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ENVIRONMENTAL ASSESSMENT

**ADMINISTRATION OF APPALACHIAN REGIONAL
COMMISSION GRANT TO CONSTRUCT SEWAGE SYSTEM
FACILITIES FOR NEW TOYOTA MANUFACTURING
FACILITY
Lee County, Mississippi**

PREPARED BY:
TENNESSEE VALLEY AUTHORITY

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TABLE OF CONTENTS

1.0	PURPOSE OF AND NEED FOR ACTION	1
1.1.	The Proposed Decision and Need	1
1.2.	Other Pertinent Environmental Reviews or Documentation.....	1
1.3.	The Scoping Process	2
1.4.	Environmental Permits and Notification	2
2.0	ALTERNATIVES INCLUDING THE PROPOSED ACTION	9
2.1.	Alternative A – The No Action Alternative	9
2.2.	Alternative B – The Proposed Action	9
2.3.	Comparison of Alternatives	10
2.4.	The Preferred Alternative	10
3.0	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	11
3.1.	Cultural Resources	11
3.2.	Terrestrial Ecology	15
3.3.	Aquatic Ecology.....	15
3.4.	Threatened and Endangered Species	17
3.5.	Natural Areas	17
3.6.	Floodplains	17
3.7.	Wetlands	18
3.8.	Cumulative Impacts.....	18
3.9.	Summary of TVA Commitments and Proposed Mitigation Measures.....	18
4.0	LIST OF PREPARERS AND OTHER CONTRIBUTORS	19
4.1.	Preparers.....	19
4.2.	Other TVA Contributors and Reviewers.....	20
4.3.	Non-TVA Contributors and Reviewers	22
5.0	LIST OF AGENCIES AND ORGANIZATIONS TO WHICH COPIES ARE SENT	23
6.0	LITERATURE CITED.....	25

LIST OF APPENDICES

Appendix A – Cultural Resource Assessment, Tribal Concurrence, and Mississippi SHPO Concurrence	27
Appendix B – List of Plants and Animals	51
Appendix C – Map of Stream Crossings, Descriptions of Stream Crossings, Application for USACE Permit, Permit, and Correspondence With USACE.....	59
Appendix D – Correspondence With USFWS and MDWFP	109
Appendix E – NPS/Natchez Trace Parkway Categorical Exclusion and NPS/Natchez Trace Parkway Construction Easement/Special Use Permit	115

LIST OF FIGURES

Figure 1.	PUL Alliance Wastewater Infrastructure Project (Aerial Photo).....	3
Figure 2.	PUL Alliance Wastewater Infrastructure Project (Topographic Map).....	5
Figure 3.	Aerial photograph showing areas of monitoring for archaeological sites	13

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
ARC	Appalachian Regional Commission
BMPs	Best Management Practices
EA	Environmental Assessment
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
kV	Kilovolt
LCNOI	Large Construction Notice of Intent
MDEQ	Mississippi Department of Environmental Quality
MDOT	Mississippi Department of Transportation
MDWFP	Mississippi Department of Wildlife, Fisheries, and Parks
MGD	Millions of Gallons per Day
MSSHPO	Mississippi State Historic Preservation Officer
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
POTW	Publicly Owned Treatment Works
PUL Alliance	Pontotoc, Union, and Lee County Alliance
ROW(s)	Right(s)-of-Way
RPW	Relatively Permanent Waters
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
THPOs	Tribal Historic Preservation Officers
TVA	Tennessee Valley Authority
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WTS	Wildlife Technical Services

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CHAPTER 1

1.0 PURPOSE OF AND NEED FOR ACTION

1.1. The Proposed Decision and Need

The Tennessee Valley Authority (TVA) proposes to administer a \$1.5 million Appalachian Regional Commission (ARC) grant to help fund approximately 11.9 miles of 18-inch and 24-inch-diameter force main sewer line in Tupelo (Lee County), Mississippi, and upgrade an existing pumping station. The grant has been awarded to the Pontotoc, Union, and Lee County Alliance (PUL Alliance), which would own the line and be responsible for its construction.

The proposed route of the line is shown on Figures 1 and 2. An 18-inch sewer force main would extend south approximately 6 miles from the north end of North Coley Road at McCullough Boulevard to the existing Haven Acres Pumping Station in the southwestern corner of the project area. From the Haven Acres Pumping Station, a 24-inch sewer force main would extend east approximately 5 miles and north approximately a mile to connect to the Tupelo Publicly Owned Treatment Works (POTW) facility on the eastern edge of the city. The pumping station would be refurbished and have its pumps upgraded.

The proposed sewer line would serve the new Toyota Mississippi Manufacturing facility currently under construction in the Blue Springs Community along U.S. Highway (US) 78, approximately 10 miles from the project area. This facility will provide long-term economic growth and development opportunities for Northeast Mississippi. A more diverse regional economy and stronger economic base are needed to offset the loss of manufacturing jobs in recent years, particularly as the traditionally strong furniture industry has increasingly moved overseas. Total cost of the line for which the ARC grant would be used is estimated to be \$9,287,700. The portion of this cost not funded by the ARC grant is being funded by the State of Mississippi, acting through the PUL Alliance.

1.2. Other Pertinent Environmental Reviews or Documentation

In 1998, the Mississippi Department of Transportation (MDOT) and Federal Highway Administration (FHWA) completed an environmental assessment (EA) and issued a finding of no significant impact (FONSI) for the widening of Mississippi State Route (SR) 6 from Tupelo to Pontotoc, which lies south and west of Tupelo (MDOT 1998). Approximately 2.5 miles of the proposed ARC-funded sewer line would be within and/or adjacent to the right-of-way (ROW) for SR 6. MDOT and FHWA determined that the project would not involve fill in wetlands, change stream channels, or have impacts on wildlife or rare species. Best management practices (BMPs) such as hay bales and silt fences would adequately control erosion and sedimentation. There would be no impacts to archaeological sites or other historic properties in the section of highway along which the proposed sewer line would lie.

Subsequently MDOT and FHWA reevaluated the FONSI for a section of the highway including the 2.5 miles along which the proposed sewer line would lie and again determined that there would be no significant impacts (MDOT 2007). The reevaluation included additional analysis related to potential disturbance of Chickasaw Nation house sites and visual impacts on the Natchez Trace Parkway. Neither of those potential impacts was of concern in the stretch of the highway along which the proposed sewer line would run. The two documents are incorporated by reference.

The National Park Service (NPS) has completed a categorical exclusion and issued a Special Use Permit for the proposed sewer line crossing under section 6.0 of the Natchez Trace Parkway (Parkway) on the west side of Tupelo. The permit requires the use of directional boring to cross the Parkway. The categorical exclusion and permit are incorporated by reference and are included in Appendix D.

TVA has also built approximately 4 miles of new 161-kilovolt (kV) transmission line to supply the electrical power to the Toyota facility. The tap point is east of structure 13 in the existing Union-Pontotoc 161-kV Transmission Line. The new line ends on the Toyota Plant site at a new TVA switching station adjacent to a new substation built by TVA and New Albany Light, Gas, and Water. TVA previously examined the impacts of building the transmission line and substations and categorically excluded this action with Categorical Exclusion Checklist 15567.

1.3. The Scoping Process

This EA assesses the impacts of the construction of the proposed sewer line from the north end of North Coley Road to the Tupelo Wastewater Treatment Plant. This proposed 11.9-mile segment to be funded by the ARC grant would connect to an additional 10 miles of sewer line extending to the Toyota Mississippi manufacturing facility. The state previously committed to provide funding for that portion of the line, and the decisions for location of that section of the line have been made by the PUL Alliance. Several miles of that portion of the line lie along the route of a frontage road to the Toyota site, and clearing and most of the grading for this road have already been done. Therefore, the review of the ARC-funded segment of the sewer line does not consider the environmental effects of the portion of the line from North Coley Road to the Toyota facility at Blue Springs, except insofar as there may be cumulative impacts.

Alternatives considered are the proposed action and no action. No other alternatives appear feasible or necessary to consider. The PUL Alliance has already chosen the location of the section of the line from Toyota to the start of the proposed project at North Coley Road, and this significantly limits other possible sewer line routes. The proposed route lies predominantly along existing and previously disturbed easements and ROWs, which substantially reduces the risk of adverse environmental impacts. No other possible sewer line route is expected to have less adverse impacts.

Issues being considered in this EA are potential impacts on cultural resources, terrestrial ecology, and aquatic ecology; threatened, endangered, and otherwise listed species; natural areas; floodplains; and wetlands. Although the line would cross agricultural areas, impacts on prime farmland are not an issue because the entire route lies in areas used or zoned for nonagricultural use and thereby in or intended for urban development. Because the sewer line would be a force main, no additional connections to the line are planned.

1.4. Environmental Permits and Notification

The proposed sewer line would cross 24 intermittent and ephemeral streams and one perennial stream. The U.S. Army Corps of Engineers (USACE) has issued a Section 404 Permit (Nationwide Permit [NWP] 12) for these crossings. In addition, a large construction notice of intent (LCNOI) and associated storm water pollution prevention plan (SWPPP) would be prepared and submitted to the Mississippi Department of Environmental Quality



Figure 1. PUL Alliance Wastewater Infrastructure Project (Aerial Photo)

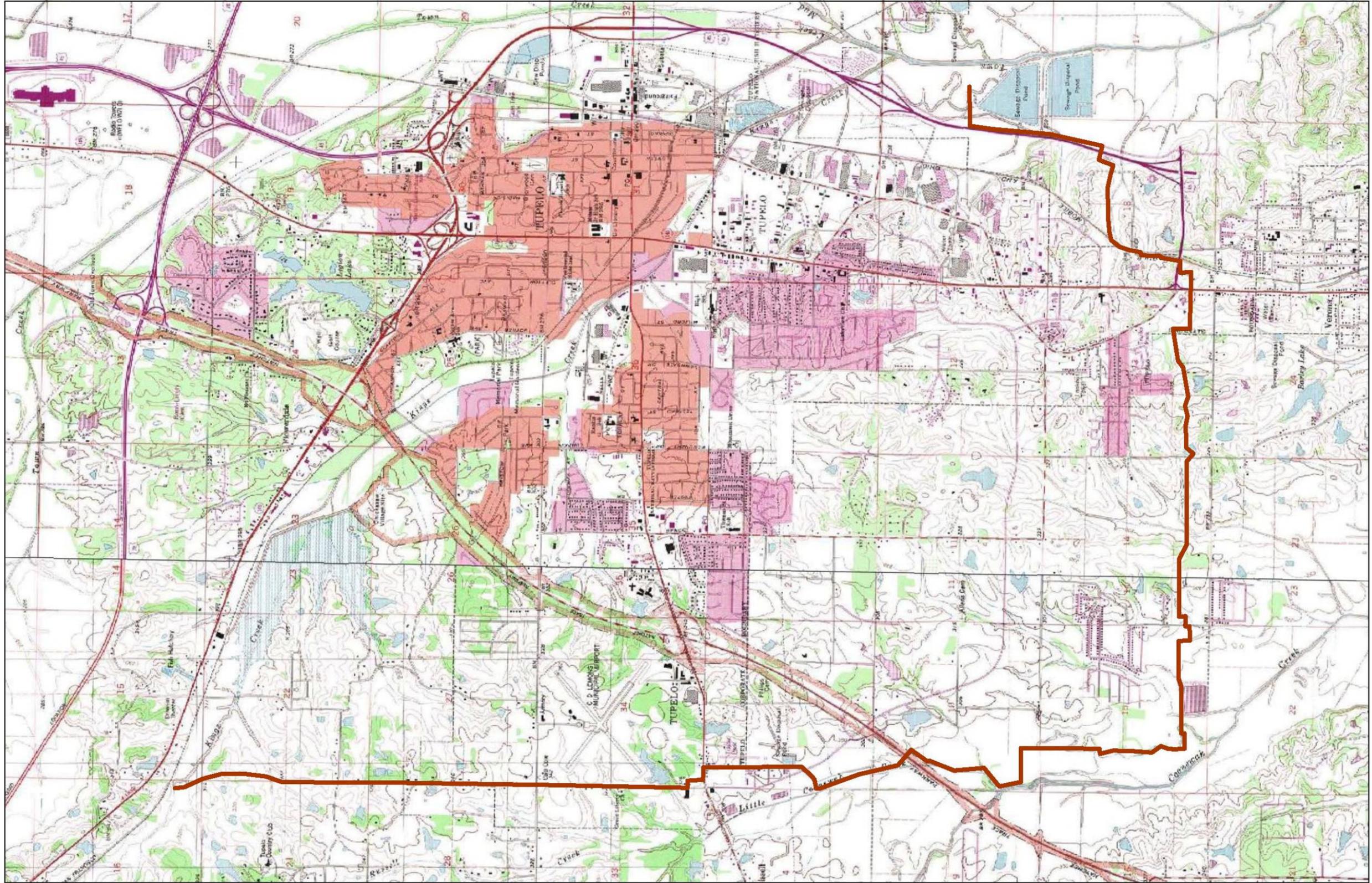


Figure 2. PUL Alliance Wastewater Infrastructure Project (Topographic Map)

(MDEQ) to provide Construction Storm Water Permit coverage for the construction activities. This permit authorization would also be issued prior to the initiation of the proposed construction activities. As noted above, a Special Use Permit has already been issued by the NPS for the proposed sewer line crossing of the Natchez Trace Parkway. No other federal, state, or local permit authorizations have been identified. The PUL Alliance is the entity responsible for obtaining all required permits.

The Tupelo POTW currently has an excess capacity of 3.5 to 4.5 millions of gallons per day (MGD) above the current average flows, which is more than enough to handle the 1.3 MGD of wastewater to be carried by the proposed line at the ultimate expected output of the Toyota facility. Therefore, no change to the POTW's existing permit would be needed.

TVA has consulted with 13 federally recognized Indian tribes regarding potential impacts to properties that may be of religious and cultural significance to them and eligible for the National Register of Historic Places (NRHP). These tribes include The Chickasaw Nation, Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Muscogee (Creek) Nation of Oklahoma, Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Kialegee Tribal Town, Thlopthlocco Tribal Town, Absentee Shawnee Tribe of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe, and Seminole Tribe of Florida.

Prior to TVA's involvement, the PUL Alliance consulted with the Mississippi State Historic Preservation Officer (MSSHPO), the U.S. Fish and Wildlife Service (USFWS); the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP); and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service regarding potential environmental issues related to the construction of the 11.9 miles of sewer line.

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CHAPTER 2

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1. Alternative A – The No Action Alternative

Under the No Action Alternative, TVA would not administer the ARC grant. The PUL Alliance could still choose to obtain other funding to build the line, or ARC could potentially utilize another federal agency to administer the grant. Because the line would serve the new Toyota plant already under construction, it is likely that it would still be built.

2.2. Alternative B – The Proposed Action

Under this alternative, TVA would administer the ARC grant for building approximately 11.9 miles of 18- and 24-inch force main sewer line from the north end of North Coley Road to the Tupelo POTW and upgrading the capacity of the existing pumping station as proposed by the PUL Alliance. Alternative B fully meets the purpose of and need for the project and represents the timeliest and most effective manner of achieving project needs.

The route of Alternative B is shown in Figures 1 and 2. The northern end of the project begins at the north end of North Coley Road, at McCullough Boulevard just south of the Burlington Northern Santa Fe Railroad. The line would be situated along the eastern side of Coley Road on a maintained open field within the Golden Triangle Regional Airport. At the southern end of the airport, the route turns east for a short distance then south into an urban area running behind Bancorp South to West Main Street. Once the route crosses underneath West Main Street, it would continue south along the west side of Glasgow Lane to an existing TVA substation where the project would begin to parallel an existing sewer easement. From the western side of the TVA substation, the project would cross underneath Cliff Gookin Boulevard and proceed southwest to the east bank of Little Coonewah Creek. The route would continue along the east bank of Little Coonewah Creek and traverse maintained open field and agricultural areas for a distance of approximately 2,600 feet before turning to the southeast and crossing underneath the Natchez Trace Parkway.

Once the route crosses underneath the Natchez Trace Parkway, it would generally proceed south through maintained and fallow open fields to the west end of Jeff Homan Boulevard. After passing Jeff Homan Boulevard, the sewer line would continue to parallel an existing sewer line to the southwest and follow the east bank of Coonewah Creek for a distance of approximately 630 feet before turning east to Graham Drive. The sewer line would traverse open agricultural fields along the west side of Graham Drive in a southern direction to the point in which the line would turn to the east underneath Graham Drive. At this point, the sewer line would follow the new SR 6 ROW east for approximately 2.5 miles. The western portion of this area is predominantly open field agriculture and pasture. To the east, the area is predominantly upland mixed pine/hardwood forestland. This portion of the project area historically has been rural. However, during the past decade, numerous residences have been constructed in the vicinity, primarily north of the new SR 6 alignment. After crossing underneath South Gloster Street, the route turns northward to cross underneath Green Street just west of the Kansas City Southern rail line. The sewer line would follow the north side of Green Street to the east for a short distance, then turn north and follow the

rail line for about a quarter of a mile. At that point, the route would cross underneath the rail line and continue north for about another quarter of a mile. The line would then travel about half a mile east to US 45, traversing a mixture of agricultural and fallow fields. The sewer line would cross underneath US 45, go north along the east side of US 45 about a mile, and terminate at the Tupelo POTW.

Construction is expected to take between three and four months. The line would be installed by open trenching in undeveloped areas using equipment such as backhoes. The trench would be 4 to 6 feet deep and 5 feet wide. Overburden would be sidecast to one side and replaced upon installation of the line. Because most of the route is in road ROW or close to roads, no access roads would be needed. Directional boring would be used in developed areas and for crossing roads, railroads, the perennial stream, and any intermittent streams with flowing water at the time of construction. The line would go at least 4 feet below the features to be avoided (6 feet below the Natchez Trace Parkway). Directional boring would be done without drilling fluids. A steel casing would be advanced throughout the stretch to be bored. The line would then be pushed through the casing.

2.3. Comparison of Alternatives

Under the No Action Alternative, the construction of the line would probably be delayed while another federal agency was found to administer the ARC grant or other sources of funding were found to support construction of the sewer line. Impacts under this alternative likely would be similar to or greater than the impacts discussed below, depending on where and how the line would be constructed.

Under the proposed action, with BMPs and related construction methods required by federal and state permits, there would be minor and insignificant impacts from construction to two known archaeological sites, terrestrial ecology, aquatic resources at stream crossings, and the Natchez Trace Parkway. There would be no impacts to federally listed or state-listed threatened or endangered species or wetlands.

2.4. The Preferred Alternative

TVA's preferred alternative is Alternative B, the proposed action.

CHAPTER 3

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Cultural Resources

A cultural resources survey was conducted in March 2008 along the proposed route to determine the presence of and potential impacts to archaeological sites or historic structures listed on or eligible for the NRHP. According to the survey results (contained in Appendix A), there are 27 recorded archaeological sites within 0.75 mile of the survey area. A large number of these sites contain 18th century Chickasaw material. All but two of these sites are located well outside the route of the proposed pipeline.

In the 2008 survey no previously unrecorded cultural resources were identified in the area of potential effect (APE). The two previously recorded sites near the route were reevaluated. Site 22-Le-999 had been identified in a previous MDOT survey for the EA on SR 6 and had been determined ineligible for the NRHP. In the 2008 survey, one prehistoric pottery sherd was recovered from the surface of this site. This site continues to be not eligible for the NRHP.

Archaeological site 22-Le-599 had been determined eligible for the NRHP in 1978. In the 2008 survey, it was concluded that the extreme western edge of this site, which could be impacted by the proposed sewer line, had been eroded down to the chalk, and no artifacts were recovered.

In its letter of consultation to the tribes (contained in Appendix A), TVA requested comments on the above determinations. In response, TVA received comments from three tribes. The comments are contained in Appendix A. The Chickasaw Nation responded that the area is very important to them because of its religious and cultural significance. They noted that the APE is in a location that contains hundreds of historic and sacred sites once used by the Chickasaw Nation, who did not abandon these sites but were forcibly removed by federal action. Because of the potential to uncover sacred locations, they requested that an archaeologist monitor construction of the sewer line in undisturbed areas (Figure 3). They also requested that in the event of inadvertent discoveries, all construction activities cease and the Chickasaw Nation be notified immediately so that they may evaluate and determine if confidential Chickasaw sacred sites have been discovered. In the case of discovery, they requested that sites be avoided.

The Choctaw Nation (Nation) of Oklahoma responded on May 8, 2008 that to the best of their knowledge, the project would have no adverse effect on any historic properties in the APE, but if construction exposed buried archaeological or building materials, the Nation should be contacted immediately.

The Jena Band of Choctaw Indians responded on May 19, 2008 that they had determined there would be no significant impact concerning their tribe.

Toyota Sewer Line

In his April 14 letter to the PUL Alliance's consultant (contained in Appendix A), the Mississippi State Historic Preservation Officer (MSSHPO) indicated he had no objection to the proposed undertaking.

Based on its review of the archaeological report and the consultations with the Tribal Historic Preservation Officers (THPOs) and the MSSHPO, TVA has determined that the proposed sewer line would have insignificant impacts on cultural resources. To further reduce the risk of adverse impacts and in accordance with Section 106 of the National Historic Preservation Act (NHPA), TVA would require that the PUL Alliance hire a professional archaeologist to monitor the construction. This person would have the written authority to stop construction if sites are located that could be of concern to the Chickasaw Nation or the Choctaw Nation of Oklahoma. A monitoring plan (contained in Appendix A) was developed and submitted to the PUL Alliance.

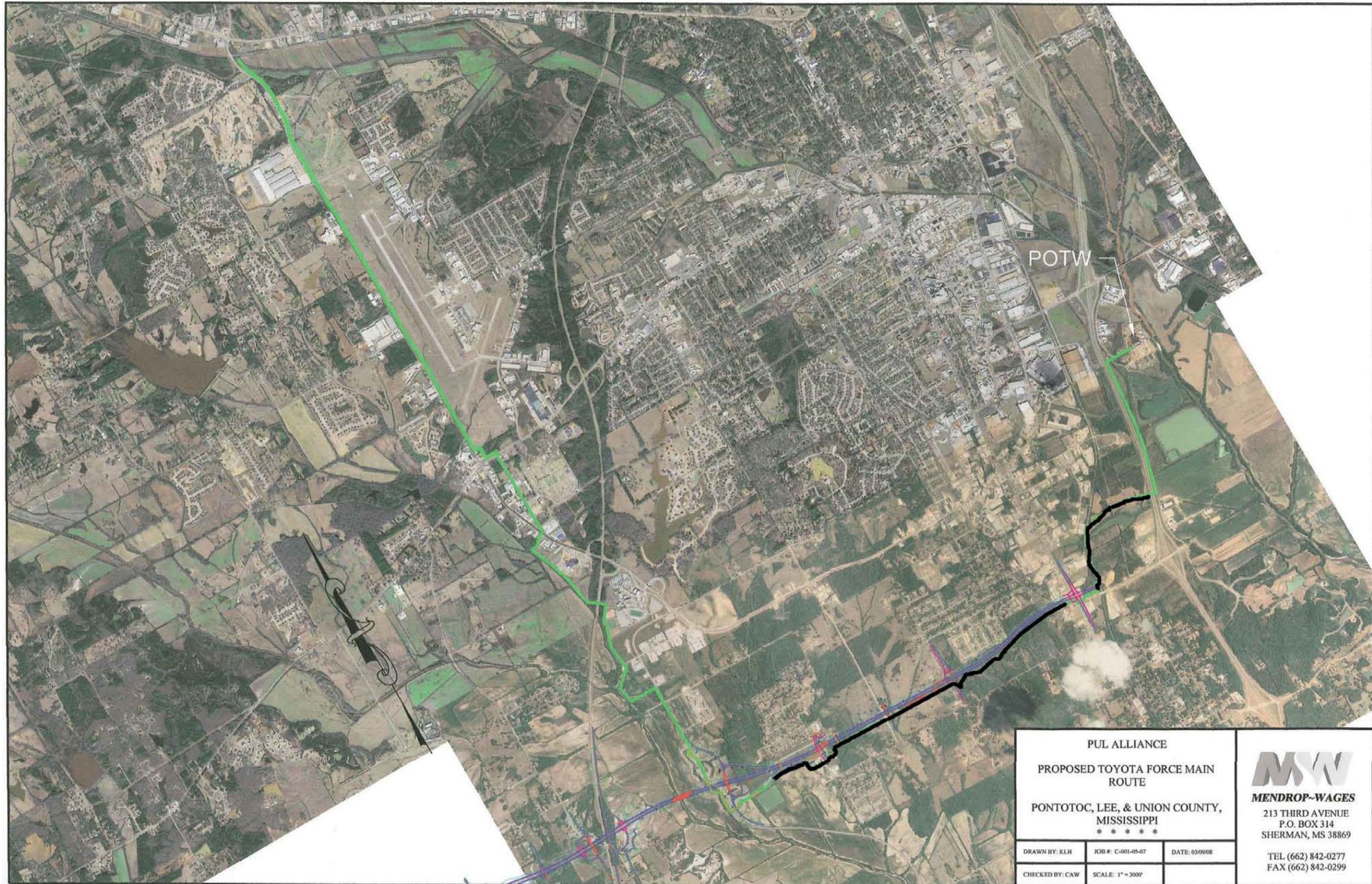


Figure 3. Aerial Photograph Showing Areas of Monitoring for Archaeological Sites

3.2. Terrestrial Ecology

A field review of the proposed route was conducted in February 2008 by PUL's consultant. Beginning at the end of the project on North Coley Road, the sewer line would be installed along previously disturbed ROW within a maintained open field habitat. This trend would continue to West Main Street where the sewer line would be constructed within a commercial area of Tupelo. Most of the remainder of the land use of the project area is either cultivated for agricultural production or maintained open field/pasture. Of the total length (11.9 miles), approximately 4,000 feet of the project would be constructed within forest habitat. This upland forest habitat consists of a mixed pine/hardwood timber stand that has been poorly managed for timber production over time and is substantially fragmented with urban encroachment. The majority of this area of habitat is along the portion of the line that would be constructed along new SR 6. Thus, the forest will be cleared for the highway, regardless of whether the sewer line is constructed.

Based on the database and field reviews for this project and other experience in the area by the PUL Alliance consultant, a listing of the plants and animals known or with potential to occur within the general vicinity of the project area is included as Appendix B. The list includes four exotic invasive plant species, Japanese honey suckle, Johnson grass, Chinese privet and Chinese tallow tree. Of the four plant species, the Mississippi Bureau of Plant Industry (2008) lists the Chinese tallow tree as a noxious weed. It reproduces easily, spreads quickly, and is difficult to control because of its long taproot. It displaces native vegetation and alters soil conditions due to the high amount of tannins present in the leaf litter (Douce et al. 2008). According to the USDA 2008 PLANTS Database, Chinese tallow tree has not previously been reported from Lee County, so it is particularly important to try to prevent it from becoming established there. The botanical field surveys conducted in February and a survey in May 2008 confirm that no Chinese tallow trees occur within the proposed project area.

Due to the limited quality of terrestrial habitat along the proposed route and the limited impact that the line would have, TVA has determined that impacts to terrestrial ecology would be minor and insignificant.

3.3. Aquatic Ecology

The project is located in the watershed of Town Creek, a tributary to the Tombigbee River. The primary surface water features in the vicinity of the proposed sewer line location are Coonewah Creek, in the western portion of the project area, and Town Creek, in the extreme eastern portion of the project area. While the proposed sewer line would cross neither Coonewah nor Town creeks, it was noted during the February field review that the line would cross 24 intermittent/seasonal streams and one perennial stream. Appendix C contains a map of the crossings and a table with brief descriptions.

The 24 intermittent/seasonal streams are classified as relatively permanent waters (RPW) with seasonal flow. These streams exhibit seasonal flows or intermittent flows that feed a higher order water body downstream. They have defined stream channels but lack significant vegetative components within the channel. The main function for these intermittent drainages is to carry water from these upland areas to perennial streams. The frequency and duration of flow within the drains are insufficient to support and sustain aquatic vegetation or a community of macro invertebrates. The soils and vegetation components along the top banks of the drainages are upland in nature.

The one perennial stream that would be crossed by the project was identified as an RPW with typical year-round flow. This RPW serves as the primary source of storm water runoff from the adjacent uplands within the southern portion of the project area. The stream channel is approximately 20 feet wide at the bottom with top banks varying from 10 to 12 feet high on either side. With a relatively large upstream drainage area, flowing water about 7 feet wide and about 7 to 10 inches deep was present during the field assessment. A defined ordinary high water mark, sediment deposits, and drift lines indicated that water flows on a perennial or more than seasonal basis.

Despite being perennial, the stream at the crossing has no aquatic vegetation, wetlands, or evidence of macroinvertebrate animal life. Most of the stream is located within the campus of the new Tupelo High School, which has been graded and either paved or planted in grass. Upstream of the campus much of the stream has been channelized, and part of the stream has been covered for crossing by Cliff Gookin Boulevard and entrance/exit ramps.

Direct impacts due to the stream crossings would be minimized by plan by the PUL Alliance to time construction when the streams are dry or, if that is not feasible, using directional boring under streams with flowing water. Indirect impacts due to construction adjacent to streams would be minimized by using BMPs to prevent indirect runoff of polluted storm water into the streams as required by USACE and Mississippi permit requirements.

Because the streams are considered "other waters of the United States," the crossings require a permit from the USACE. The PUL Alliance applied to USACE for a permit to affect 0.069 acre of RPW with seasonal flow and 0.009 acre of RPW with year-round flow. On June 2, 2008 the USACE authorized the project under Nationwide Permit 12 "Utility Line Activities" subject to nationwide general and special conditions and regional conditions. A copy of the application, the permit with the applicable conditions, and all other correspondence with the USACE are contained in Appendix C.

Under the 2007 Regional Conditions for Nationwide Permits in Mississippi, state water quality certification is authorized under NWP 12 for a period of five years from its effective date, provided the project complies with five conditions. MDEQ would be notified in cases where a preconstruction notification is required. MDEQ would be notified of projects that have associated discharges of cuttings, drilling mud, hydrostatic testing water, or any other waste material. The applicant would obtain coverage under the state's Storm Water Construction General Permit (MSR10). No sewage, oil, refuse, or other pollutants would be discharged into the watercourse. The turbidity outside the limits of a 750-foot mixing zone would not exceed the ambient turbidity by more than 50 nephelometric turbidity units. Given that each of the conditions is to be met by the project, the state's 401 Water Quality Certification would be authorized by NWP 12.

For the required coverage under the state's Storm Water Construction General Permit, an LCNOI and associated SWPPP would be prepared and submitted to MDEQ. As is customary, the SWPPP would include best management practices (BMPs) that would address the issue of sediment dispersal during the construction phase of the project. Common BMPs that are implemented, as applicable, to construction projects of this nature include temporary silt fencing, the use of hay bales, temporary brush barriers, and temporary seeding. The LCNOI would be completed and submitted to the MDEQ along with the SWPPP for permit authorization prior to the commencement of project construction activities.

Based on the limited aquatic ecological resources present in the streams and the expected use of routine BMPs, TVA has determined that the impacts on aquatic ecology would be minor and insignificant.

3.4. Threatened and Endangered Species

USFWS reported on February 27, 2008, that there are no known federally listed endangered, threatened, or candidate species present within the project area. MDWFP reported in a letter dated April 22, 2008, that if BMPs are implemented, the project likely poses no threat to state-listed species or their habitats.

Further review by TVA identified potential habitat for the plant *Apios priceana*, Price's potato bean (federally listed as threatened), along the southeastern part of the proposed route of the line, north of Green Tee Road between Southern Heights Road and SR 145. Field investigations of this area in June 2008, determined that the plant was not present.

Copies of the USFWS and MDWFP correspondence are contained in Appendix D.

3.5. Natural Areas

The proposed sewer line would affect the Natchez Trace Parkway (Parkway) by crossing it near Tupelo High School. The PUL Alliance chose this location because an existing sewer easement already crosses underneath the Parkway with the proper orientation and is wide enough to accommodate the proposed line.

In September 2007, the PUL Alliance submitted an NPS construction easement application for the crossing underneath the Parkway. The NPS completed its environmental review of the proposed crossing and determined that it would be categorically excluded under NPS's regulations. Based on this evaluation, the NPS issued a construction easement to the PUL Alliance authorizing the installation of the sewer line. The NPS required that the crossing be directionally bored. The boring would begin approximately 50 feet from the Parkway property and be a minimum of 6 feet under the park property. Other provisions of the permit include no use of herbicides or high-pressure water on the property and that any fill material placed on the property be free of weeds. Copies of the categorical exclusion and the construction easement/Special Use Permit are included in Appendix E.

Based on its examination of the NPS review, TVA has concluded that impacts to the Parkway would be minimal and insignificant.

3.6. Floodplains

Under the proposed action, parts of the sewer line would be within the floodplain of Kings Creek, Coonewah Creek, and Town Creek. Consistent with Executive Order 11988, an underground sewer line is considered a repetitive action in the floodplain that should result in only minor floodplain impacts. Floodplain impacts of the sewer line would be minimized by construction predominantly in existing road ROW and by returning of impacted areas to original contours. Because of the way the floodplains cross the general area, there is no way for the line to avoid them completely. The Tupelo POTW is also in the 100-year floodplain, but there would be no change to the POTW as a result of this project. Therefore, TVA concludes that there is no practicable alternative to construction of the

sewer line in the floodplain. Impacts to the floodplains of tributary streams have been minimized, and permanent floodplain obstructions have been avoided. TVA has determined that impacts to floodplains would be minor and insignificant.

3.7. Wetlands

Field reviews for the project, examined the proposed route to determine if jurisdictional wetlands were present. None were found. Therefore, TVA has determined that the proposed action would have no impacts to wetlands.

3.8. Cumulative Impacts

Other actions in the area have had or will have impacts to which the proposed sewer line could contribute. These actions include the extension of the sewer line from North Coley Road back to the Toyota facility, the new TVA transmission line, a new water line being built to serve the Toyota facility, the Toyota facility itself, and the widening of SR 6. Other development may occur in the area due to Toyota or the highway widening, but the specific nature of this development and its impacts are not foreseeable. However, the proposed sewer line would have only a minimal impact on the environment with the mitigation measures required by the permits being obtained. Therefore, TVA has concluded that the incremental effect of the sewer line would have insignificant cumulative impacts in conjunction with other known past, present, and reasonably foreseeable future actions in the area.

3.9. Summary of TVA Commitments and Proposed Mitigation Measures

To further reduce the risk of adverse impacts and in accordance with Section 106 of the NHPA, TVA would require that the PUL Alliance hire a professional archaeologist to monitor the construction. This person would have the written authority to stop construction if sites are located which could be of concern to the Chickasaw Nation or the Choctaw Nation of Oklahoma. A monitoring plan (contained in Appendix A) was developed and submitted to the PUL Alliance.

CHAPTER 4

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Position: Senior Aquatic Biologist
Education: M.S. and B.S., Zoology
Experience: 18 years in Protected Aquatic Species Monitoring, Habitat Assessment, and Recovery; 9 years in Environmental Review
Involvement: Aquatic Ecology/Threatened and Endangered Species

Patricia B. Cox

Position: Senior Botanist
Education: Ph.D., Botany (Plant Taxonomy and Anatomy); M.S. and B.S., Biology
Experience: 30 years in Plant Taxonomy at the Academic Level; 4 years with TVA Heritage Project
Involvement: Terrestrial Ecology, Invasive Plant Species, and Threatened and Endangered Species

Adam J. Dattilo

Position: Botanist
Education: M.S., Forestry; B.S., Natural Resource Conservation Management
Experience: 7 years in Ecological Restoration and Plant Ecology; 4 years in Botany
Involvement: Threatened and Endangered Plant Species, Botany, Plant Ecology, and Invasive Plant Species

Patricia Bernard Ezzell

Position: Historian and Native American Liaison
Education: M.A., History with an emphasis in Historic Preservation; B.A., Honors History
Experience: 21 years in History, Historic Preservation, and Cultural Resource Management; 6 years in tribal relations
Involvement: Cultural Resources

Karen T. Ford

Position: Civil Engineer, Flood Risk
Education: B.S., Mechanical Engineering; M.S. Environmental Engineering; ; Registered Professional Engineer
Experience: 17 years in Floodplain and Environmental Evaluations
Involvement: Floodplains

Ella Christina Guinn

Position: Project Control Specialist
Education: M.S. and B.A., Geography
Experience: 14 years in Land Use Analysis; 6 years in Environmental Services
Involvement: Technical Staff Coordinator

Travis Hill Henry

Position: Terrestrial Zoologist Specialist
 Education: M.S., Zoology; B.S., Wildlife Biology
 Experience: 18 years in Zoology, Endangered Species, and NEPA Compliance
 Involvement: Terrestrial Ecology, Threatened and Endangered Species

Clinton E. Jones

Position: Senior Aquatic Community Ecologist
 Education: B.S., Wildlife and Fisheries Science
 Experience: 16 years in Environmental Consultation and Fisheries Management
 Involvement: Aquatic Ecology and Aquatic Threatened and Endangered Species

Victor L. Maddox

Position: Contract Botanist
 Education: Ph.D., Plant Taxonomy
 Experience: 20 years in Botany and Invasive Species Ecology
 Involvement: Threatened and Endangered Species

Charles L. McEntyre

Position: Senior Environmental Engineer
 Education: M.S., Environmental Engineering; B.A., Biology; Registered Professional Engineer in Alabama, Tennessee, Mississippi, and North Carolina; Certified Hazardous Materials Manager
 Experience: Over 30 years in Wastewater and Water Treatment, NPDES Permitting and Compliance, Solid and Hazardous Waste Treatment, and Waste Reduction
 Involvement: General Project Information

Kim Pilarski-Brand

Position: Senior Wetlands Biologist
 Education: M.S., Geography, Minor Ecology
 Experience: 13 years in Wetlands Assessment and Delineation
 Involvement: Wetlands

Peggy W. Shute

Position: Manager, Heritage Resources
 Education: M.S., Zoology; B.S., Biology
 Experience: 17 years in Environmental Impact Assessment for Endangered Species; 25 years Endangered Aquatic Species
 Involvement: Terrestrial Ecology, Threatened and Endangered Species, Invasive Species

Bill L. Zotto

Position: Project Control Specialist
Education: B.S., Construction Engineering Technology
Experience: 7 years in Project Management and Environmental Coordination associated with TVA Economic Development initiatives; 13 years involving Commercial Plan Review and Building Inspection
Involvement: Project Coordination

4.3. Non-TVA Contributors and Reviewers

Jeffrey C. Cromwell

Position: Environmental Specialist, Wildlife Technical Services, Inc.
Education: B.S., Forestry
Experience: 7 years involving NEPA Documentation, Wetlands Delineation and Determination, Regulatory Coordination, and Environmental Site Assessments
Involvement: Wetlands

James W. “Walt” Dinkelacker

Position: Environmental Scientist, Wildlife Technical Services, Inc.
Education: B.S., Environmental Science
Experience: 7 years of Project Management involving Wetlands Delineation and Determination, Environmental Management and Regulatory Compliance, and NEPA Reviews for Transportation and Water Projects.
Involvement: Terrestrial Ecology, Aquatic Ecology, Threatened and Endangered Species, and Overall Management of Technical Input

Michael E. Goff

Position: Vice President, Wildlife Technical Services, Inc.
Education: B.S., Forest Management
Experience: 29 years in Environmental Compliance and Regulatory Coordination, Environmental Assessment and other NEPA Review, Environmental Planning and Policy Development, and Wetland Resource Management
Involvement: General Review of Technical Input

T. J. Holliday

Position: Environmental Scientist, Wildlife Technical Services, Inc
Education: B.S., Biology
Experience: 8 years in Threatened and Endangered Species Surveys and Consultation, Wetland Determinations and Delineation, and Cultural Resources Consultation
Involvement: Threatened and Endangered Species

CHAPTER 5

5.0 LIST OF AGENCIES AND ORGANIZATIONS TO WHICH COPIES ARE SENT

Federal Agencies

- U.S. Army Corps of Engineers
- U.S. Federal Highway Administration
- U.S. Fish and Wildlife Service
- U.S. National Park Service

Indian Tribes

- Chickasaw Nation
- Choctaw Nation of Oklahoma
- Jena Band of Choctaw Indians

State Agencies

- Mississippi Department of Transportation
- Mississippi Department of Wildlife, Fisheries, and Parks
- Mississippi State Historic Preservation Officer

Local Agency

- Pontotoc, Union, and Lee County Alliance

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CHAPTER 6

6.0 LITERATURE CITED

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- Mississippi Department of Transportation. 1998. *Mississippi Highway 6, Pontotoc and Lee Counties Pontotoc to Tupelo Environmental Assessment and Finding of No Significant Impact. Projects 46-0070-05-018-10/STP-070-5(18) and 46-0070-06-008-10/STP-070-6(8)*
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