boundary
- Existing Roads
- - - Temporary Roads
- Borrow Areas
- Archaeological Sites
- ▨ TVA Partial
- ▧ TWRA Only
- Elev. 690'

USGS
DECATUR, TENN.



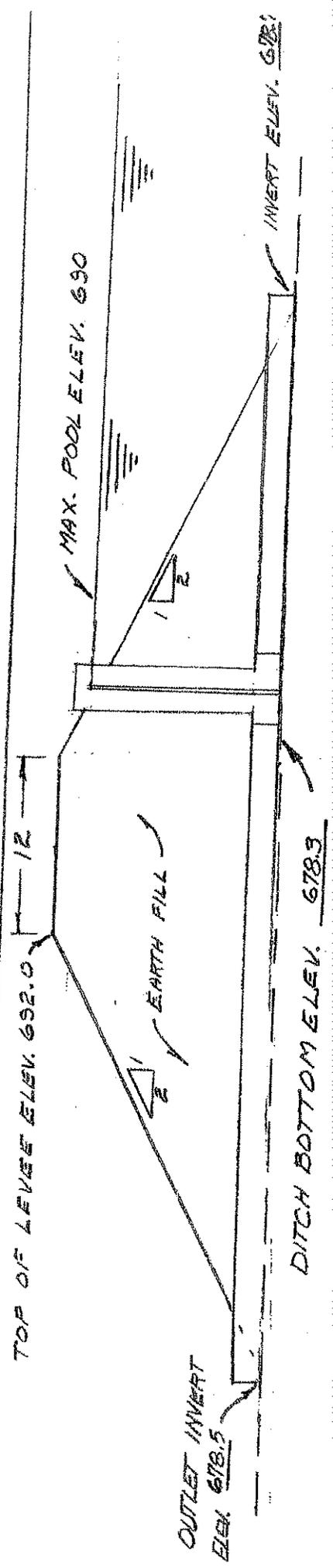
GRADING PLAN

SCALE - 0 10' 20' 30'

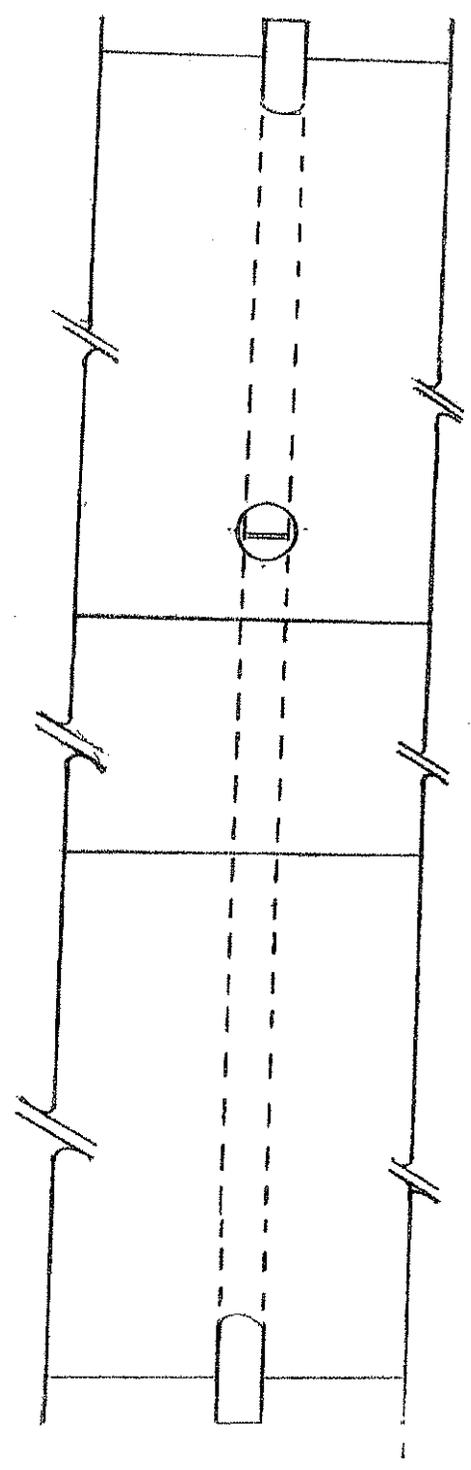
FILL VOLUME 668 CUBIC YARDS

STRUCTURE # 1
YUCHI WMA

SHEET 1 OF 3



CENTERLINE SECTION



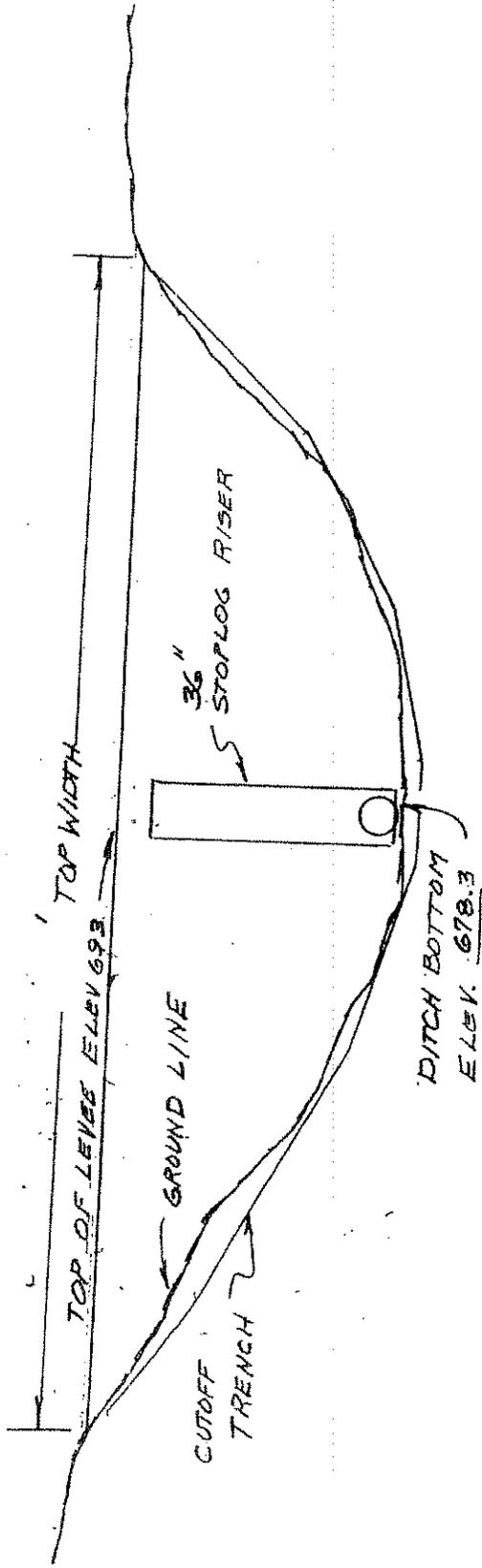
PLAN

STRUCTURE # 1
YUCHI WABA

Set 6-27-3, 0-1-3

PN NO. 05-36

FILE NO. 200400466



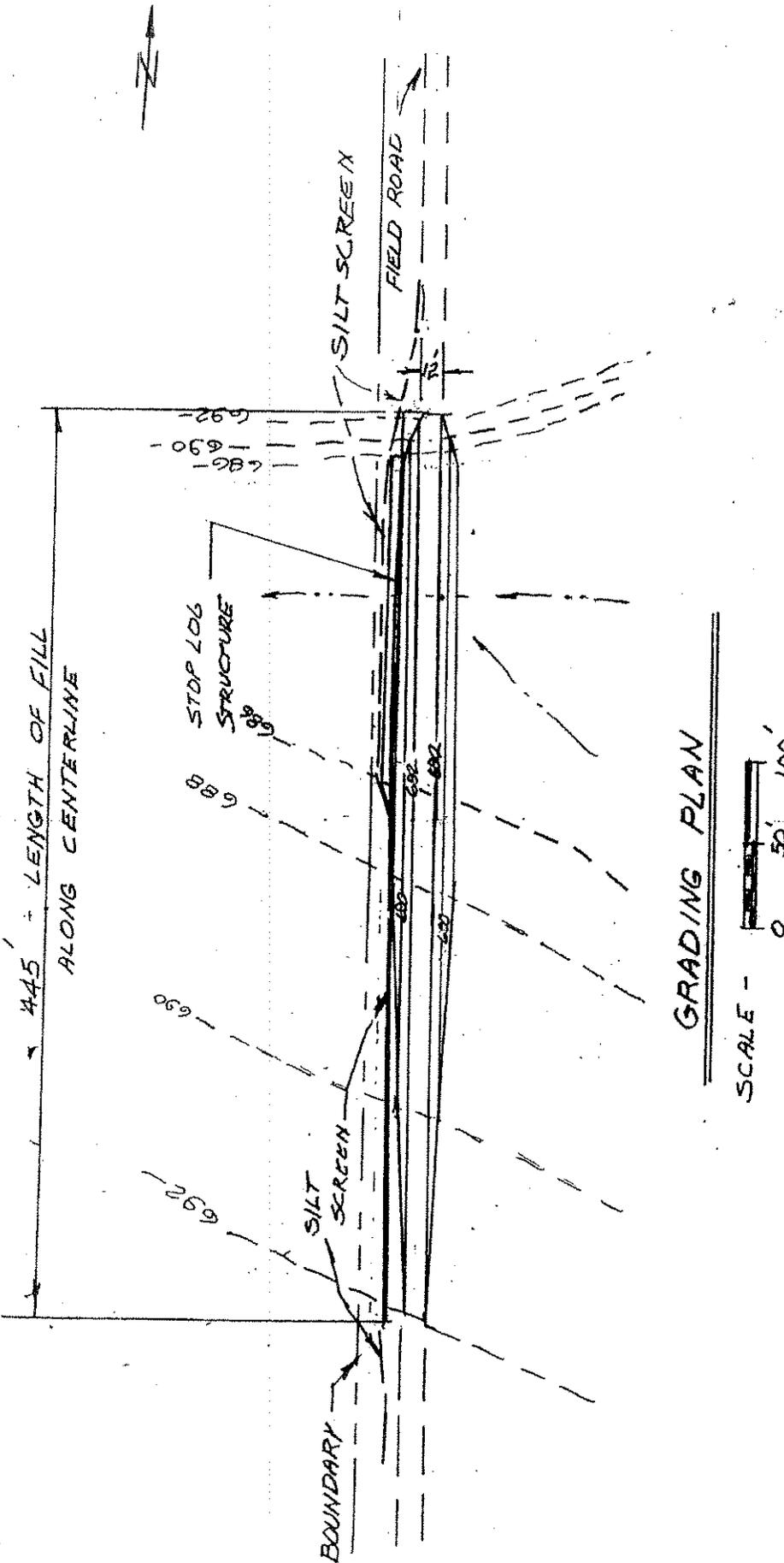
VOLUME OF FILL 663 CUBIC YARDS

DOWNSTREAM ELEVATION

NOTE: STRIP 12'-3" OF EXISTING
BANKS & DITCH BOTTOM
PRIOR TO FILL OPERATION

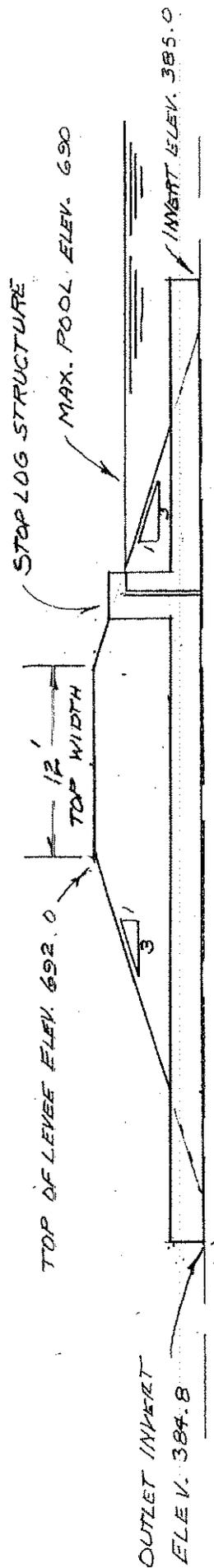
STRUCTURE # 1
YUCHI WMA

Sheet 3 of 3

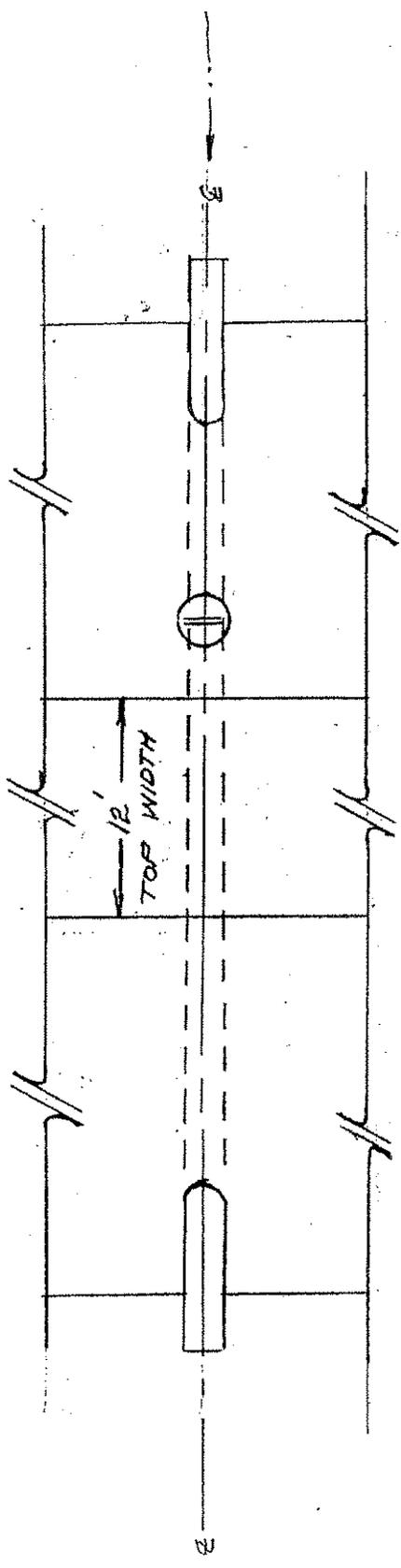


FILL VOLUME 2954 CUBIC YARDS

STRUCTURE # 5
YUCHI WMA
By: HAUN DATE: MAY 04



CENTERLINE SECTION
THROUGH PIPE STRUCTURE

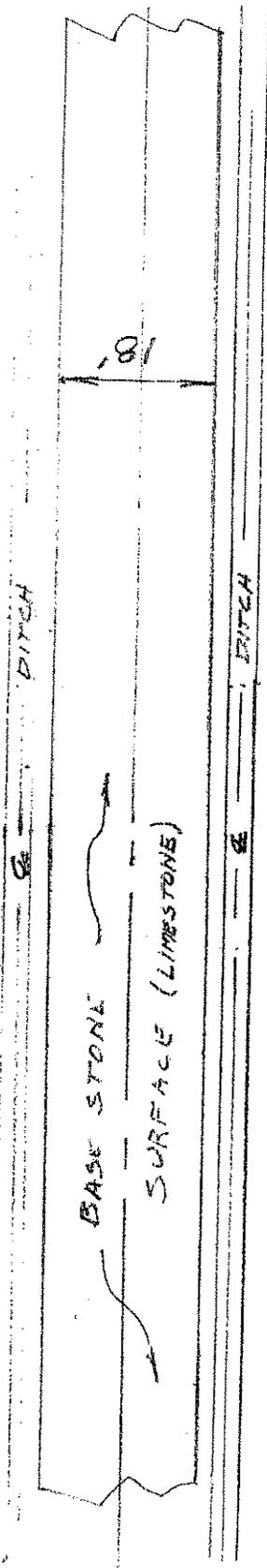


PLAN

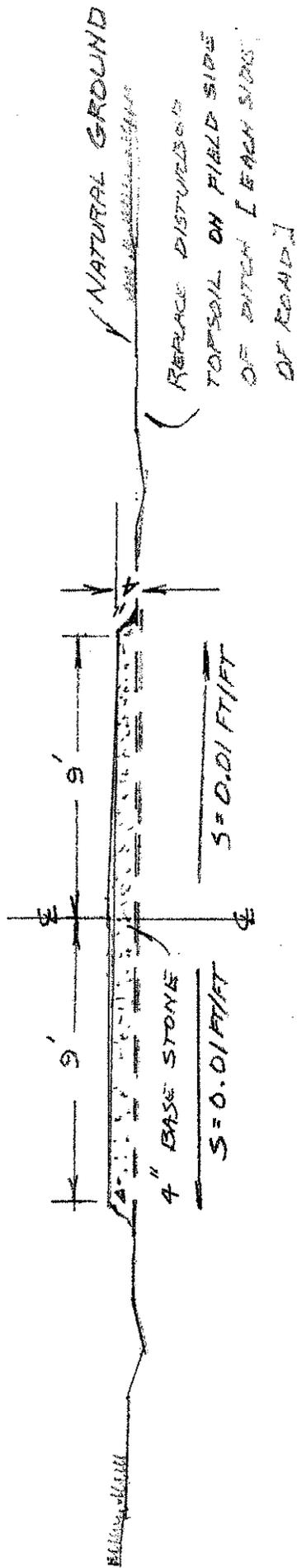
SCALE:



STRUCTURE # 5
YUCHI WIMA
BY: MAUN DATE: JUN 04



PLAN VIEW - TYPICAL FIELD ROAD



TYPICAL SECTION - FIELD ROAD

YUCHI WMA
FIELD ROAD
BY: H. HARRIS

APPENDIX C

April 4, 2005

Mr. Mike Lee
Tennessee Dept. of Environment & Conservation
Water Pollution Control/ Natural Resources Section
401 Church Street
7th Floor, L & C Building
Nashville, Tn. 37243-1534

**RE: Water Quality Certification Application No. 04-051
Mitigation Proposal For Structure #5**

Structure #5 of the Yuchi Refuge complex is located across a drainage on the property line of the area. The footprint of the berm is .75 acre. This berm and stoplog structure will hold water for migratory waterfowl and shorebirds from mid November until late February. Water will then be released and the drainage allowed to fluctuate normally with seasonal rains and/or TVA flood storage needs.(fig. 1)

The site in question is currently flooded due to beaver infestation originating on adjacent property.(fig 2) The woody vegetation consists of Black Willow and Red Maple. There are no mast producers in this drain above the proposed berm. Several large Willow Oaks are below the site and will not be impacted by the structure or its construction. Very few hydrophytic oaks occur in any impoundments on the entire project. Future plans include plantings of site specific oaks along and in the impoundments as part of normal management for waterfowl.

Mitigation for the proposed berm will be instituted on a previously disturbed 3+ acre wetland located in the upper reaches of the same drainage.(fig. 3) Partial hydrology has

naturally returned, but a rock deterrent to slow water is needed to restore full hydrological potential.(fig. 4&5)

Reforestation using hydrophytic oaks is proposed along the slopes of the wetland. Water Oaks on the drier sites, Willow Oaks on moist areas, and Swamp Chestnut Oaks on the wet sites. Open water areas will not be forested. Bald Cypress will also be planted on very wet areas in a small percentage.

Plantings at 400 seedlings/ acre or 10x10 spacing will be done with site specific species. Plantings will be monitored annually with photos and seedling counts. Success rate of 75% over 5 years will be maintained. No disturbance due to agricultural practices will occur. A buffer strip of warmseason grasses already surrounds the mitigation area.

All impoundments affecting forest types will be operated to prevent damage to existing cover. Water holding will coincide with the dormant season. All impoundments on Yuchi Refuge are below TVA flood storage elevations (690') and may be flooded at any time necessary to accommodate heavy runoff. TWRA can not control these flood levels nor the time of their occurrence. Water levels during TWRA inundation will be fluctuated to avoid any damage to trees in the impoundments.

Mitigation work will begin upon approval of the 401 and 26-A TVA permits. Optimal planting season will be targeted to insure greater survivor rates of the seedlings. Preliminary planting window is late winter/ early spring 2006. Rock deterrents can be installed as soon as approval is received.

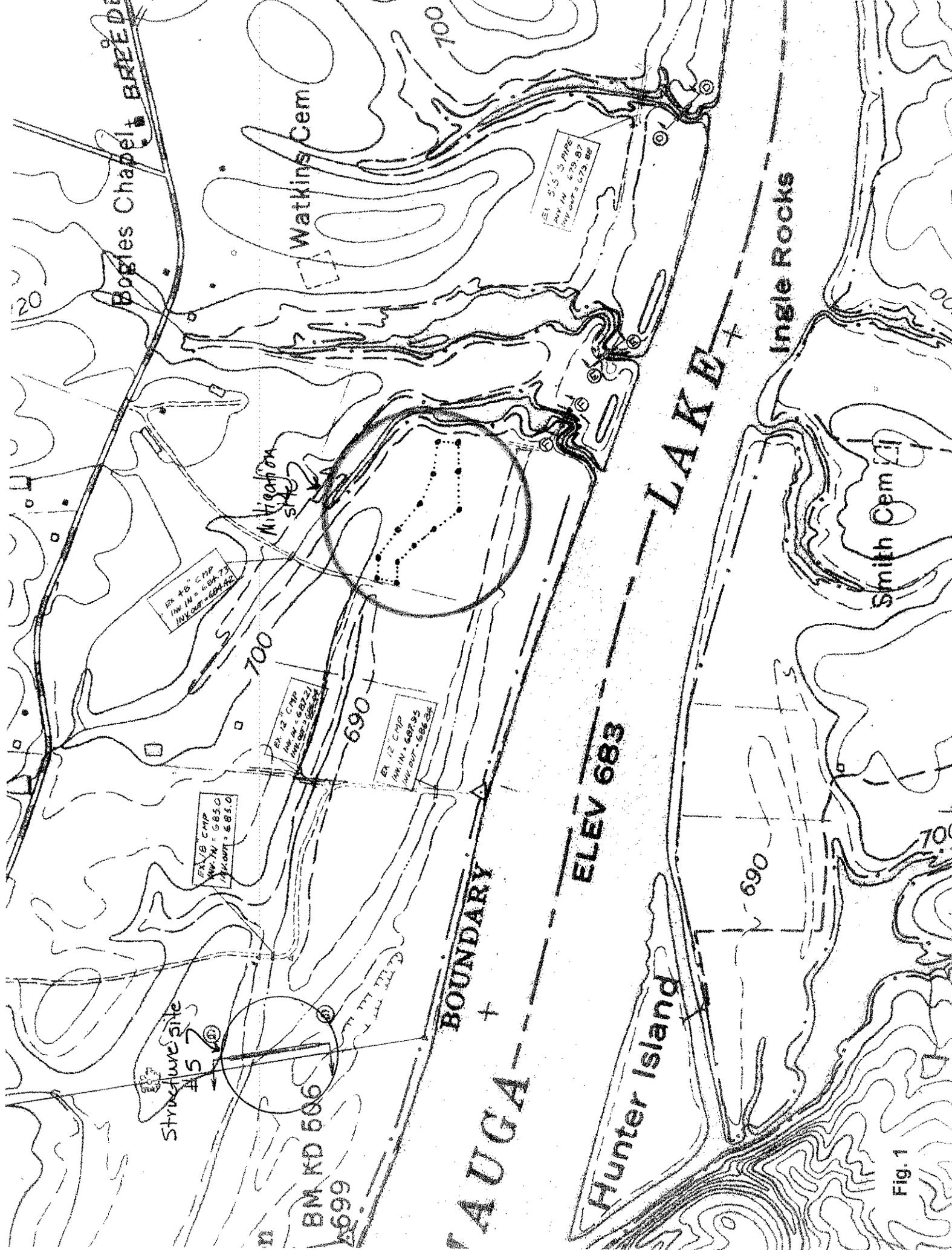


Fig. 1

APPENDIX D



DEPARTMENT OF ENVIRONMENT & CONSERVATION

Division of Water Pollution Control
401 Church Street
7th Floor, L & C Building
Nashville, TN 37243-1534

Certified Mail Receipt Number 7000 0520 0019 1966 7771

August 4, 2005

Mr. Bernie Swiney
Tennessee Wildlife Resources Agency
464 Industrial Blvd.
Crossville, TN 38555

SUBJECT: §401 Water Quality Certification; Waterfowl Impoundment; Yuchi Refuge at Smith Bend on Chickamauga Reservoir; Wetland Impacts of 0.75 acres; Rhea County. Tennessee Aquatic Resource Alteration Permit State of Tennessee Application # NRS 04-026.

Dear Mr. Swiney:

Pursuant to §401 of the Federal Clean Water Act (33 U.S.C. §1341), the State of Tennessee is required to certify whether the activity described below will violate applicable water quality standards. Accordingly, the Division of Water Pollution Control requires reasonable assurance that the activity will not violate provisions of *The Tennessee Water Quality Control Act of 1977* (T.C.A. § 69-3-101 et seq.) or of §§ 301, 302, 303, 306 or 307 of *The Clean Water Act*.

Subject to conformance with approved plans, specifications, and other information submitted in support of the referenced application, the State of Tennessee hereby certifies the proposed activity pursuant to 33 U.S.C. 1341. This shall serve as authorization pursuant to T.C.A. §69-3-101 et seq.

LOCATION: Yuchi Refuge at Smith Bend on Chickamauga Reservoir, Rhea County.

DESCRIPTION: The authorized work includes the placement of 1.321 cubic yards of fill for stop log water control structures below summer pool elevation of 682.5 at four locations in unnamed tributaries of the Tennessee River.

**§401 WATER QUALITY CERTIFICATION
TWRA – YUCHI REFUGE
PAGE 2.**

Approximately 0.75 acres of jurisdictional wetland will be impacted. Compensatory wetland mitigation shall consist of the restoration/enhancement of 3.0+ acres.

EFFECTIVE DATE: August 4, 2005
EXPIRATION DATE: August 3, 2010

SPECIAL CONDITIONS:

1. The work shall be accomplished in conformance with the approved plans, specifications, data and other information submitted in support of the above application and the limitations, requirements, and conditions set forth herein.
2. Grading, excavation or fill may not take place in flowing waters. Grading, excavation and fill activities shall be separated from the water column. All surface water flowing toward the grading, excavation or fill work shall be diverted through utilization of cofferdams, berms, or temporary channels. Temporary diversion channels must be protected by non-erodible material and lined to the expected high water level. Cofferdams must be constructed of sandbags, clean rock, steel sheeting or other non-erodible material. Excavated material must be removed to a location that will prevent its reentry into the any waters of the State. The silt fence must be maintained at all times.
3. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 1200-4-3.-03 of the Rules of The Tennessee Department of Environment and Conservation. This includes but is not limited to the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the State for any of the uses designated by Rule 1200-4-4. These uses include fish and aquatic life, livestock watering and wildlife, recreation, irrigation, industrial water supply, and domestic water supply.
4. Temporary erosion and sedimentation control measures must be used throughout the construction period. Effective erosion control must be installed along the base of all fills and cuts, on the down hill side of stock piled soil, and along stream banks in cleared or graded

**§401 WATER QUALITY CERTIFICATION
TWRA – YUCHI REFUGE
PAGE 3.**

areas to prevent sedimentation into streams. Controls shall be repaired and maintained as necessary. Measures shall include, but not be limited to the use of entrenched fabric filter fence, entrenched staked straw bales, sediment basins, berms, dams, brush barriers, fiber mats, netting, gravel, mulches, grasses, slope drains, etc.

5. Slurry water pumped from work areas and excavations must be held in settling basins or treated by filtration prior to its discharge into surface waters. Water must be held in sediment basins until at least as clear as the receiving waters. Sedimentation basins shall not be located closer than 20 feet from the top bank of a stream. Sediment basins and traps shall be properly designed according to the size of the drainage areas or volume of water to be treated. Sediment shall be removed from the basin when design capacity has been reduced by 50%.
6. Pre construction vegetative ground cover shall not be destroyed, removed or disturbed more than 10 calendar days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed. Temporary or permanent soil stabilization shall be accomplished within 15 days after final grading or other earthwork. Permanent stabilization with perennial vegetation (using native herbaceous or woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable.
7. At the construction site appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state. All oils, fuels, and lubricants or other chemical pollutants shall be drained into receptacles and disposed of in an acceptable manner. All spills must be reported immediately to the appropriate emergency management agency. Measures shall be taken immediately to prevent the pollution of waters of the State, including groundwater.
8. Compensatory wetland mitigation for wetland impacts of 0.75 acres shall be through the restoration/enhancement of 3.0+acres in the area submitted in the plans dated April 4, 2005. Compensatory mitigation shall occur prior to or concurrently with the impacts to existing wetlands.
9. Native tree seedlings common to the area shall be planted at the rate of 400/acre. Water tolerant oaks shall dominate with no one species comprising more than 25% of the total. Planting shall occur during from approximately December until the first of March.

**§401 WATER QUALITY CERTIFICATION
TWRA – YUCHI REFUGE
PAGE 4.**

10. The created wetlands shall be monitored and annual reports submitted to this office. The mitigation wetland must at a minimum meet PFOIC criteria within the 1987 Corps of Engineers (COE) Delineation parameters. Monitoring reports shall include a listing of dominant herbaceous species with wetland indicator status. The report shall be in both a narrative and photographic form. Necessary remedial actions to correct deficiencies shall be addressed with a timetable for corrective activities.
11. The water control structures shall be constructed in the dry. This may be accomplished by construction during the dry months, diversion channels, cofferdams, use of sandbags or similar measures.
12. All impoundments affecting forest types (listed as six acres of forested wetland in the Environmental Assessment) shall be operated to prevent damage to existing cover. This shall be accomplished by:
 - (a) Impoundments occurring only during the dormant season beginning approximately December 1-February 1, except when dictated by TVA FLOOD STORAGE MEASURES.
 - (b) When de-watering the impounded areas the stop log structures shall be removed in a manner that does not result in downstream scouring or bank destabilization. Final de-watering will involve the removal of all stop logs so that the movement of aquatic life is not impaired during the time that impoundment is not occurring.
 - o Fluctuation of water levels will occur in the forested areas during TWRA inundation except when dictated by TVA FLOOD STORAGE MEASURES. Such fluctuation shall, at least, involve at least once every three years the water completely **drained** for seven days and then slowly raised back to at or near full pool.
13. The impounded forest area shall be monitored annually beginning with a comprehensive pre-inundation ground cover and understory species listing submitted with wetland indicator status and percent dominance. The pre-inundation report and subsequent reports shall also document existing regeneration (species, abundance, dominance), existing tree mortality, percentage of dead snags and observation of chlorosis. Water depths, sediment deposits or soil saturation shall also be measured. Information shall be gathered at fixed sampling plots for quantitative vegetational data and along meandering transects for general observations. The purpose of this monitoring shall be to determine if prolonged soil saturation or inundation occurs as a result of artificial impoundment or due to the

**§401 WATER QUALITY CERTIFICATION
TWRA – YUCHI REFUGE
PAGE 5.**

inability to completely de-water the areas. These reports shall be submitted to the COE and this office. If the reports indicate prolonged or abnormal soil saturation or inundation of these soils during the growing season (March 1 through mid October) sufficient to cause changes as outlined Condition #14 then remedial actions must be undertaken. Corrective measures may include the removal of water control structures.

14. If a 30% or larger change in density, percent cover or species composition occurs in vegetative ground coverage or greater than 30% shift in one wetness indicator to another in dominant groundcover and understory species or noticeable indicators of flooding stress such as a 30% increase in dead snags or in chlorosis, or a 10% increase in tree or understory mortality in the forested wetland area the permittee shall immediately suspend impoundment activities on the forested area. The permittee, division and the COE shall conduct an analysis to determine the cause and necessary remedial actions.
15. It is the responsibility of the permittee to convey all the terms and conditions of this certification to all contractors.

This does not obviate requirements of other federal, state or local laws. In particular, work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers or §26a permit from the Tennessee Valley Authority where necessary.

The applicant is responsible for obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities for construction sites involving clearing, grading, or excavation that result in an area of disturbance of one or more acres, and activities that result in the disturbance of less than one acre if it is part of a larger common plan of development or sale.

The State of Tennessee reserves the right to modify or revoke this permit or to seek modification or revocation should the State determine that the activity results in more than an insignificant violation of applicable water quality criteria or violation of the Act. Failure to comply with permit terms may result in penalty in accordance with § 69-3-115 of the Act.

An appeal of this action may be made to the Water Quality Control Board. In order to appeal, a petition requesting a hearing before the Board must be filed within 30 days after receipt of the permit action. In such petition, each contention should be stated in numbered paragraphs that describe how the proposed activity would be lawful and the action of the state is

**§401 WATER QUALITY CERTIFICATION
TWRA – YUCHI REFUGE
PAGE 6.**

inappropriate. The petition must be prepared on 8½" by 11" paper, addressed to the Water Quality Control Board and filed in duplicate at the following address: Paul E. Davis, Director, Division of Water Pollution Control, 6th Floor L & C Annex, 401 Church Street, Nashville, Tennessee 37243-1534. Any hearing would be in accordance with T.C.A. §69-3-110 and 4-5-301 et seq. Questions concerning this certification should be addressed to Mike Lee at 615-532-0712.

Sincerely,



 Paul E. Davis
Director

cc: Tom Welborn, U.S. Environmental Protection Agency, Atlanta, GA.
Lee Barclay, U.S. Fish & Wildlife Service, Cookeville, TN
Robert Todd, Tenn. Wildlife Resources Agency, Nashville, TN
Carl Olsen, Nashville District Corps of Engineers, Nashville, TN
Richard Urban, Water Pollution Control Division, Chattanooga Field
Office

APPENDIX E



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

July 18, 2005

Mr. Carl Olsen
U.S. Army Corps of Engineers, Nashville District
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214

RE: COE-N, ARCHAEOLOGICAL ASSESSMENT, PN# 05-36/TWRA YUCHI WETLAND FILL,
UNINCORPORATED, RHEA COUNTY, TN

Dear Mr. Olsen:

At your request, our office has reviewed the above-referenced archaeological survey report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we find that the project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb

8 5 2005



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

July 8, 2005

Mr. J. Bennett Graham
Tennessee Valley Authority
400 W. Summit Hill Drive
WT 11D - Cultural Resources
Knoxville, Tennessee 37902

RE: TVA, FINAL PLANS, TWRA YUCHI REFUGE & WILDLIFE AREA, UNINCORPORATED,
RHEA COUNTY, TN

Dear Mr. Graham:

At your request, our office has reviewed the above-referenced final plans in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we find concur the project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb

July 1, 2005

Ms. Jennifer Barnett
Tennessee Division of Archaeology
Cole Building #3
1216 Foster Avenue
Nashville, TN 37210

Dear Ms. Barnett:

TVA, ARCHAEOLOGICAL ASSESSMENT, TWRA YUCHI REFUGE AND WILDLIFE
MANAGEMENT AREA, TRM 321R-523.4R, 525R-525.6R, RHEA COUNTY

TVA has recently received final plans from TWRA for the proposed construction and operation of waterfowl impoundments at the Yuchi Wildlife Management Area (enclosed). Review of these plans indicates that all potentially eligible or eligible archaeological sites will be avoided. However, TVA continues to disagree with the author's eligibility assessment for sites 40Rh13, 40Rh79, 40Rh72, 40Rh12, and 40Rh96. As stated in our previous consultation, the consultant did not assess buried site potential in these locations. When shovel testing was completed, depths failed to reach below 100cm. Results of the geoarchaeological testing for the proposed dam constructions indicate that buried site potential exists below 200cm in this area. Site forms submitted as a result of this survey document these sites as having been destroyed. We feel that the state site files need to be updated to reflect the potential for buried deposits.

Pursuant to Section 106 of National Historic Preservation Act and its implementing regulations at 36 CFR § 800.4, TVA has determined that the project as currently proposed would not affect historic properties eligible for listing in the National Register of Historic Places. If you have any questions, please contact me at 865/632-2458 or by email at jbgraham@tva.gov.

Sincerely,

J. Bennett Graham
Manager
Cultural Resources

ENCLOSURES

2004 - 00466

→ CFO

02

2/1



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

June 15, 2005

Mr. Carl Olsen
U.S. Army Corps of Engineers, Nashville District
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214

RE: COE-N, PN# 05-36/TWRA YUCHI WETLAND FILL, UNINCORPORATED, RHEA COUNTY, TN

Dear Mr. Olsen:

Pursuant to your request, this office has completed an initial review of the above-referenced undertaking received on Monday, June 13, 2005 pursuant to Section 106 of the National Historic Preservation Act. Our review is a requirement for compliance by the participating federal agency and/or applicant for federal assistance. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

In accordance with the language contained in the public notice for this undertaking, our office shall await agency review and comment on the archaeological survey report submitted to the United States Army Corps of Engineers by the applicant.

Upon receipt of this documentation, we will complete our review of this undertaking as quickly as possible. Please be advised that until this office has provided you a final written comment on this project, you have not met your Section 106 obligation under federal law. We appreciate your cooperation. Questions and comments may be directed to Jennifer M. Barnett (615) 741-1588, ext. 17.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb

JUN 2005



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

July 19, 2005

Lt. Colonel Byron G. Jorns
District Engineer
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, Tennessee 37214

Attention: Mr. Carl Olsen, Regulatory Branch

Subject: Public Notice No. 05-36. Tennessee Wildlife Resources Agency, Proposed Wetland and Stream Fill, Rhea County, Tennessee.

Dear Colonel Jorns:

Fish and Wildlife Service (Service) personnel have reviewed the subject public notice. The purpose of the project would be to allow the applicant (Tennessee Wildlife Resources Agency) to construct water control structures that would create temporary feeding and resting areas for migrating waterfowl at the Yuchi Refuge in Rhea County, Tennessee. The proposed project would result in the permanent loss of 0.75 acre of wetland and the placement of 1,321 cubic yards of fill material into unnamed tributaries of the Tennessee River at four locations. The proposed structures would hold water from mid-November through February. The wetland loss would be mitigated by restoring approximately 3 acres of wetlands on site. The following constitute the comments of the U.S. Department of the Interior, provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the project. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality. However, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under section 7 of the Act must be reconsidered if (1) new information reveals impacts of the action that may affect listed species or critical habitat in a manner not previously considered,

21 JUL 2005

(2) the action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the action.

We do not anticipate significant adverse impacts to fish and wildlife or their habitats as a result of this project, provided the proposed mitigation is implemented in a timely manner. Therefore, the Service does not oppose issuance of the subject permit.

We appreciate the opportunity to review the subject permit application. Please contact Robbie Sykes (telephone 931/528-6481, ext. 209) of my staff if you have questions regarding the information provided in this letter.

Sincerely,

A handwritten signature in cursive script that reads "Lee A. Barclay".

Lee A. Barclay, Ph.D.
Field Supervisor

xc: Robert Todd, TWRA, Nashville, TN
Dan Eagar, TDEC, Nashville, TN
Darryl Williams, EPA, Atlanta, GA

#2004-00466 → CPO
OR
7/1

U.S. Department of Homeland Security
Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341



FEMA

June 20, 2005

Department of the Army
Nashville District Corps of Engineers, Regulatory Branch
3701 Bell Road
Nashville, TN 37214

ATTN: Carl R. Olsen:

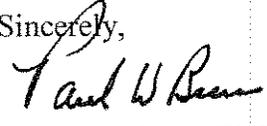
RE: Public Notice No. 05-36; Application No. 200400466; Tennessee Wildlife Resources Agency

The Federal Emergency Management Agency, Region IV (FEMA R-IV) is responding herein to your request for comment on the placement of fill for the applicant agency's proposed construction of water control structures to allow operation of a waterfowl impoundment complex at Yuchi Refuge, Rhea County, Tennessee. FEMA R-IV's comments pertain to floodplain management.

Executive Order 11988, Floodplain Management, requires that Federal agencies take action to minimize modification of floodways. Floodplain management's special concerns here are that the introduction of fill into the streams should avoid possible adverse impacts on the floodways. In regard to local floodway issues, please contact the Rhea County Floodplain Administrator.

FEMA Region IV appreciates the opportunity to comment on this proposal. If you have questions on our response, please contact Janice Mitchell at 770-220-5441.

Sincerely,

for 
William R. Straw, Ph.D.
Regional Environmental Officer

27 JUN 2005

APPENDIX F

OCT 08 2004

**Archaeological Survey of Five Proposed Water Control Structures and
Associated Seasonal Waterfowl Management Impoundments, Yuchi
Wildlife Management Area, Rhea County, Tennessee**

PREPARED FOR:

Tennessee Wildlife Resources Agency
Ellington Agricultural Center
P.O. Box 40747
Nashville, Tennessee 37204
615-781-6547

SUBMITTED TO:

Tennessee Valley Authority
Cultural Resources Division
P.O. Box 1589
Norris, Tennessee 37828-1589

PREPARED BY:

William L. Lawrence
Tennessee Division of Archaeology
Route 1, Box 395
Tiptonville, Tennessee 38079
731-253-8589

with contributions by:

Joseph L. Benthall
Tennessee Division of Archaeology
Sarah C. Sherwood
Department of Anthropology
University of Tennessee, Knoxville

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MANAGEMENT SUMMARY

Archaeological investigations at Yuchi Wildlife Management Area were carried out in conjunction with the proposed construction of five water control structures on five unnamed streams within Smith Bend on the Tennessee River in Rhea County, Tennessee. These water control structures are designed to improve habitat for migratory waterfowl through the creation of shallow seasonal sub-impoundments in the lower elevations near the river. These sub-impoundments will have a maximum pool elevation of 690 AMSL. Archaeological survey was conducted at all proposed water control structure sites; within the sub-impoundment areas including a 100ft buffer zone above the 690 contour, borrow pit locations, access roads, and at a culvert crossing on an existing access road. Backhoe assisted testing was conducted to assess the potential for deeply buried archaeological sites at all water control structure sites and within the associated sub-impoundments in consultation with a geomorphologist.

No new archaeological sites were recorded as a result of this survey. A total of 22 previously recorded archaeological sites were reinvestigated. 14 sites (40Rh15, 105, 114, 115, 116, 118, 119, 122, 123, 124, 125, 126, 127, and 128) were determined to be outside the Area of Potential Effect and will not be impacted by the proposed project design. These sites were surveyed by pedestrian reconnaissance to assess the boundaries and determine if any portion of the sites extend into the APE. Two sites (40Rh80 and 117) were found to be within the Area of Potential Effect and were tested to determine eligibility for nomination to the National Register of Historic Places. 40Rh80 is a large Mississippian shell midden located at the proposed site of borrow pit 5. Subsurface testing revealed a 20cm thick zone of intact midden at the base of the plowzone. Testing also indicates that features with excellent organic preservation, structure floors, and human remains are likely to be present at this site. 40Rh80 is eligible for nomination to the National Register and modification of the proposed project design are recommended to avoid impacting this significant cultural resource. 40Rh117 consists of a moderate density scatter of prehistoric lithic debris of undetermined cultural affiliation. The site is located on an upland knoll approximately 800ft north of the Tennessee River on the west side of drainage 1. The site is within the Area of Potential Effect as a portion of the site extends to the edge of a vertical bluff above a proposed sub-impoundment. The 690 contour falls along this bluff well below but within 100ft of the site. Geomorphic assessment of the backhoe trenches excavated at nearby structure 1 indicate that the area has the potential for deeply buried archaeological sites. However 40Rh117 is located at a higher elevation on the second river terrace in an entirely different geomorphic setting. Subsoil is evident on the surface of the site and testing indicates that the site is contained entirely within the plowzone. 40Rh117 is not eligible for nomination the National Register of Historic Places. No additional testing is recommended at this site.

Backhoe assisted deep testing was conducted at the proposed location of each water control structure and within the proposed sub-impoundments to assess the potential for deeply buried archaeological deposits. No buried archaeological sites were found as a result of this testing. Geomorphic assessment of the trenches indicates that the potential for deeply buried archaeological sites exists in these areas and additional deep testing will be required if the project plan calls for excavation deeper than two meters.

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APPENDIX G

404(B)(1) GUIDELINES COMPLIANCE EVALUATION (RESTRICTIONS ON DISCHARGE, 40 CFR 230.10): (A check in a block denoted by an asterisk indicates that the proposal does not comply with the guidelines.)

I. Alternatives test.

- A. Are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States" or at other locations within these waters? [Yes(*)__ No_x]
- B. If the project is in a special aquatic site and is not water-dependent, has applicant clearly demonstrated that there are no practicable alternative sites available? [Yes_x No(*)__]

II. Special restrictions. Will the discharge:

- A. violate state water quality standards? [Yes(*)__ No_x]
- B. violate toxic effluent standards (under Section 307 of the Act)? [Yes(*)__ No_x]
- C. jeopardize endangered or threatened species or their critical habitat? [Yes(*)__ No_x]
- D. violate standards set by the Department of Commerce to protect marine sanctuaries? [Yes(*)__ No_x]
- E. Evaluation of the physical/chemical and biological characteristics and anticipated changes indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s). [Yes_x No__]

(x) based on available information, the material is not a carrier of contaminants

() the levels of contaminants are substantially similar at the extraction and disposal sites

and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas

- () acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site

III. **Other restrictions.** Will the discharge contribute to significant degradation of "waters of the U. S." through adverse impacts to:

- A. human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife, and special aquatic sites? [Yes(*)__ No x]
- B. life stages of aquatic life and other wildlife? [Yes(*)__ No x]
- C. diversity, productivity, and stability of the aquatic ecosystem, such as loss of fish or wildlife habitat, or loss of the capacity of wetland to assimilate nutrients, purify water, or reduce wave energy? [Yes(*)__ No x]
- D. recreational, aesthetic and economic values? [Yes(*)__ No x]

IV. **Actions to minimize potential adverse impacts (mitigation).**

Will all appropriate and practicable steps (40 CFR 230.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem? [Yes x No(*)__]

The mitigation measures included in the proposed action together with the standard erosion and sedimentation controls included in the DA permit conditions would adequately minimize pollution or adverse effects to the affected ecosystem.