



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

DEC 13 1991

OFFICE OF  
WATER

Honorable Nancy P. Dorn  
Assistant Secretary (Civil Works)  
Department of the Army  
Washington, D.C. 20310-0103

Dear Ms. Dorn:

In accordance with the provisions of the Memorandum of Agreement (MOA) between the U.S. Environmental Protection Agency (EPA) and the Department of the Army under Section 404(q) of the Clean Water Act, I am formally requesting your review of the decision by Colonel Clinton W. Willer, District Engineer, U.S. Army Corps of Engineers (Corps), Memphis District (District), to issue a Section 404 permit (Loosahatchie River/Big Creek-25-TD (LR/BC-25)) to the Tennessee Department of Transportation (TDOT) for the extension of the Paul Barrett Parkway near Millington, Shelby County, Tennessee. Colonel Willer's Notice of Intent to issue a permit for this project was transmitted by facsimile on November 13, 1991, to Greer C. Tidwell, Regional Administrator, EPA Region IV. Issuance of the permit to TDOT would authorize the discharge of fill material in conjunction with roadway construction into approximately 34 acres of wetlands adjacent to Big Creek.

After a thorough review of available information relevant to this case, we have determined that this case warrants elevation in accordance with the criteria in the MOA for elevation under section 5.b.3, regarding environmental issues of national importance requiring policy level review. I also believe that this request is consistent with the Administration's stated policy of elevating issues of national significance. In particular, we believe that the Memphis District's failure to adequately consider the dramatic differences in values of the wetlands affected by different alternatives, the effects of the proposed alignment on the success of an adjacent mitigation bank, and the process by which costs were factored into the determination of practicability resulted in the selection of an alternative with serious and avoidable environmental impacts.

We believe that in the review of the alternatives analysis for the TDOT application, the Memphis District failed to recognize the strikingly disparate values of wetland types existing in the project area. Of the 34 acres of wetlands that would be impacted by the proposed project, 11 to 12 acres are mature ox-bow wetland, rated high in their ability to perform water quality maintenance and wildlife habitat functions. A shift in alignment 250 feet to the south would avoid these higher value wetlands. The remaining wetlands that would be impacted are previously farmed and early successional

forested wetland, which are lower in value and contrast sharply with the ox-bow wetlands in functional value. We believe that the Memphis District did not consider these differences in value, and therefore did not properly evaluate the environmental impacts of the proposed alignment. It should also be noted that the ox-bow wetlands are located adjacent to an existing TDOT mitigation bank and are believed to play a key role in the success of the mitigation bank. We are very concerned by the Memphis District's failure to consider the effects of this proposed alignment on the mitigation bank.

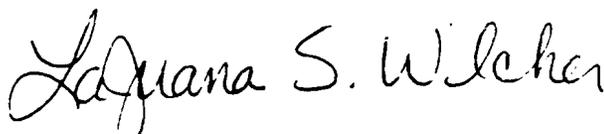
While we recognize there may be some additional costs associated with the abovementioned change in project alignment, we believe that such costs are not unreasonable in light of the total project cost nor would it compromise the objectives of the TDOT proposed project. However, the Memphis District has concluded that the alternative alignment is not practicable due to "economic and social considerations." We believe that the factors the Memphis District used to calculate cost in the determination of practicability of alternatives were inappropriate.

In closing, I stress our overall policy concerns that the currently proposed project does not take the required steps necessary to reduce significant but avoidable environmental impacts. We believe that the failure to adopt the most environmentally acceptable alignment of this portion of the Paul Barrett Parkway will set an undesirable precedent for the subsequent portions of the overall project, as well as the many other TDOT construction projects currently under consideration. I have attached a more detailed analysis of the issues in this matter for your review.

I hope you will carefully review the record on this permit case and agree to provide additional guidance to the Memphis District. I would like to emphasize that there appear to be fundamental disagreements over the policies that should be applied to the facts of this case.

I look forward to your response to our concerns. If my staff can be of further assistance during your evaluation of this request, please have your staff direct their questions to Ms. Sandy Sieg-Ross in the Office of Wetlands, Oceans and Watersheds (OWOW) at 260-9914. Data which we used to reach our decision in this matter are available for review through Ms. Sieg-Ross. You should also, of course, feel free to contact me or Robert Wayland, Director of OWOW, at 260-7166.

Sincerely yours,



LaJuana S. Wilcher  
Assistant Administrator

## ATTACHMENT - Loosahatchie River/Big Creek-25-TD (LR/BC-25)

### Project Description and Affected Environment

The proposed project is the second section of a larger road construction project from State Route 3 (U.S. 51) in Millington, Tennessee, to Interstate 40 in Arlington, Tennessee. This particular portion of the project extends 3.5 miles from Singleton Parkway to Austin Peay Highway near Big Creek in Shelby County, Tennessee.

Of the 34 acres of wetlands affected by the TDOT project, 11 acres are high quality, old-growth forest associated with a relict ox-bow system. The ox-bow is dominated by willow oak, water oak, bald cypress, and American elm. The mature age and habitat attributes of this area contrast sharply with the young shrub-scrub and early successional forested wetlands which occur in the initial and middle portions of the proposed TDOT road alignment. These younger wetlands are characterized by a variety of sedges and rushes, button bush, black willow, red maple, green ash and bald cypress seedlings and saplings. The proposed alignment and mitigation is directly adjacent to the TDOT wetlands mitigation bank on Big Creek. TDOT has used this site for wetland mitigation for numerous other Section 404 projects.

During initial review of project associated impacts, Corps and EPA biologists concluded that additional information was needed to document the functions and values of the old-growth forested ox-bows relative to the other wetland types in the project area. In August, 1991, potential wetland functions of the ox-bow area were determined using the Corps Wetland Evaluation Technique (WET).

Under the WET analysis, the ox-bow wetlands were rated "high" in their predicted ability to perform the following wetland functions: floodflow alteration; sediment stabilization; retention of sediments and toxicants; nutrient removal and transformation; and wildlife diversity and abundance in terms of breeding, migration, and wintering. Field inspections support the conclusion that the area possesses unique and exceptional wildlife habitat attributes and revealed the presence of the little green heron, barred owl, beavers, marsh rabbit, and numerous songbirds. Further evidence of the superior wildlife habitat values of the area included observations of numerous features which typically provide shelter for wildlife. EPA and Corps field staff concluded that, based on its location in the drainage basin, vegetational and wildlife species composition, soil characteristics, diverse landscape features, and unique hydrologic characteristics, the ox-bow wetland forest currently supports important wildlife habitat and provides water quality functions that distinguish it from the earlier successional wetlands in the project area.

## Project History

The overall project was planned during the early 1970's, when 16 different routes in five roadway corridors were studied for the purposes of compliance with the National Environmental Policy Act (NEPA). The Federal Highway Administration (FHWA), in a final Environmental Impact Statement (EIS) dated September 11, 1975, cites "Corridor IV" as the preferred alternative. Within this corridor, alignment K, located approximately 700 feet south of the currently proposed alignment, was recommended for roadway construction.

According to the record for this project, implementation of the project was delayed due to funding constraints until late 1986. Because of residential development that had occurred in the recommended alignment during the construction delay, TDOT shifted the alignment location approximately 700 feet to the north. A supplemental EIS was not prepared to evaluate the effects of this change in alignment.

TDOT's request for a Section 404 permit for construction of this phase of the Paul Barrett Parkway was published by the Memphis District in the April 3, 1991, Public Notice entitled LR/BC-25. During initial site inspections, Corps and EPA biologists identified obvious functional distinctions between wetlands in the project area, and focused the project review on alternative road alignments that would avoid the high quality, old-growth forested ox-bow wetlands. During field inspections in May and June of 1991, alternative routes were identified that would avoid impacts to the old-growth forested ox-bows in the proposed alignment. EPA requested that these alternate routes be investigated by TDOT, with emphasis placed on an alignment shift approximately 250 feet to the south of the currently proposed alignment. In June, EPA informed the Corps that the avoidance of the 11 acres of old-growth wetlands was paramount to evaluation of alignment alternatives, and that unavoidable impacts to the remaining shrub-scrub and early successional forested wetlands would be acceptable should adequate mitigation be provided.

The overall cost estimates for the project, as prepared by TDOT, indicate that this phase of the project will cost approximately \$20,000,000. The TDOT estimate of additional cost resulting from realignment of the project 250 feet to the south was placed at \$684,350 and was later increased to \$1,673,710. The TDOT preferred alignment would require the relocation of four homes, while the proposed realignment to the south would involve the loss of access to, and potential relocation of, an additional two residences.

## Elevation Criteria

With regard to the criteria set forth in the Memorandum of Agreement under Section 5.b.3, EPA believes that the District Engineer's decision to issue the Section 404 permit for the TDOT proposed road alignment raises several policy issues of national

importance related to compliance with the Section 404(b)(1) Guidelines, including factors determining the practicability of alternatives. The permit decision for the TDOT proposal also raises significant policy issues regarding recognition of varying functional values of affected aquatic resources, and consideration of existing mitigation banking efforts.

### Practicability of Alternatives

EPA believes that the application of the Guidelines on the part of the District in this case is inconsistent with Section 404 national program policies and goals concerning factors which control the practicability of alternatives. During review of the Section 404 permit for the TDOT proposal, the District concluded that an alternative alignment was not a practicable alternative under the Guidelines due to "economic and/or social considerations." This position was based on TDOT's assertion that selection of an alignment other than the preferred alignment would result in additional, unacceptable project costs. TDOT maintained, and the District agreed, that the alternative alignment was not practicable because of the additional costs that would be incurred in redesign of the road, purchase of additional right-of-way, and acquisition of two additional residences. Conclusions regarding practicability were also based on "road user costs" associated with delay in use of this road segment and funds expended on the TDOT alignment prior to completion of the Section 404 permit review.

The Memphis District's conclusions regarding the practicability of the alternative alignment inappropriately limited analysis of alternatives under Section 230.10(a) of the Guidelines because those conclusions relied upon consideration of costs expended by TDOT prior to permit approval. It is our understanding that the District was not notified of TDOT's intention to seek a permit until December, 1990. The record does not indicate that TDOT approached the District during the 1986 project realignment phase even though significant wetland impacts would be involved that would not have resulted from the preferred alignment identified in the 1975 EIS. During this time, the applicant committed resources toward its currently proposed project without any indication from the permitting authority regarding the likelihood that a permit would or would not be issued. Nevertheless, TDOT asserts that this expenditure limits the availability of any alternative other than its current preferred alternative.

EPA believes that a lack of coordination with the permitting authority prior to making a discretionary commitment of resources should not foreclose a full and fair exploration of practicable alternatives. This factor is particularly relevant for an applicant such as TDOT that has applied for numerous Section 404 permits and is intimately familiar with the permitting process and the Section 404(b)(1) Guidelines requirements for alternatives analysis.

In addition, the Memphis District's conclusions regarding the practicability of alternative alignments inappropriately limited analysis of alternatives because those conclusions relied upon consideration of opportunity costs which do not affect the ability of TDOT to pursue alternatives. The "road user costs" identified by TDOT as additional costs incurred under alternative alignments do not represent additional costs that will be expended by TDOT. Therefore, such costs do not affect the ability of TDOT to pursue alternative alignments, and should not affect the practicability of alternative alignments. Finally, in light of the overall costs of the proposed project, EPA submits that even if TDOT's estimates of additional costs for the alternative alignment were considered appropriate for the determination of practicability, the amount of increased project cost does not make the project unreasonably expensive.

#### Recognition of Functional Values of Affected Aquatic Resources

For reasons previously outlined, the Memphis District's Section 404 permit review of the TDOT proposal did not consider alternatives other than the TDOT preferred alignment. The record indicates that the forested ox-bow area that would be destroyed by the proposed TDOT alignment is of significantly higher functional value than the remainder of the wetlands in the project area. From a policy perspective, EPA believes it is critical that the Corps permit review process recognize varying levels of functional value of aquatic resources affected by permit decisions. In cases such as the TDOT proposal, where proposed projects will impact wetlands of markedly differing quality and value, EPA believes that the rigor of the alternatives review and commitment to avoiding impacts must be heightened for those wetlands of higher value.

EPA Region IV has recommended that an alternative road alignment approximately 250 feet south of the TDOT proposal be fully considered in the Memphis District's alternatives analysis for the project. This alternative alignment would avoid the loss of valuable wetlands that would be destroyed with implementation of the TDOT proposal. EPA has concluded, and the District permit documentation confirms, that these wetlands are of significantly higher functional value than other wetlands in the project review area. The record on this case indicates that although the alternative alignment favored by EPA would impact approximately 15 acres of wetlands, this reconfiguration of the alignment embraces a fundamental precept of the Guidelines: that potential adverse impacts to waters of the United States must be avoided to the maximum extent practicable. Clearly, an opportunity to avoid adverse impacts on the highest value resources in the overall aquatic ecosystem should prompt the Corps to fully review the alternative alignment under Section 230.10(a) of the Guidelines.

#### Potential for Project to Impair Effectiveness of Existing Mitigation Bank

EPA is concerned about the policy implications of the District Engineer's decision to permit destruction of the ox-bow forested wetland area in light of that area's importance in maintaining the success of past TDOT mitigation efforts. As previously

mentioned, an existing TDOT wetlands mitigation bank, that has been utilized by TDOT as off-site mitigation for environmental impacts associated with as many as 20 other highway projects, is immediately adjacent to the ox-bow forested wetlands at issue. EPA, in its review and comment on these past projects, has considered the merits of given mitigation proposals in light of the functional values contributed to the bank by the existing forested wetland resources of Big Creek, including the old-growth forested ox-bow systems. In fact, one of the primary biological arguments favoring the use of the adjacent site as a mitigation bank, and the acceptance of the area as mitigation for past projects, was its proximity to the forested ox-bows that would be destroyed by the proposed TDOT alignment for this project.

In evaluating mitigation proposals for previous TDOT projects, EPA Region IV has recognized the proximity of the mitigation bank area to the ox-bow area as a controlling factor in the success or failure of the mitigation. The ox-bow wetland enhances the biodiversity of the area and provides an important source of seeds for natural regeneration of indigenous species in the mitigation bank. As a policy matter, EPA has recognized and endorsed the resource management philosophy behind the TDOT mitigation banking site and has accepted use of the site based on the assumption that success of the bank will be assured through future actions by TDOT and the Corps. Project-related impacts on the mitigation bank must be thoroughly considered by the Memphis District to ensure future success of the mitigation bank. The failure to fully consider the potential impacts of this permit decision on the bank raises significant implications for future policy decisions regarding how the agencies will address mitigation banking at the national level.

#### NEPA Compliance

As a final point, EPA is concerned about the Corps decisionmaking process as it relates to compliance with the requirements of NEPA. Based on preliminary information provided by FHWA, it appears that TDOT should have prepared supplemental NEPA documentation for this project since the originally selected alternative was changed, substantial delay in project construction had occurred, and new information regarding environmental impacts was available for consideration. EPA believes that the District should not issue a Section 404 permit while these outstanding questions regarding compliance with NEPA remain unresolved.