

WIDOWS CREEK FOSSIL PLANT PROPERTY DISPOSAL AND TRANSMISSION CONNECTIONS

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

Jackson County, Alabama

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Symbols, Acronyms, and Abbreviations

ADEM	Alabama Department of Environmental Management
BMP	Best Management Practice
CCR	Coal combustion residual
CWA	Clean Water Act
EA	Environmental Assessment
ESA	Endangered Species Act
EO	Executive Order
FIRM	Flood Insurance Rate Map
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
TVA	Tennessee Valley Authority
WCF	Widows Creek Fossil Plant
USACE	U.S. Army Corps of Engineers

CHAPTER 1 – PURPOSE AND NEED FOR ACTION

In March 2015, Tennessee Valley Authority (TVA) completed a final environmental assessment (EA; TVA 2015) to document the potential environmental effects of TVA's disposal of approximately 360 acres of property near Widows Creek Fossil Plant (WCF) in Jackson County, Alabama for potential light industrial purposes. TVA has subsequently granted a permanent easement to Wiessner Enterprises, LLC for the 360-acre site for light industrial use, including but not limited to a data center to be built for Google, Inc. In order to support the development of the 360-acre area, Wiessner Enterprises has requested that TVA grant it permanent easements on an additional eight parcels totaling 336 acres of plant property (Figure 1).

This EA supplements the March 2015 EA and evaluates the anticipated environmental impacts of the disposal and likely future development of the 336 acres of WCF property. In the March 2015 EA, TVA acknowledged that there could be additional actions associated with the disposal and development of the 360-acre area, particularly the expansion of existing utility infrastructure (i.e., electric, water, fiber optics, sewer, gas and roads) and utilization of existing infrastructure at WCF. TVA has subsequently identified the need to construct and operate a new electrical switching station to provide electrical service to the data center. The switching station and associated transmission connections are proposed to be built on the 360-acre site addressed in the March 2015 EA. A portion of the transmission connection work would also occur on Parcel D of the 336-acre area. TVA has also identified the need to grade 3.3 acres of Parcels A and B to facilitate the development of the adjacent 360-acre area. The potential impacts of constructing and operating the switching station and associated transmission connections, as well as the proposed grading on Parcels A and B are evaluated in this supplemental EA.

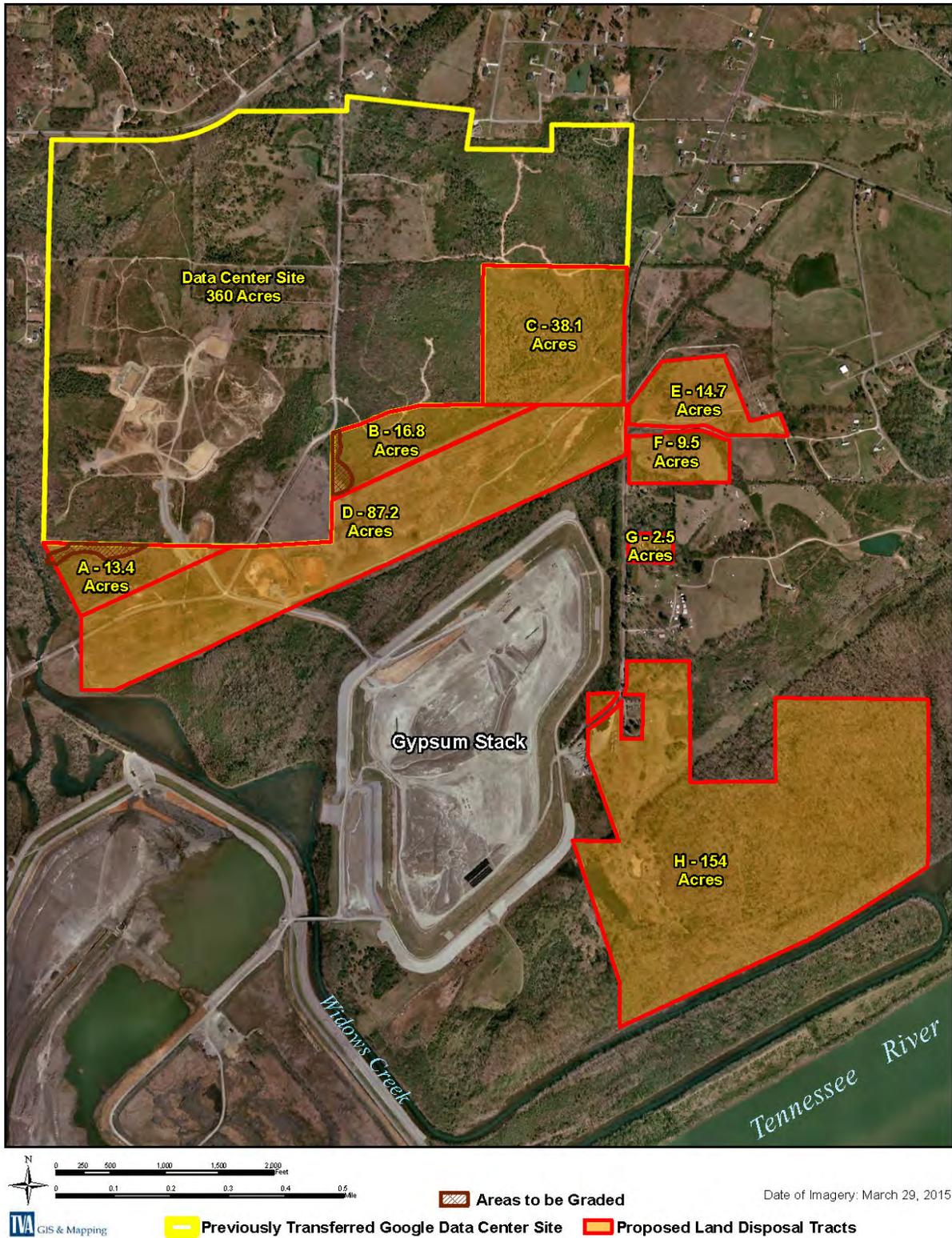


Figure 1. The eight tracts (Parcels A–H) at Widows Creek Fossil Plant proposed for disposal.

1.1 Background

In 2009 and 2010, TVA purchased approximately 600 acres adjacent to the Widows Creek plant. The land was purchased to preserve the ability to construct and operate coal combustion residual (CCRs, i.e., coal ash and flue gas desulfurization residuals) management and storage facilities. Since purchasing the land, TVA has retired all of the generating units at Widows Creek. Consequently, TVA no longer needs to preserve the 600 acres for CCR management or other purposes related to the operation of the plant. The 600 acres include the 360 acres over which TVA granted the easement to Wiessner Enterprises and Parcels B, C, E, F, G and H as illustrated on Figure 1. TVA acquired Parcels A and D in 1985-1986; TVA owned easements for the transmission lines on Parcels C, D, E, F, and H for many years before acquiring fee-title ownership of the parcels.

1.2 Decision to be Made

The decisions before TVA are 1) whether or not to make the 336 acres of WCF property available for light industrial uses, 2) whether or not to grade the portions of Parcels A and B, and 3) whether or not to construct and operate the switching station and associated transmission connections.

1.3 Related Environmental Reviews and Consultation Requirements

In addition to the March 2015 EA, previously completed environmental reviews relevant to this supplemental EA include:

Widows Creek Fossil Plant Soil Excavation and Gypsum Stack Closure (TVA 2014) –

This EA evaluated the closure of the 160-acre WCF gypsum stack (i.e., landfill) located south of Parcel D and west of Parcel H. It also evaluated the excavation of soil from approximately 60 acres of the 360-acre site that was the subject of the March 2015 EA and the use of the excavated soil to cover the gypsum stack. The descriptions of affected environmental resources at WCF in this EA are relevant to the current proposed action.

1.4 Scope of the Environmental Assessment

TVA has prepared this supplemental EA in accordance with the National Environmental Policy Act (NEPA) and implementing regulations. TVA considered the possible environmental effects of the proposed action and determined that potential effects to the environmental resources listed below are relevant to the decision to be made. Thus, potential effects to the following environmental resources are addressed in detail in this supplemental EA:

Air Quality	Land Use
Surface Water	Recreation
Aquatic Ecology	Visual Resources
Wetlands	Cultural Resources
Floodplains	Transportation
Vegetation	Noise
Wildlife	Socioeconomics and Environmental Justice
Endangered and Threatened Species	

1.5 Potentially Necessary Permits or Licenses

The proposed disposal of the property would not require TVA to obtain permits or other approvals or authorizations. The subsequent development of the property would require permits and other approvals from federal, state, and/or local authorities. These are described in detail in Section 1.6 of the March 2015 EA and are summarized below. Particular permit and approval requirements would depend on the nature of future development.

- Approval from TVA under Section 26a of the TVA Act.
- Approval(s) from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) or Section 10 of the Rivers and Harbors Act.
- Certification by the Alabama Department of Environmental Management (ADEM) under Section 401 of the CWA.
- National Pollutant Discharge Elimination System (NPDES) Permits issued by ADEM.
- Permits issued by ADEM under the Clean Air Act.
- Construction permit issued by local governments.

CHAPTER 2 - ALTERNATIVES

This chapter describes the proposed action and its alternatives, summarizes the anticipated environmental impacts of each alternative, and describes TVA's preferred alternative.

2.1 Description of Alternatives

This supplemental EA evaluates two alternatives: the No Action and Proposed Action Alternatives.

2.1.1 Alternative A –No Action

Under the No Action Alternative, TVA would not make the 336 acres of WCF property available for acquisition and subsequent development. The property would continue to be designated and managed as TVA power property, with the main management activity being the continued management of vegetation in the transmission line right-of-ways crossing Parcels C, D, E, F, and H. TVA would not conduct the grading on Parcels A and B, which could affect the development of the 360-acre site. TVA also would not construct the switching station and associated transmission connections designed to provide power to the data center.

2.1.2 Alternative B – Proposed Action

Under the Proposed Action Alternative, TVA would issue a long-term easement to make the eight tracts totaling 336 acres at WCF (Figure 1) available for light industrial land use or associated infrastructure. TVA would also grade 1.9 acres of Parcel A and 1.4 acres of Parcel B (Figure 1) as part of its current site preparation efforts on the previously transferred 360-acre site immediately north of these two tracts. TVA would also construct and operate a switching station and associated transmission connections that would provide electrical service to the new data center.

Future Development of the Easement Area

Light industry can be generally defined as a manufacturing activity that uses moderate amounts of partially processed materials to produce items of relatively high value per unit weight. Manufactured goods are typically easy to transport. These industries tend to be more consumer-oriented and/or service-oriented and less intensive than heavy industry. Section 2.1.2 of the 2015 EA (TVA 2015) provides detailed descriptions of examples of the following light industries, which are potential uses of the 336 acres of WCF property:

- Call centers
- Food processing
- Data centers
- Fabricated metal products industry
- Recycling facilities
- Storage facilities
- Printing, publishing and allied industries
- Mineral processing facilities – stone, clay, glass and concrete sector

Parcels A, B and C, totaling 68 acres, are located immediately adjacent to the 360-acre data center site. Therefore, these parcels could be used to support the development and operation of the Google data center currently under construction.

For Parcel D, most of Parcel E, and the portions of Parcels C, F, and H within the transmission line right-of-ways (Figure 2), TVA would retain the rights to operate and maintain the transmission lines in accordance with National Electric Safety Code requirements. These rights include the continued management of vegetation within the cleared right-of-way and the removal of trees outside the cleared right-of-way tall enough to pass within 5 feet of a conductor or strike a structure should it fall. TVA would also retain the right to prohibit the construction of buildings and other activities within the right-of-ways that could interfere with the operation and maintenance of the transmission lines. These constraints limit the future development of Parcel D and the portions of Parcels C, E, F, and H within the transmission line right-of-ways. Potential future development in these areas could include roads, parking lots, storage of certain materials, utilities, and other compatible uses.

The remainder of Parcels C, E, F, and H, as well as all of Parcel G, could be developed for light industrial uses without the constraints applicable to transmission line right-of-ways. The small size of the remainder of Parcels E and F, as well as the size of Parcel G, constrains their development for light industry without the development of adjacent land. The steep wooded terrain of much of Parcel H, as well as the presence of the 100-year floodplain and wetlands on its southern portion, could also constrain industrial development. For purposes of the supplemental EA, TVA has therefore assumed that development of Parcel H would most likely occur on its northwestern and western portions. Figure 2 shows a potential development concept for Parcel H with two alternative utility corridors crossing the tract. The utility corridors, each 100 feet wide, were designed to minimize impacts to wetlands and heavily forested areas. Other development configurations that include the eastern portion of Parcel H are possible. Although the development of the entirety of the remainder of the eight parcels is unlikely due to some areas remaining relatively undisturbed, TVA has assumed the entire development of the eight tracts for light industrial use as a conservative approach.

Future development of the project area could include the construction of multiple buildings and parking lots. Depending on the extent of on-site development, expansion of existing utility infrastructure (i.e., electric, water, fiber optics, sewer, gas and roads) could be necessary. If a new water intake or discharge structure in the Tennessee River or Widows Creek is needed, the future owner would need to apply for a Section 26a permit from TVA and, depending on its location, an easement or other grant of rights to construct it on TVA property. TVA would then evaluate the proposed structure in a separate environmental review process that tiers from this EA.

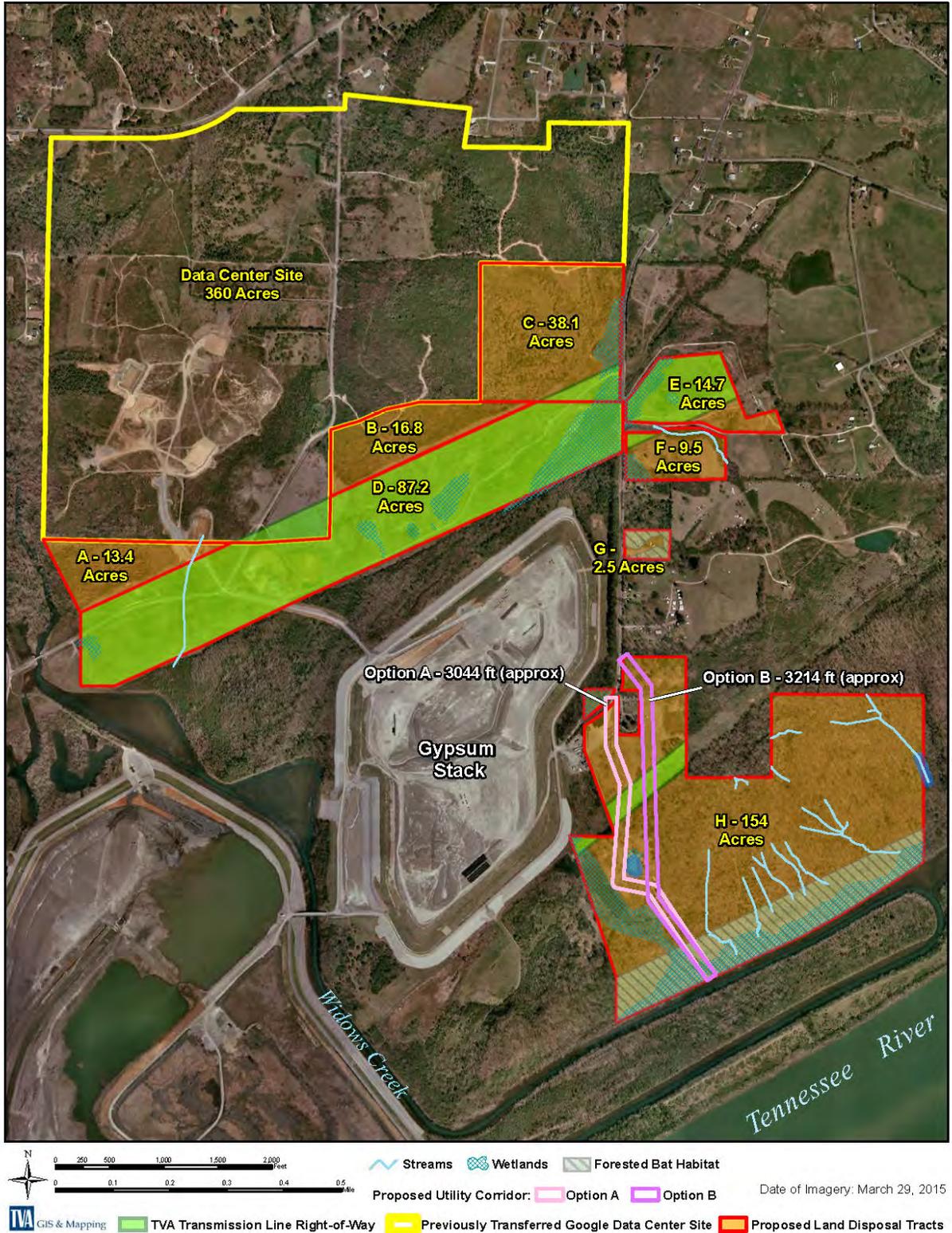
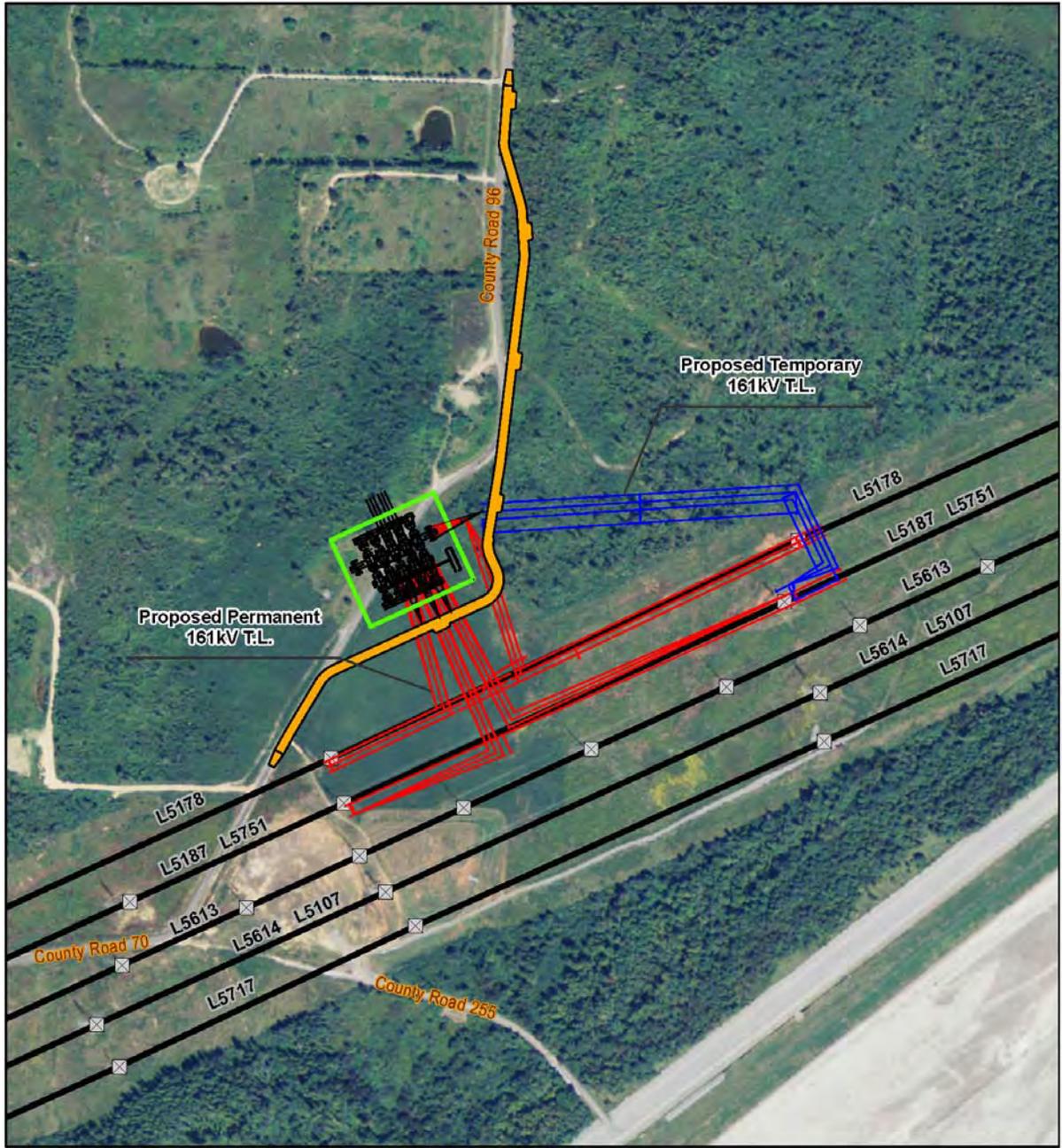


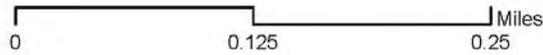
Figure 2. The eight tracts (Parcels A–H) proposed for disposal, transmission line right-of-ways, and potential utility corridors across Parcel H.

Switching Station and Transmission Line Connections

Under the Proposed Action Alternative, TVA would construct and operate the new Battery Hill, Alabama Switching Station and connect it via short taps to the adjacent Widows Creek Fossil-Moccasin (L5178) and Widows Creek Fossil Plant-Nickajack Hydro Plant (L5187) transmission lines (Figure 3). Upon completion of the connections the lines would be renamed the Moccasin-Battery Hill and Nickajack-Battery Hill transmission lines, respectively. Preliminary engineering indicates that the Widows Creek Fossil-Moccasin transmission line would be tapped between existing structures 13 and 14, and the Widows Creek Fossil Plant-Nickajack transmission line between existing structures 14 and 15. The resulting right-of-way (ROW) for the new transmission lines between the existing lines and the switching station would be approximately 410' wide by 668' in length and occupy 6.3 acres. The proposed switching station and the associated transmission line work described below would be located on TVA fee-owned property. The switching station and parts of the associated transmission connections would be located on part of the 360-acre area over which TVA granted the easement to Wiessner Enterprises. TVA retained the rights to construct and operate the switching station and transmission connections on this property. The remainder of the transmission connections would be on Parcel D.



Jackson County, AL



Legend

- Battery Hill 161-kV Switching Station
- Proposed Permanent 161kV TL
- Proposed Temporary 161kV TL
- Existing Transmission Lines
- Structures
- Relocated Road

Drawings from R:\Projects\Drawings\Projects\Battery Hill\Drawings\Battery Hill.dwg

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Figure 3. Proposed Battery Hill Switching Station and associated transmission connections.

To facilitate the operation of the proposed switching station and associated transmission connections, TVA proposes to also undertake the following additional activities:

- Addition of fiber optic groundwire (OPGW) from the Battery Hill Switching Station to Bays 25 and 32 of the Widows Creek Fossil Switchyard;
- Reconfigure the Widows Creek Fossil Plant-Oglethorpe (L5751) line such that it terminates into Bay 20 of the Widows Creek Fossil Plant Switchyard instead of Bay 25 as currently configured;
- Construct a temporary feed from structure 15 of the Widows Creek Fossil Plant-Nickajack Hydro Plant transmission line to the Battery Hill Switching Station (Figure 3) to provide electrical service in advance of the in-service-dates for the transmission connections described above. The temporary feed would be removed upon connection of the permanent electrical service to the Battery Hill Switching Station;
- Reconfigure and install telecommunications connections at the Widows Creek Electrical Control Building, Nickajack Hydro Plant, Oglethorpe, Georgia Substation, Bryant, Alabama Substation, Moccasin, Tennessee Substation, Brown Swiss, Tennessee and Tusculum, Tennessee, and Volunteer, Tennessee substations; and
- Modify the TVA system map boards to include names and numbers of the renamed transmission lines and Battery Hill Switching Station.

The following sections describe the construction, operation, and maintenance of the proposed switching station and associated transmission connections in more detail.

Right-of Way Acquisition and Clearing – A ROW utilizes an easement that would be designated for a transmission line and associated assets. In this case, the easement that TVA proposes to grant Wiessner Enterprises for the eight tracts would provide for TVA's continued use of certain areas for the construction and operation of transmission assets. TVA would survey and record the ROW to document the specific area to be used. The ROW provides a safety margin between the high-voltage conductors and surrounding structures and vegetation and is periodically maintained to avoid line disruptions, the risk of fires and other accidents.

The conditions in the easement on the 360-acre area give TVA the right to construct, operate, and maintain the transmission line connections, as well as remove "danger trees" adjacent to the ROW. Danger trees include any trees that are located beyond the cleared ROW, but that are tall enough to potentially impact a transmission line structure or conductor, should the trees fall toward the transmission line. The terms of the easement agreement prohibit certain activities, such as construction of buildings and any other activities within the ROW that could interfere with the transmission line or create a hazardous situation.

Because the area in which both the proposed transmission connections would be built and where the existing transmission lines to be reconfigured or upgraded is either existing TVA ROW or recently disturbed by previous activities, limited clearing would be required. In areas where additional clearing is needed to maintain adequate clearance between tall vegetation and transmission line conductors and to provide access for construction equipment, however, trees and shrubs would be removed. Equipment used during this ROW clearing could include chain saws, skidders, bulldozers, tractors, and/or low ground-

pressure feller-bunchers. Woody debris and other vegetation would be piled and burned, chipped, or taken off site. Vegetation removal in streamside management zones (SMZs) and wetlands would be restricted to trees tall enough, or with the potential to soon grow tall enough, to interfere with conductors. Clearing in SMZs would be accomplished using hand-held equipment or remote-handling equipment, such as a feller-buncher, in order to limit ground disturbance. TVA ROW Clearing Specifications, Environmental Quality Protection Specifications for Transmission Line Construction, Transmission Construction Guidelines Near Streams (TVA 2012a, 2013a, 2013b), and Best Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities (TVA 2012b) would provide guidance for clearing and construction activities.

Following clearing and construction, vegetative cover on the ROW would be reestablished utilizing appropriate seed mixtures as described in TVA (2012b). Erosion controls would remain in place until the plant communities become fully established. Streamside areas would be revegetated as described in TVA (2012a), TVA (2012b), TVA (2013a), and TVA (2013b). Native vegetation or plants with favorable growth patterns (slow growth and low mature heights) would be maintained within the ROW following construction.

Transmission Line Construction – Access roads would be needed to allow vehicular access to each structure and other points along the ROW during construction. Typically, temporary access roads used for transmission lines are located on the ROW wherever possible, and are designed to avoid severe slope conditions and to minimize stream crossings. Access roads are typically about 20 feet wide and are surfaced with dirt, mulch, or gravel. Culverts and other drainage devices, fences, and gates are installed as necessary. Culverts may be left or removed, depending on applicable permit conditions.

A construction assembly area (laydown area) would be required for worker assembly, vehicle parking, and material storage during construction. This area would be located on existing TVA property. Trailers used for material storage and office space would be parked on the site. Following completion of construction activities, all trailers, unused materials, and construction debris would be removed and site restoration performed.

The proposed transmission line connections would utilize a combination of steel double and triple-pole structures similar to those shown in Figure 4. The structures are anticipated to be between 70 and 80 feet tall. Three conductors (the cables that carry the electrical current) are required to make up a single-circuit alternating-current transmission line. Each single cable conductor is attached to porcelain insulators suspended from the structure cross arms. A smaller overhead ground wire (OPGW) or wire containing fiber optic communication cables, is attached to the top of the structures.



Figure 4. Example of double and triple steel-pole transmission structures.

Most poles are directly imbedded in holes augured into the ground to a depth equal to 10 percent of the pole's length plus an additional 2 feet. Normally, the holes would be backfilled with the excavated material, but, in some cases, gravel or a concrete-and-gravel mixture would be used. Poles at angles (angle points) in the transmission line may require supporting screw, rock, or log-anchored guys or may be self-supporting poles.

Equipment used during the construction phase would include trucks, truck-mounted augers, and drills, as well as tracked cranes and bulldozers. Low ground-pressure-type equipment would be used in specified locations (such as areas with soft ground) to reduce the potential for environmental impacts.

Reels of conductor and OPGW would be delivered to the site. A small rope would be pulled from structure to structure. It would be connected to the conductor and OPGW and used to pull them down the line through pulleys suspended from the insulators from pull-points along the ROW. A bulldozer and specialized tensioning equipment would be used to pull conductors and ground wires to the proper tension. Crews would then clamp the wires to the insulators and remove the pulleys.

Transmission Line Operation and Maintenance – Periodic inspections of transmission lines are performed by helicopter aerial surveillance after operation begins. Foot patrols or climbing inspections are also performed in order to locate damaged conductors, insulators, or structures, and to discover any abnormal conditions that might hamper the normal operation of the line or adversely affect the surrounding area. During these inspections, the condition of vegetation within the ROW, as well as immediately adjoining the ROW, is noted. These observations are then used to plan corrective maintenance and routine vegetation management.

TVA vegetation management standards, based on National Electric Safety Code requirements, require a minimum vegetation clearance of 24 feet for transmission lines of the voltage of the proposed electrical interconnection. Vegetation management along the ROW would consist of the felling of danger trees adjacent to the cleared ROW (as described above in the ROW Acquisition and Clearing Section) and vegetation control within the cleared ROW. These activities occur on approximately 3- to 5-year cycles. TVA utilizes an integrated management approach for its ROW vegetation management that is designed to encourage low-growing plant species and discourage tall-growing plant

species. A vegetation reclearing plan is developed and implemented for the transmission line, based on the results of the periodic inspections described above. The two principal management techniques are mechanical mowing (using tractor-mounted rotary mowers) and herbicide application. Herbicides are normally applied in areas where heavy growth of woody vegetation is occurring on the ROW and mechanical mowing is not practical. Herbicides would be selectively applied by helicopter or from the ground with backpack sprayers or vehicle-mounted sprayers.

Any herbicides used are applied in accordance with applicable state and federal laws and regulations. Only herbicides registered with the U. S. Environmental Protection Agency (USEPA) are used. A list of the herbicides currently used by TVA in ROW management is presented in TVA (2013c). This list may change over time as new herbicides are developed or new information on presently approved herbicides becomes available.

Other than vegetation management, little maintenance work is generally required. The transmission line structures and other components typically last several decades.

Switching Station Construction – The proposed Battery Hill switching station would be constructed a short distance north of the existing transmission line corridor on Parcel D (Figure 2). The location of the switching station was selected to integrate into the electrical system for the data center. The switching station would consist of a 3-bay breaker and a half switchyard with four line terminations and two transformer terminations.

The switching station site has been cleared and is being graded as part of the current site preparation activities. TVA would complete the finish gradework, including any necessary cut and fill, for the approximately 2.45-acre switching station site in accordance with TVA's Site Clearing and Grading Specifications (TVA 2013d). Any additional fill required to prepare the site would be obtained from an approved/permitted borrow area. TVA standard environmental quality protection specifications and procedures described in TVA (2012a), TVA (2013d), and TVA (2013e), as well as Best Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities (TVA 2012b) would be implemented during clearing and construction activities.

Once the grading for the switching station site is complete, spoil would be removed in preparation for foundations. Temporary spoil storage would be located onsite in several designated areas. Total disturbance, including grading and spoil material would be approximately 4 acres. Silt fences and site drainage structures would be installed during construction. The switching station would utilize an existing adjacent detention basin as an additional stormwater pollution prevention control both during and after construction. The switching station yard would be covered with crushed stone and enclosed with chain link fencing. A new gravel access road would be constructed off of the existing Widows Creek Reservation Haul Road to the switching station, a distance of approximately 70 feet. This road would be used throughout the duration of construction. A portion of the road crossing the switching station site shown on Figure 3, formerly County Road 96, would be rerouted around the site. Permanent access to the switching station, however, depends on the final design of the data center future infrastructure. Potential permanent access could be granted off of County Road 96 or along the existing TVA ROW corridor as shown on Figure 3.

Major equipment that would be installed at the switching station site includes three breaker bays, nine circuit breakers, disconnect switches, two station service transformers, fourteen

voltage transformers, six metering combo voltage/current transformers, and surge arrestors, six pull off structures, standard metering package, and one switch house. The circuit breakers would utilize SF-6 as the electrical insulator and would contain no oil. The switch house would have water and sewer service via a connection to onsite utilities to be installed to serve the data center.

As described in TVA’s Substation Lighting Guidelines (TVA 2008), all lights at the switching station would be fully shielded or would have internal low-glare optics, such that no light is emitted from the fixtures at angles above the horizontal plane.

Following construction, disturbed areas on the property, excluding the switching station and permanent access roads, would be re-vegetated, to the extent practicable, utilizing appropriate seed mixtures as described in TVA (2012b). Erosion controls would remain in place site-wide until the plant communities become fully established

2.2 Comparison of Alternatives

Table 1 summarizes and compares the anticipated impacts of the No Action and Proposed Action Alternative for the environmental resources analyzed in Chapter 3.

Table 1. Summary and comparison of anticipated impacts by alternative and resource area.

Resource Area	Alternative	
	No Action	Proposed Action
Air quality	No impacts	Minor, temporary increase in fugitive dust and vehicle emissions during construction. Industrial emissions limited by permit requirements. Overall, no significant impacts
Surface water and aquatic ecology	No impacts	Potential for increased sediment runoff during construction and industrial discharges. No significant impacts.
Wetlands	No impacts	No impacts from TVA grading and transmission actions. Potential impacts from industrial development would be mitigated per permit requirements.
Floodplains	No impacts	No impacts from TVA grading and transmission actions. Future industrial development would have to comply with floodplain regulations.
Vegetation and Wildlife	No impacts	Adverse local impacts, overall impacts insignificant.
Endangered and Threatened Species	No impacts	No impacts from TVA grading and transmission actions. Potential effects on listed species from industrial development would be mitigated.
Land Use	No impacts	No impacts from TVA grading and transmission actions. Insignificant adverse effects from industrial development.
Recreation	No impacts	Minor, insignificant impacts.

Resource Area	Alternative	
	No Action	Proposed Action
Visual Resources	No impacts	Minor adverse impacts with potential for increased impacts depending on extent of industrial development.
Noise	No impacts	Temporary increase in noise from construction equipment. Long-term impacts from industrial operations insignificant.
Transportation	No impacts	Insignificant short-and long-term impacts.
Cultural Resources	No impacts	No impacts from TVA grading and transmission actions. Adverse impacts from industrial development would be mitigated.
Socioeconomics and Environmental Justice	No impacts	No disproportionately adverse impacts on minority and low income populations. Short- and long-term beneficial socioeconomic impacts.

2.3 Identification of Mitigation Measures

Mitigation measures are actions taken to avoid, minimize, rectify, reduce, compensate, or mitigate for adverse impacts to the environment. The following measures would be taken to reduce the potential for adverse effects under the Proposed Action Alternative. Depending upon the nature of future developments and their location, additional mitigation could be required by other federal, state, and local authorities in order to acquire necessary permits and other authorizations (see Section 1.5).

Future owners of the tracts would utilize appropriate best management practices (BMPs) during construction and operation of any facilities in order to comply with necessary permits and authorizations. These BMPs would include the following measures:

- Construction BMPs to control emissions of particulate matter (“dust”) from open construction areas and unpaved roads. Roadways would be sprayed with water as needed to reduce fugitive dust emissions.
- Construction BMPs as described in a construction stormwater discharge permit to reduce stormwater runoff.

To assure TVA’s compliance with applicable laws, regulations, and executive orders, TVA would take the following measures:

- Consistent with TVA implementation procedures for EO 11990, TVA would include specific language in the deed, transfer, or other conveyance documents for the property describing wetlands on the property and the need to obtain approval and appropriate permitting from USACE prior to impacting any of the wetlands. TVA would require the developer/site owner to avoid impacting wetlands if practicable and if not practicable, to submit a no practicable alternatives analysis to TVA.
- Consistent with the National Historic Preservation Act, TVA would enter into a Programmatic Agreement (PA) with the Alabama State Historic Preservation Office

describing the evaluation and resolution of adverse effects for two archaeological sites. TVA would also establish and mark a 20-meter buffer around two other archaeological sites and would include specific language in the deed, transfer, or other conveyance documents for the property that prohibits disturbance within the buffers.

- Consistent with the Endangered Species Act, TVA would require the deed, transfer, or other conveyance documents to include a covenant limiting tree clearing to between October 15 and March 31, unless the future owner either 1) demonstrates that there is no summer roosting habitat for the Indiana and northern long-eared bats prior to any tree clearing or 2) obtains U.S. Fish and Wildlife Service (USFWS) concurrence that no impact to these species would occur at any time of year. This would remove any potential for direct, indirect, or cumulative impacts to either species.

2.4 The Preferred Alternative

TVA's preferred alternative is Alternative B – Proposed Action. This alternative would facilitate the development of TVA power plant property no longer need for plant operations, provide the electrical interconnection necessary for the operation of the data center, and promote TVA's economic development mission.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental resources that could be affected by the alternatives and the effects of the alternatives on those resources. Due to the nature and location of the proposed action, there is no potential for impacts to wild and scenic rivers, parks, and natural areas and therefore these resources are not discussed further. Geologic and ground water conditions in the area are described in TVA (2014). The potential for impacts to these resources is absent or minor and, as described in the 2015 EA (TVA 2015), they are not discussed further. The conditions of several other resources are described in the 2015 EA and these descriptions are incorporated below and supplanted with more current and site-specific information where necessary.

3.1 Air Quality

3.1.1 Affected Environment

The description of criteria air pollutants and climate change in the 2015 EA (TVA 2015) is applicable to the current proposed action. 2014 greenhouse gas emissions in Jackson County (Table 2) were slightly higher than the 2013 emissions reported in the March 2015 EA. The power plant reporting emissions is the WCF plant. 2015 and 2016 emissions of greenhouse gases, as well as of nitrogen oxides, sulfur dioxide, and hazardous air pollutants in Jackson County will be significantly lower due to the retirement of the WCF plant in September 2015.

Table 2. 2014 Greenhouse gas emissions in Jackson County, Alabama by industrial sector.

	Sector					Total
	Power Plants	Waste ^a	Metals ^b	Minerals ^c	Pulp and Paper	
Greenhouse gas emissions (metric tons CO ₂ e)	4,097,832	97,331	139,747	40,148	80,070	4,455,129
Reporting facilities	1	2	1	1	1	6

Source: USEPA 2015

^a – includes industrial landfill, municipal landfills, wastewater treatment plants and solid waste combustion

^b – includes various metal (zinc, iron, etc.) production

^c – includes cement, glass, and other mineral production

3.1.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, TVA would not dispose of the property and environmental conditions would remain relatively unchanged until such time that TVA takes other actions that affect the property. The gradual maturation of the forests on the tracts would increase their sequestration of the greenhouse gas carbon dioxide. This would have a negligible effect on atmospheric greenhouse gas concentrations.

Alternative B – Proposed Action Alternative

The construction of the switching station and associated transmission connections, as well as the proposed grading on Parcels A and B, would result in emissions of air pollutants from land clearing, site preparation, and the operation of internal combustion engines. The construction of industrial facilities on the transferred tracts would similarly result in emissions of air pollutants. These emissions and their impacts are described in more detail in Section 3.1.2 of the March 2015 EA. The operation and maintenance of the switching station and associated transmission connections would result in negligible emissions, primarily from internal combustion engines during maintenance activities.

Emissions of air pollutants and greenhouse gases from potential future light industrial uses of the tracts would be similar to those described in Section 3.1.2 of the 2015 EA. Air emissions from any future industrial development on lands to the east facilitated by the disposal of the subject tracts would also be similar to those described in the 2015 EA. As described in the 2015 EA, various programs are in place to regulate these emissions to ensure that potential impacts on air quality are insignificant. Consequently, the direct, indirect and cumulative air quality impacts under Alternative B would not be significant and would not adversely affect regional air quality.

3.2 Surface Water and Aquatic Ecology

3.2.1 Affected Environment

The project area is within the Tennessee River drainage and the nearby Tennessee River flows to the southwest. Guntersville Dam, located 49 miles southwest of the project area, has impounded the Tennessee River to form the 76-mile long Guntersville Reservoir. The WCF site is adjacent to Guntersville Reservoir at the mouth of Widows Creek. Widows Creek flows to the southeast through the WCF site and makes a long meander to the northeast and then southwest before joining the Tennessee River. The eight tracts drain to Widows Creek through sheet runoff, Horn Branch, and several unnamed ephemeral streams.

Both Widows Creek and the adjacent Tennessee River have impaired water quality that does not support designated beneficial uses (e.g., swimming, public water supply, fish and wildlife) (ADEM 2014). The cause of impairment is elevated mercury levels due to atmospheric disposition. Widows Creek is considered impaired from its confluence with the Tennessee River to 5 miles upstream; this includes the stretch of Widows Creek in the project area. A 16-mile stretch of the Tennessee River, from the Alabama-Tennessee state line to about 4 miles downstream of Widows Creek is considered impaired. Horn Branch was not assessed (ADEM 2014).

During a June 2015 field survey of the project area, TVA identified streams and ponds in the project area. They are described below by tract and illustrated in Figure 5.

- Parcel A: The southern end of the tract adjoins Widows Creek. An ephemeral stream crosses the eastern end of the tract.
- Parcel C: A shallow pond occurs within the wetland complex in the southeast corner of the tract. Horn Branch flows to the southwest through this wetland complex. The pond is described in the Section 3.6.
- Parcel D: The ephemeral stream present in Parcel A flows south across Parcel D, through a culvert under County Road 96, and into Widows Creek south of Parcel D. Horn Branch flows through the wetland complex at the east end of the tract.

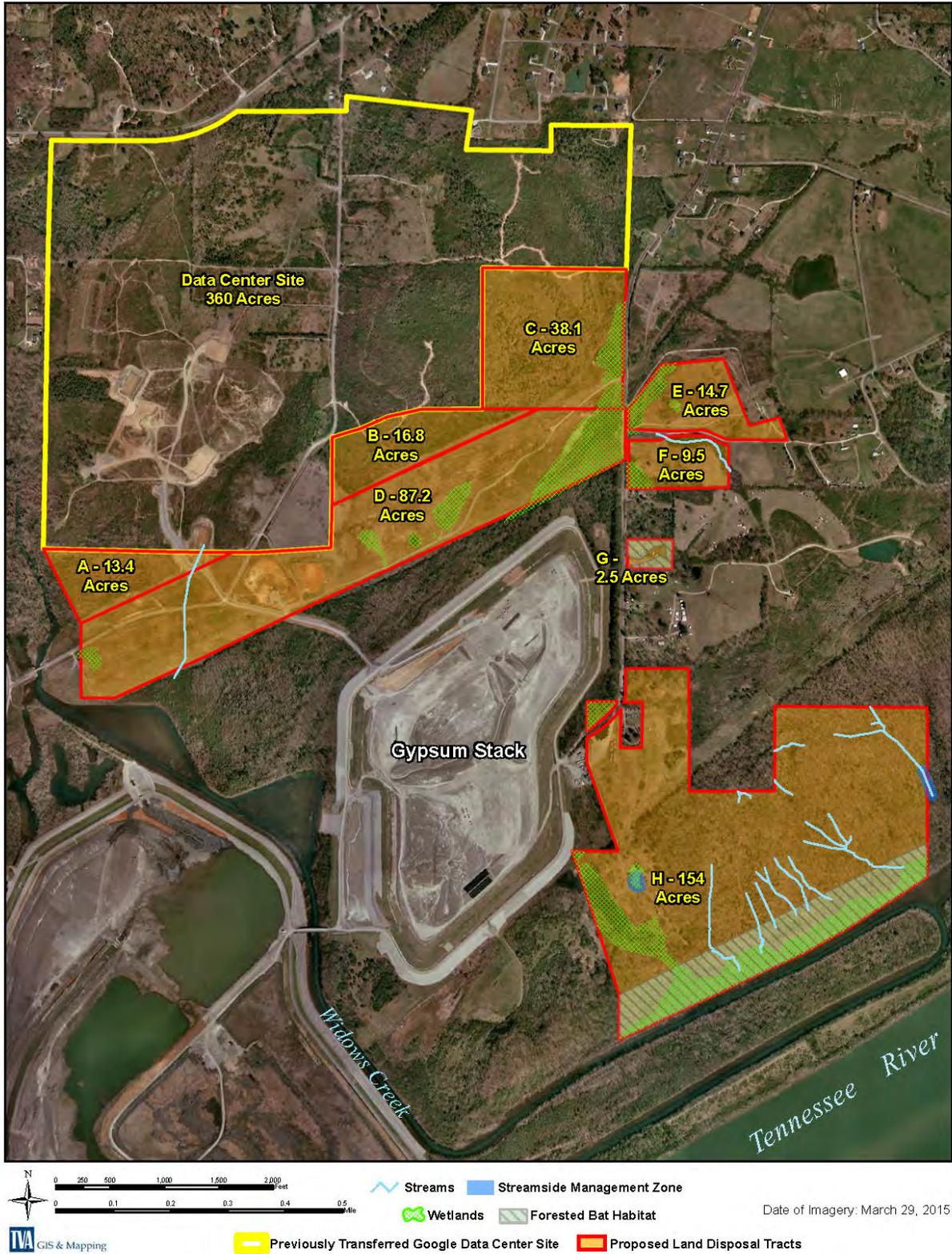


Figure 5. Streams, streamside management zones, wetlands, and forest bat habitat on the tracts proposed for disposal.

- Parcel F: An ephemeral stream flows within the wooded strip along the northern edge of the tract.
- Parcel H: The southern border of the large Parcel H adjoins Widows Creek. One pond, one intermittent stream, and 18 ephemeral streams were documented within the tract. The intermittent stream had some flow with a cobble/gravel substrate. This stream originates as an ephemeral in the northeast corner of Parcel H and transitions from ephemeral to intermittent as it approaches the eastern border of the tract. Most of the other ephemeral streams originate on the south slope of the wooded ridge crossing Parcel H and flow into Widows Creek.

The ephemeral stream crossing Parcels A and D, although shown as a blue line stream on the 1983 U.S. Geological Survey topographic map, flows only during and immediately after precipitation, has no defined channel, and lacks evidence of aquatic life (TVA 2014).

3.2.2 Environmental Consequences

Alternative A – No Action

Under the No Action alternative, there would be no project-related impacts to surface water and aquatic ecology.

Alternative B – Proposed Action Alternative

The potential impacts to surface water and associated aquatic ecology from the disposal and subsequent light industrial development of the eight tracts would be similar to those described in Section 3.2.2 of the 2015 EA (TVA 2015). The future owner/developer would be required to implement appropriate best management practices (BMPs) to minimize impacts to surface waters. BMPs would include erosion control measures and the maintenance of streamside management zones around streams and wetlands. A TVA Section 26a permit and a USACE Section 404 permit would be required for any water intake and discharge structures in Widows Creek or the Tennessee River. Any direct discharge of wastewater or stormwater would also require an NPDES permit from the Alabama Department of Environmental Management; this permit would establish limits on the quantities of pollutants that could be discharged. Water withdrawals of greater than 100,000 gallons per day would also be required to obtain a Certificate of Use from the Alabama Department of Economic and Community Affairs Office of Water Resources, although this certificate places few requirements on the water use.

TVA would submit a notice of intent to ADEM for coverage under the General NPDES Permit for Discharges of Storm Water prior to beginning construction of the proposed switching station and associated transmission connections. In accordance with permit requirements, TVA would develop and implement a Construction Best Management Practices Plan (CMBPP) specifying BMPs to minimize discharges of sediment and other pollutants. Applicable BMPs would include those described in TVA (2012). The proposed grading on Parcels A and B would be covered by the General NPDES Permit and CMBPP prepared for the ongoing grading on the adjacent 360-acre site. Any future industrial development on lands east of the subject tracts would be subject to the same requirements, minimizing the potential for cumulative impacts on water resources.

With proper implementation of BMPs and adherence to the CMBPP and other permit conditions, there would be minor to negligible impacts to surface waters and aquatic ecology.

3.3 Wetlands

3.3.1 Affected Environment

Section 3.6 of the 2015 EA (TVA 2015) defines wetlands, describes their regional setting, and describes the survey methods used to identify wetlands. Wetland surveys were conducted in August 2013 and June 2015 to identify wetlands present on the eight tracts proposed for disposal. No wetlands are present on Parcels A, B, and G. There is a total of 37.62 acres of wetlands present on the remaining 5 tracts (Table 3). These wetlands are mapped in Figure 5.

Table 3. Characteristics of wetlands on the Widows Creek tracts proposed for disposal.

Parcel	Wetland Acreage	Wetland Type
C	3.55	scrub-shrub and emergent wetlands associated with a tributary of Horn Branch
D	11.11	emergent, depressional wetlands within the TL ROW; emergent wetland within the floodplain of Horn Branch
E	2.28	emergent/scrub shrub wetland within the floodplain of Horn Branch; farm pond with emergent wetland fringe
F	0.91	forested wetland
H	19.77	emergent wetland associated with beaver pond; pond with emergent wetland fringe; mature forested wetland along Widows Creek
Total	37.62	

The TVA Rapid Assessment Method (TVARAM) was used to assess the wetland condition and identify wetlands with potential ecological significance (Mack 2001). Using TVARAM, wetlands may be classified into three categories. Category 1 wetlands are considered “limited quality waters” and represent degraded aquatic resources that have limited potential for restoration and such low functionality that lower standards for avoidance, minimization, and mitigation can be applied. Category 2 includes wetlands of moderate quality and wetlands that are degraded but could be restored. Avoidance and minimization are the first lines of mitigation for Category 2 wetlands. Category 3 generally includes wetlands of very high quality or of regional/statewide concern, such as wetlands that provide habitat for threatened or endangered species. All of the wetlands on the tracts proposed for disposal were classified as Category 2 wetlands.

3.3.2 Environmental Consequences

Wetlands are protected under Section 404 of the Clean Water Act and are addressed in EO 11990. In order to conduct specific activities in wetlands, authorization under a Section 404 permit from the USACE may be required depending on the size of the wetland and its connectivity to a navigable waterway. EO 11990 requires all federal agencies to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency’s responsibilities. In accordance with TVA procedures for implementing EO 11990 in *Instruction IX*,

Environmental Review (TVA 1983), TVA must also determine whether there is a practicable alternative that will avoid affecting wetlands.

Alternative A – No Action

Under the No Action Alternative, there would be no project-related impacts to wetlands.

Alternative B – Proposed Action Alternative

None of the currently proposed grading within Parcels A and B would occur within wetlands. Similarly, no wetlands occur within or immediately adjacent to the site of the proposed switching station. The proposed grading and construction and operation of the proposed switching station would therefore not affect wetlands.

Emergent depressional wetlands occur on Parcel D a short distance south of the proposed transmission connections to the existing Widows Creek Fossil-Moccasin and Widows Creek Fossil Plant-Nickajack Hydro Plant transmission lines. As currently designed, the construction of the transmission connections would not directly affect these wetlands and TVA would implement BMPs to minimize any potential indirect effects from the runoff of sediment. These wetlands are currently maintained as emergent wetlands by the ROW vegetation management activities which would continue during the operation of the transmission connections.

The proposed land transfer and future development of the transferred tracts could result in impacts to a maximum of about 38 acres of wetlands. In accordance with EO 11990, TVA would include specific language in the deed, transfer, or other conveyance documents for the property describing the wetlands and the need to obtain approval and appropriate permitting from USACE prior to impacting any of the wetlands. TVA is unable to determine a no practicable alternative for potential wetland impacts at this time as the location and nature of future facilities is unknown. However, prior to site development, TVA would require the future developer/site owner to avoid impacting wetlands if there is a practicable alternative. Alternatively, the future developer/site owner would conduct a no practicable alternative analysis and submit it to TVA for approval before taking action that would impact these wetlands.

Permitting requirements would require mitigation to offset impacts to jurisdictional wetlands. Mitigation is typically at a 2:1 ratio, involving purchase of mitigation credits at a mitigation bank within the service area as required by USACE. This level of mitigation would likely be sufficient to offset wetland impacts associated with development of the transferred property. Overall direct, indirect, and cumulative wetland impacts associated with the proposed action are expected to be insignificant.

3.4 Floodplains

3.4.1 Affected Environment

A floodplain is the relatively level land area along a stream or river that is subjected to periodic flooding. The area subject to a one-percent chance of flooding in any given year is normally called the 100-year floodplain. Portions of the two of the eight subject tracts occur within the 100-year floodplain. These floodplain areas are at the western end of Parcel D adjacent to Widows Creek miles 3.3 to 3.4 in the vicinity of the County Road 96 bridge and along the southern edge of Parcel H adjacent to Widows Creek miles 1.3 to 1.9. The floodplain elevations in these areas are 608.7 feet for the 100-year flood and 611.6 feet for the 500-year flood. The flood elevations along Widows Creek are heavily influenced by the

nearby Tennessee River. These elevations are referenced to the National Geodetic Vertical Datum 1988. The TVA Flood Risk Profile elevation in this area is the same as the 500-year flood elevation.

3.4.2 Environmental Consequences

As a federal agency, TVA is subject to the requirements of Executive Order (EO) 11988, Floodplain Management. The objective of EO 11988 is "...to avoid to the extent possible the long- and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative" (U. S. Water Resources Council 1978). The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances. The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative.

Alternative A – No Action

Under the No Action Alternative, no project-related impacts to floodplains would occur.

Alternative B – Proposed Action Alternative

According to FEMA Flood Insurance Rate Maps (FIRMs) for Jackson County, Alabama, Parcels A, B, C, E, F, and G are outside 100-year floodplains. Therefore, the disposal of these tracts and their subsequent development would not affect floodplains or floodplain resources and would be consistent with EO 11988. The proposed transmission switching station and associated transmission connections would also not affect floodplains.

The FIRMs indicate that the western end of Parcel D and the southern portion of Parcel H along Widows Creek are within floodplains. While the sale of these two parcels would not directly impact floodplains, their likely future development could impact floodplains. Future development in the floodplain would require approval by TVA under Section 26a of the TVA Act. Because no specific development activities within the floodplain areas of Parcels D and H have been proposed, such approval is not part of the current proposed actions. TVA would consider granting this approval after receiving a detailed application and analyzing the potential direct, indirect, and cumulative impacts of the proposed development. As part of its approval process, TVA would have to determine that its approval is consistent with E.O. 11988. As part of the EO 11988 process, TVA must either determine that the proposed development is a repetitive action that would result in only minor impacts, or that there is no practicable alternative to the development in the floodplain and that measures will be implemented to minimize adverse impacts on natural and beneficial floodplain values. Standard conditions of TVA's approval of developments in the floodplain would include the use of BMPs to during construction activities and the revegetation of floodplain areas where natural vegetation is removed. Because Jackson County, Alabama, participates in the National Flood Insurance Program, any development within the 100-year floodplain on the Parcels D and H must also comply with county floodplain regulations. TVA would include specific language in the disposal document(s) for Parcels D and H describing the floodplains and the need to obtain approval and appropriate permitting from the county Floodplain Administrator.

The potential future development of Parcel D is already constrained by the presence of the transmission lines, which prohibits the construction of buildings and some other above-ground facilities. The construction of utilities, roads, and parking lots on the floodplain portion of Parcel D would be considered repetitive actions that would result in minor impacts to floodplain values.

Potential future developments within the floodplain area of Parcel H considered to be repetitive actions that would result in minor impacts to floodplain values include water intake and discharge structures. Other developments considered to be repetitive actions include barge facilities, boat ramps, piers and docks; these facilities, however, are unlikely given the narrow channel of Widows Creek. Other water-dependent uses could be approved provided floodplain impacts are minimized.

3.5 Vegetation and Wildlife

3.5.1 Affected Environment

Sections 3.3 and 3.4 of the 2015 EA (TVA 2015) describe the general ecological setting of the project area. Parcels A and B are both similar to the adjacent 360-acre tract that was the subject of the 2015 EA. They are both mostly covered by mixed deciduous forest that was heavily disturbed by a tornado in 2011. The forests are mixed age with open canopies, heavy vine growth, and dense midstories of native and invasive shrubs. Autumn olive and sumac (winged and smooth) occur in the understory and blackberry, Japanese honeysuckle, and sericea lespedeza are common in the herbaceous layer. Parcel C is primarily mixed evergreen-deciduous forest with an average tree diameter of less than 6 inches and a very dense understory. Loblolly and shortleaf pines comprise most of the canopy and deciduous tree saplings comprise most of the understory.

Parcels D and E are entirely comprised of early successional habitat with a few wetlands described in Section 3.3. The early successional habitat is the result of the periodic management of the vegetation, primarily by mowing, within the transmission line right-of-way. Common species found include American pokeweed, Bermuda grass, blackberries, blackeyed Susan, broomsedge bluestem, butterfly weed, Canada goldenrod, daisy fleabane, Johnson grass, narrow-leaf plantain, Queen Anne's lace, sericea lespedeza, tall fescue, and yellow bristle grass. Parcel F and the northwestern portion of Parcel H have similar herbaceous vegetation maintained by farming and transmission line right-of-way maintenance activities and a few scattered large deciduous trees. Parcel G has a very open tree canopy comprised of large, mostly deciduous trees and an open herbaceous understory.

The majority of the large Parcel H is a mature, mixed deciduous forest with a closed canopy. Tree species present include black locust, buckeye, chestnut oak, chinkapin oak, northern hackberry, pignut hickory, red maple, slippery elm, sugar maple, and white ash in the canopy and flowering dogwood, hop hornbeam, redbud, and sassafras in the midstory. The herbaceous layer includes American lopseed, Canadian honewort, crossvine, early blue violet, Japanese honeysuckle, muscadine, poison ivy, Virginia creeper, wild comfrey, and yellow trillium. The ridge tops have several rock outcrops. The upper north-facing slopes have limestone boulders with sugar maple and tulip poplar in the canopy, coralberry in the understory, and American hog peanut and spring forget-me-not in the herbaceous layer. Deciduous forested wetlands occur in the southern portion of the tract in the floodplain of Widows Creek. Species in this area include boxelder, green ash, southern hackberry, swamp chestnut oak, and sweetgum in the overstory, Chinese privet in the understory, and American bellflower and white avens in the herbaceous layer. Overstory trees on Parcel H range from about 6 inches to 32 inches diameter at breast height.

Executive Order (EO) 13112 defines an invasive species as any species that is not native to that ecosystem and whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive plants are common in the project

area and include autumn olive, bush honeysuckle, Chinese privet, Japanese honeysuckle, Japanese stilt grass, Johnson grass, mimosa, multiflora rose, and sericea lespedeza.

The wildlife species described in Section 3.4 of the 2015 EA (TVA 2015) are also present on the current project area. No caves or colonial wading bird colonies occur on or in the immediate vicinity of the project area. Parcel H, with its more extensive closed canopy forest contiguous with similar forest extending to the northeast, provides habitat for additional wildlife species such as the pileated woodpecker, red-eyed and yellow-throated vireos, wood thrush, black-and-white, hooded, and Kentucky warblers, ovenbird, and scarlet tanager. A few of these birds are included on the U.S. Fish and Wildlife Service's list of birds of conservation concern (USFWS 2008).

3.5.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, no project-related impacts to vegetation and wildlife would occur. TVA would continue to actively manage the vegetation within the transmission line right-of-ways as low-growing early successional plant communities. The plant communities elsewhere on the property would gradually change over time due to succession and other factors until such time that TVA takes other actions that would affect them.

Alternative B – Proposed Action Alternative

Actions under Alternative B that would affect vegetation and wildlife include the construction and operation of the switching station and associated transmission connections, the grading of portions of Parcels A and B, and the industrial development of the tracts following their acquisition by Wiessner Enterprises. The construction and operation of the switching station would result in the long-term elimination of the vegetation and wildlife from the switching station site. The associated transmission line connections would have minor impacts on vegetation and wildlife during their construction, primarily from the movement and operation of construction equipment. Because the adjacent area is already managed as transmission line ROW, no additional impacts would occur during their operation.

The proposed grading on Parcels A and B would result in the loss of about 3.3 acres of young deciduous forest-shrubby habitat, with localized adverse impacts to the plant and animal communities on the site. Following the grading, these areas would be revegetated with non-invasive grasses.

The adoption of Alternative B would result in disposal of the 336 acres of TVA property, which could result in the permanent removal of much of the vegetation and wildlife from the eight tracts. Approximately 146 acres of the site is forest or more open woodland, and most of the remainder is heavily disturbed early successional herbaceous and shrubby vegetation maintained by periodic bush-hogging, mowing, and/or grazing. The plant and animal communities on the site are common in the region. The removal of the existing vegetation and subsequent development would adversely affect the plant and animal communities on the affected areas, and the local wildlife population. The severity of these effects would vary with the acreage that is developed, and would be substantially reduced if development on Parcel H is restricted to the potential utility corridor illustrated in Figure 2. While the impacts of developing the forested portion of Parcel H would be much greater, impacts to regional forest resources would still be insignificant. Any future industrial development of lands to the east would have similar, but regionally insignificant, impacts on vegetation and wildlife. As of 2012, more than 1,638,000 acres of forest occur in Jackson and the adjacent counties in Alabama, Georgia, and Tennessee (USFS 2014).

3.6 Endangered and Threatened Species

3.6.1 Affected Environment

The Endangered Species Act (ESA) provides broad protection for species of fish, wildlife, and plants that are listed as endangered or threatened in the United States or elsewhere. The Act states that federal agencies must conserve endangered and threatened species outlines and procedures requires federal agencies to determine the effects of their proposed actions on federally listed endangered and threatened species and their designated critical habitat. The State of Alabama provides protection for species considered threatened, endangered, or deemed in need of management within the state other than those federally listed under the ESA.

The 2015 EA (TVA 2015) in Section 3.5.1 described 17 listed plant species and 6 listed terrestrial animal species potentially occurring in the project area. Because the proposed action evaluated in that EA had little potential to affect aquatic resources, no aquatic listed species were identified as being potentially affected. The current proposed action does have the potential to affect aquatic resources and five listed species were identified as occurring in Jackson County or within 10 miles of the project area (Table 4). Table 4 also includes a state-listed plant, the bastard toad-flax, not identified in the 2015. No areas designated as critical habitat for federally listed species occurs in the area.

Table 4. Federally and state-listed species from Jackson County, Alabama and/or within a 10-mile radius of the project area.

Common Name	Scientific Name	Element Rank ²	Status ³	
			Federal	State (Rank) ⁴
Plants				
Bastard toad-flax	<i>Comandra umbellata</i>		--	TRKD (S1)
Fish				
Flame chub	<i>Hemitremia flammea</i>	E	--	NMGT (S3)
Mussels				
Fanshell	<i>Cyprogenia stegaria</i>	H	END	END (S1)
Snails				
Anthony's riversnail	<i>Athernia anthonyi</i>		END	TRKD (S1)
Armored rocksnail	<i>Lithasia armigera</i>	E	--	TRKD (S1)
Smooth mudalia	<i>Leptoxis virgata</i>	E	--	TRKD (S1)
Warty rocksnail	<i>Lithasia lima</i>	E	--	TRKD (S2)

²Status codes: **END** = Endangered; **TRKD** = Listed by the state of Alabama, but not assigned a status.

³Rank codes: **S1** = Extremely rare and critically imperiled in the state with 5 or fewer occurrences, or very few remaining individuals, or because of some special condition where the species is particularly vulnerable to extirpation; **S2** = Very rare and imperiled within the state, 6 to 20 occurrences; **S3** = Rare or uncommon with 21 to 100 occurrences.

Bastard toad-flax occurs on prairies, rocky open woodlands, and thinly wooded ridges in partial to full sun. The flame chub occupies springs and spring runs. The fanshell occupies unimpounded stretches of rivers and is likely extirpated from the Guntersville Reservoir area. The four snails occupy submerged rock outcrops and/or rock substrates in medium to big rivers with moderate to strong currents. Anthony's riversnail occurs in the Tennessee

River near the Alabama-Tennessee state line, upstream of the project area. None of the aquatic species have been reported from the project area.

Field surveys of the eight parcels were conducted during the summer and early fall of 2015 to determine the presence of listed species as well as habitat suitable for the listed species. No listed plants were observed on the parcels and the majority of them had been previously heavily disturbed, reducing their suitability for listed plants. One area on the northern portion of Parcel H had limestone forest capable of supporting Price's potato bean. However, this species was not observed during a comprehensive search of that habitat.

Suitable habitat for green salamander, bald eagle, gray bat, Indiana bat and northern long-eared bat exists on Parcel H. Habitat for green salamanders occurs throughout Parcel H, particularly on the rocky outcrops that parallel Widows Creek along the ridgeline and in the forested wetland along the edge of Widows Creek. Lower quality habitat for this species also exists on Parcel F in riparian forested areas. Suitable bald eagle nesting habitat occurs throughout Parcel H in mature forest stands, particularly along the more secluded western facing slope of the ridgeline where heavily developed areas of the fossil plant are not visible. No bald eagles or bald eagle nests were observed during the field reviews.

A total of 29.0 acres of suitable summer roosting habitat for the federally listed endangered Indiana bat and threatened northern long-eared bat was observed in the mature forested areas of Parcels G (1.82 acres) and H (27.18 acres) where shagbark and shellbark hickories, white oaks, and snags are prevalent and the forest midstory is open. Suitable foraging habitat for all three bat species (gray, Indiana, and northern long-eared) is present over inundated wetlands and ponds in Parcels C, D, E, F and H, as well as Widows Creek adjacent to Parcel H. Lower quality foraging habitat for these bats exists over forested areas of Parcels A, B, and C. Higher quality forested foraging habitat for these species exists within and over forested areas of Parcels F, G and H. No suitable wintering habitat was observed for any of these bat species during field reviews.

3.6.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, no project-related impacts to species listed as endangered, threatened, or of other conservation concern would occur.

Alternative B – Proposed Action Alternative

No listed species occur in the area of the proposed construction and operation of the switching station and associated transmission connections, or in the vicinity of the proposed grading on Parcels A and B.

No listed plants or aquatic animals occur on or in the immediate vicinity of the seven parcels subject to the proposed easement and subsequent development. Consequently, no listed plants or aquatic animals would be affected under the Proposed Action Alternative.

A few listed terrestrial animals could be affected by the proposed action. Suitable green salamander habitat exists in riparian forested areas and rocky outcrops of Parcels F and H. Removal or modifications of these wet areas may directly and/or indirectly affect green salamander. However, potential presence of this species is restricted to relatively isolated locations across project area and similarly suitable habitat exists across the surrounding landscape. Populations of green salamanders are not expected to be impacted by actions proposed under Alternative B.

Suitable nesting habitat for the bald eagle occurs on Parcel H. However, no bald eagles or bald eagle nests were observed during field review of the project area. The nearest known bald eagle nesting record is approximately 2.1 miles away; however this nest is no longer present and no replacement nesting location is known. Suitable nesting habitat is fairly common along the Tennessee River and some larger embayments upstream and downstream of the project area. Bald eagles are not expected to be impacted by actions proposed under Alternative B.

No cave roosting habitat for the federally listed endangered gray bat occurs in the project area. The presence of the gray bat on Widows Creek Fossil Plant Property was confirmed during mist net surveys in 2013 (TVA 2014). Suitable foraging habitat for this species exists over inundated wetlands and ponds on parcels C, D, E, F and H; the potential development of these tracts could eliminate this habitat. Additional foraging habitat exists throughout the landscape as well as over Widow's Creek and Gunter'sville Reservoir; this habitat would not be affected under Alternative B.

No caves or other winter hibernating sites for either the Indiana bat or northern long-eared bat occur in the project area or would be impacted by the proposed action. However, suitable foraging and summer roosting habitat for both bat species occurs on parcels G and H due to the high number of shagbark and shellbark hickories, white oaks, snags, and water sources within or adjacent to the parcels. A total of 29.0 acres of suitable summer roosting habitat could be affected under Alternative B. TVA would require the deed, transfer, or other conveyance documents to include a covenant to limit tree clearing to October 15 to March 31, unless the future owner(s) either (i) demonstrates that there is no summer roosting habitat for the Indiana and northern long-eared bats prior to any tree clearing or (ii) obtains USFWS concurrence that no impact to these species could occur at any time of year. This would remove any potential for direct effects to Indiana bat and northern long-eared bat, and ensure that indirect effects from potential loss of habitat are discountable. TVA has initiated consultation with the U.S. Fish and Wildlife Service under Section 7 of the ESA on the impacts of the proposed action on species listed under the ESA.

3.7 Land Use

3.7.1 Affected Environment

Current land uses on the 336 acres comprising Parcels A–H are undeveloped rural, agricultural, and transmission line right-of-ways. The transmission line right-of-ways are maintained by periodic bush-hogging and portions of the remaining area are maintained by mowing and grazing. The remainder of the area is forest and woodlands. The site of the proposed switching station is part of the 360-acre area being developed for the data center. Jackson County does not have land use zoning and the project area is not currently zoned.

Prime farmland is land that is the most suitable for economically producing sustained high yields of food, feed, fiber, forage, and oilseed crops. Prime farmlands have the best combination of soil type, growing season, and moisture supply and are available for agricultural use (i.e., not water or urban built-up land). The Farmland Protection Policy Act (7 United States Code [U.S.C.] 4201 et seq.) requires Federal agencies to take into account the adverse effects of their actions on prime or unique farmlands. The purpose of the Act is “to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.” Approximately 25 percent (91 acres) of the 336-acre area is classified as prime farmland and an additional 26 percent (98

acres) are classified as farmland of statewide importance (NRCS 2015). Farming is a major land use in Jackson County, and approximately 34 percent (231,845 acres) of the county was classified as farmland in 2012 (USDA 2012). According to the USDA-Soil Conservation Service, 1941, Soil Survey of Jackson Alabama, 168,241 acres in Jackson County were classified as prime farmland.

3.7.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no changes in current land uses and consequently no impacts on land use.

Alternative B – Proposed Action Alternative

The implementation of the Proposed Action Alternative would result in the change in land use of the switching station site to industrial land use and would likely lead to the future development of much of the 336 acres for light industrial use. This would be a major change from the current rural undeveloped and agricultural land use of much of this area. Industrial land use would be compatible with the remainder of the WCF plant reservation located west and south of the subject tracts, and with the area to the north on which the data center will be constructed. It would be incompatible with much of the adjacent area east of the subject tracts, which is a mix of forest, farmland, and low density rural residential land uses. Some of the subject tracts (e.g., Parcels E, F, and G) are relatively small and adjacent to larger areas of non-TVA lands. The disposal of the subject tracts for industrial development would likely promote the industrial development of adjacent non-TVA lands, resulting in cumulative impacts on land use as additional areas are converted to industrial land use.

The future industrial development of the subject tracts would adversely affect up to about 91 acres of prime farmland and a similar area of farmland of statewide importance. This would affect up to about 0.05 percent of the prime farmland in the county. Based on the Farmland Protection Policy Act land evaluation and site assessment system, the conversion of the prime farmland on the subject tracts would score less than the threshold score of 160 that suggests alternative sites should be evaluated. Impacts to prime farmland, although adverse, would be insignificant.

3.8 Recreation

3.8.1 Affected Environment

One developed outdoor recreation area, Long Island Creek Boat Ramp, is located within one mile of the project area. Long Island Creek Boat Ramp, is managed by the State of Alabama and is located on the opposite bank of Gunter's Reservoir near the mouth of Long Island Creek. Some dispersed outdoor recreation activities may also occur on and adjacent to some of the tracts being considered for disposal. These activities may include hunting, wildlife viewing, and/or walking for pleasure. Because these tracts were in private ownership until recently, recreational use of them by the general public is probably limited.

3.8.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no project-related impacts on recreation.

Alternative B – Proposed Action Alternative

Under the Action Alternative, TVA would dispose of the eight tracts which could then be developed for light industry or industrial support. Because of the distance between the tracts and Long Island Creek boat ramp, no impacts on this recreation facility would occur. The disposal and subsequent development of the tracts could reduce or eliminate any current public recreation use of them but overall impacts to dispersed recreation opportunities and activity patterns in the area would likely be insignificant.

Industrial development on the project area tracts could create new job opportunities within the region resulting in an increase in the area population and an associated increase in demand for outdoor recreation resources. The population increase cannot be accurately quantified at this time. Any large increase in demand for recreation resulting from a large population increase would likely be met by the establishment of additional recreation facilities. Overall impacts on recreation facilities and public recreation use patterns would likely be insignificant.

3.9 Visual Resources

3.9.1 Affected Environment

The physical, biological, and cultural features of an area combine to make the visual landscape character both identifiable and unique. Scenic integrity indicates the degree of unity or wholeness of the visual character. Scenic attractiveness is the evaluation of outstanding or unique natural features, scenic variety, seasonal change, and strategic location. Where and how the landscape is viewed affect the more subjective perceptions of its aesthetic quality and sense of place.

Views of a landscape are described in terms of what is seen in foreground, middleground, and background distances. In the foreground, an area within 0.5 mile of the observer, details of objects are easily distinguished in the landscape. In the middleground, normally between 1 and 4 miles from the observer, objects may be distinguishable but their details are weak and they tend to merge into larger patterns. Details and colors of objects in the background, the distant part of the landscape, are not normally discernible unless they are especially large and standing alone. The impressions of an area's visual character can have a substantial influence on how it is appreciated, protected, and used. The general landscape character of the study area is described in this section.

Most of the project area is currently a mix of early successional fields, brushy areas, open woodlands, and closed canopy forest. The site of the proposed switching station is currently being cleared and graded, as is much of the remainder of the 360-acre site under easement to Wiessner Enterprises and immediately north of the eight additional tracts requested by Wiessner. Transmission lines with cleared, maintained ROWs cross five of the eight tracts. The most extensive forest is on the southern-most Parcel H. This forested area, adjoining Widows Creek and close to Gunter'sville Reservoir, is on a heavily dissected, southwest-northeast trending ridge with a maximum relief of about 250 feet. Much of this scenic wooded ridge is visible in the foreground to middleground from Gunter'sville Reservoir and from parts of County Route 91 / Hogjaw Valley Road on the opposite side of the reservoir.

Few occupied residences occur close to the project area and the county roads in and near the project area are lightly travelled. The heavily disturbed Widows Creek gypsum stack is adjacent to the project area and more industrialized parts of WCF are located farther to the west and southwest. Areas to the east are generally similar to the project area and include

a mix of fields, farmlands, woodland and forest, scattered residences, and transmission line ROWs. Scenic attractiveness of most of the project area is common. Scenic integrity is low on most of the tracts because of previous land disturbance and is moderate to high on the heavily wooded portion of Parcel H.

3.9.2 Environmental Consequences

Visual consequences are examined in terms of visual changes between the existing landscape and proposed actions, sensitivity of viewing points available to the public, their viewing distances, and visibility of proposed changes. These measures help identify changes in visual character based on commonly held perceptions of landscape beauty and the aesthetic sense of place.

Alternative A – No Action

Under the No Action Alternative, there would be no project-related changes to the appearance of the project area.

Alternative B – Proposed Action Alternative

The construction and operation of the proposed switching station and associated transmission connections and the proposed grading on Parcels A and B would have minor effects on visual resources. These locations of these actions are either on or adjacent to areas that are presently being developed for the data center or existing transmission line ROWs and therefore already or soon to be heavily disturbed.

The impacts to visual resources from the future light industrial development of the 336 acres would be generally similar to those described in Section 3.9.2 of the March 2015 EA for the development of the adjacent 360-acre area to the north. For much of the 336-acre area, light industrial development would be result in minor adverse direct and indirect visual impacts. Should industrial development on Parcel H extend beyond the potential utility corridor into the upland forested area, visual impacts would be greater as industrial facilities in this area would likely be readily visible to boaters on the nearby Tennessee River / Gunterville Reservoir and motorists on the opposite side of the river. The visual impacts of industrial development could be reduced by minimizing clearing, retaining existing trees, designing the facilities with natural materials and natural colors on their exteriors, minimizing night lighting and using “dark-sky” lighting where lighting is required, and extensive landscaping.

3.10 Noise

3.10.1 Affected Environment

Section 3.12 of the 2015 EA (TVA 2015) describes the noise environment in the vicinity of the project area. At present, the primary source of noise in the project area is from earth-moving and construction equipment on the 360-acre area under easement to Wiessner just north of the project area and on the gypsum stack area south and west of the project area. The WCF coal plant, located a short distance west of the project area, has been retired and this source of predominantly low frequency background noise is largely eliminated. A few houses occur within about 1,500 feet of the eight tracts proposed for disposal.

3.10.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no project-related noise impacts. The main short-term sources of man-made noise in the project area would be from the nearby

operation of earth-moving and construction. Longer term, the main source of noise would be from the operation of the nearby data center and associated vehicle traffic.

Alternative B – Proposed Action Alternative

The future light industrial development of the tracts would result in increased noise levels during construction and the operation of any future industrial facilities. Equipment used in the grading of portions of Parcels A and B would, for a short time period, generate noise similar to that currently being generated by earth-moving equipment on the nearby data center site and the gypsum stack. The construction of the switching station and transmission connections would also, for a short time period, generate noise from the earth-moving and other construction activities. Noise generated by the grading on Parcels A and B and the construction of the switching station and transmission connections is unlikely to affect nearby resident due to the distances between the construction sites and the residences. Noise levels from the future industrial development of the project area would vary with the type of industrial facilities and are described in Section 3.12 of the 2015 EA. Section 3.12 of the 2015 EA also describes potential noise abatement measures. Noise from the construction of industrial facilities may be perceptible by nearby residents and would cause minor, temporary insignificant impacts due to the short duration of construction activities and because most construction would be during daylight hours. Noise from the operation of light industrial facilities is unlikely to cause adverse off-site impacts.

3.11 Transportation

3.11.1 Affected Environment

Section 3.11.1 of the 2015 EA (TVA 2015) describes the transportation network in the project area and 2013 annual average daily vehicle counts on area roads. More recent 2014 vehicle counts show increases of about 0.7 percent at the three stations on Alabama Route 277 that are on the major access routes to the project area and similar increases at stations on US Highway 72 (ALDOT 2015). Traffic on roads leading to the WCF plant has likely decreased since then due to the plant's retirement while traffic on the routes leading to the project area, including Alabama Route 277 and CR 96 have probably increased due to the development of the data center site and will continue to increase during construction of the data center.

3.11.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no project-related impacts to transportation. Traffic on area roads will increase during the construction of the data center and would later remain higher than in the recent past due to employees commuting to the data center, as well as truck deliveries to the data center.

Alternative B – Proposed Action Alternative

Section 3.11.2 of the 2015 EA (TVA 2015) describes the transportation impacts of the light industrial development of the adjacent 360-acre area. This analysis concluded that there would be a noticeable short-term increase in traffic during construction which would be unlikely to result in large decreases in the level of service of area roadways. Relative to some of the other types of potential light industrial development, the data center has relatively low number of operating employees and its operation would likely result in minor and insignificant transportation impacts, which is at least partially offset by the reduction in workers commuting to the WCF plant.

The construction of the proposed switching station and associated transmission connections would result in a small, short-term increase in traffic over current levels. There would be little to no effects on transportation during their operation. The grading on Parcels A and B would be carried out by construction crews already working in the area and would not result in any increases in traffic on area roads.

The potential future light industrial development of the area proposed for disposal would result in transportation impacts due to increased traffic during facility construction and operation. The constraints on the development of much of the subject area due to the presence of transmission lines and the relatively small size of some of the parcels would limit the size of industrial development that is restricted to the subject tracts and the resulting impacts on transportation would likely be no greater—and probably less—than that described in Section 3.11.2 of the 2015 EA. If industrial development occurs on the subject tracts in conjunction with adjacent, non-TVA tracts, the impacts on transportation could be greater.

3.12 Cultural Resources

Cultural resources include, but are not limited to, prehistoric and historic archaeological sites, historic structures, and historic sites at which important events occurred. Cultural resources are finite, non-renewable, and often fragile. They are frequently threatened by industrial, commercial, and residential development, as well as construction of roads and other infrastructure. TVA is mandated by the National Historic Preservation Act of 1966 (NHPA) to protect significant cultural resources (i.e., archaeological sites and historic structures) located on TVA lands or such resources that would be affected by TVA undertakings. The NHPA addresses the preservation of “historic properties,” which is defined under the Act as any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (NRHP).

Two broad categories of cultural resources are archaeological resources and historic architecture. Some examples of archaeological resources are earthworks, weapons and projectiles, human remains, rock carvings, and remains of subsurface structures such as domestic fire pits. Historic architecture consists of standing structures that are usually at least 50 years old. Consistent with Section 106 of NHPA, such structures, as well as archaeological resources, must meet certain criteria to qualify for inclusion on the NRHP.

3.12.1 Affected Environment

Archaeological and historic architectural surveys have previously been conducted on much of the WCF plant reservation and on the 360-acre area that was the subject of the 2015 EA (TVA 2015). These surveys included the site of the proposed switching station, which was determined to not contain historic properties. For the other currently proposed actions, TVA determined the area of potential effects (APE) for archaeological and architectural resources to be the 337 acres that would be transferred out of federal ownership. TVA contracted with Tennessee Valley Archaeological Research (TVAR) to conduct a Phase I archaeological survey of the project area (Rosenwinkel 2015). The survey revisited two previously recorded archaeological sites (1JA694 and 1JA1129) and identified four new archaeological sites (1JA1178, 1JA1179, 1JA1180, and 1JA1181) within the APE. Sites 1JA694 and 1JA1129 were previously determined, in consultation with the Alabama State Historic Preservation Office (SHPO), to be ineligible for the NRHP. Site 1JA1178 is a small high-density historic artifact scatter with an extant brick and stone chimney stack. Site 1JA1179 is a moderately dense historic artifact scatter. Sites 1JA1180 and 1JA1181 are

prehistoric sites. The eligibility of these four newly identified sites for the NRHP could not be determined without additional archaeological testing.

3.12.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no project-related effects on historic properties.

Alternative B – Proposed Action Alternative

The site of the proposed switching station was previously determined to not contain historic properties and the construction and operation of the switching station would have no effects on historic properties. No historic properties were found in the vicinity of the proposed switching station transmission line connections or the areas to be graded on Parcels A and B. Therefore the construction and operation of the transmission line connections and the grading would have no effects on historic property.

Two of the newly identified archaeological sites, 1JA1180 and 1JA1181, are in areas that are unlikely to be developed in the near future. TVA would therefore establish 20-meter buffers around these two sites and include restrictions in the permanent easement that prohibit disturbance within the buffers. This would result in no effects to these two sites. The other two newly identified archaeological sites, 1JA1178 and 1JA1179, are located in areas where avoiding them during any development of the tracts on which they are located may not be feasible. Therefore, TVA finds that the proposed undertaking has the potential to adversely affect 1JA1178 and 1JA1179. TVA consulted with the Alabama SHPO on its findings on October 27, 2015 (Appendix A). Pursuant to 36 CFR Part 800.3(f)(2), TVA also consulted with federally recognized Indian tribes regarding properties that may have religious and cultural significance to their tribe and eligible for the NRHP.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), TVA has developed a Programmatic Agreement (PA) describing the evaluation and resolution of adverse effects to sites 1JA1178 and 1JA1179. The PA sets out the process for conducting a Phase II evaluation of site 1JA1178, and for the development of a treatment plan if site 1JA1178 is determined to be eligible. For 1JA1179, TVA assumed this site to be eligible and included provisions in the PA for the development of a treatment plan for this site. For both sites, the treatment plan would include excavating the sites and cataloging and preserving any excavated artifacts. In a response dated November 24, 2015 (Appendix A), the Alabama SHPO agreed with TVA's determinations and the approach to evaluating and resolving adverse effects described in the PA.

3.13 Socioeconomics and Environmental Justice

3.13.1 Affected Environment

Recent socioeconomic conditions are described in Section 3.10.1 of the 2015 EA (TVA 2015), along with information on minority and low income populations in the project area. More recent employment data show a September 2015 unemployment rate for Jackson County of 6.3 percent (BLS 2015), a decrease of 0.1 percent from the September 2014 unemployment rate. The September 2015 state unemployment rate was 5.9 percent, a decrease of 0.3 percent since September 2014.

3.13.2 Environmental Consequences

Alternative A – No Action

Under the No Action Alternative, there would be no project-related socioeconomic impacts and no disproportionate adverse impacts to minority or low income populations.

Alternative B – Proposed Action Alternative

The TVA actions of and constructing and operating the switching station and grading on Parcels A and B would have very small, beneficial impacts on socioeconomics due to the short term increased employment. Any future industrial development on the eight tracts proposed for disposal would have beneficial impacts due to increased employment during construction and facility operation. Employment during facility construction could be greater than during facility operation, depending on the type of industrial operations. Additional long-term beneficial impacts could result from increased industrial facility tax revenues, although this could initially be small depending on any economic development incentives received by the developers. No disproportionate adverse impacts to minority or low income populations are anticipated.

3.14 Cumulative Impacts

TVA's proposed actions of constructing and operating the switching station and transmission connections, as well as the grading on Parcels A and B, would support the data center. These two actions are not anticipated to result in any additional cumulative impacts beyond those caused by the construction and operation of the data center. If the disposal of the eight tracts facilitates the industrial development of the rural agricultural and forested areas to the east, cumulative impacts to several environmental resources would occur. These potential impacts are described in the preceding sections and are unlikely to be significant. As previously described, TVA is presently closing the gypsum stack (landfill) on the Widows Creek reservation near the eight tracts proposed for disposal. TVA anticipates dismantling much of the recently retired Widows Creek fossil plant in the near future. The details and schedule of this likely action, as well as the long-term use of the fossil plant site, are not known at this time. The dismantling of the fossil plant would generate air pollutants, noise, and additional traffic in the project area. The resulting cumulative impacts to air quality, noise, and transportation would likely be insignificant.

3.15 Unavoidable Adverse Environmental Impacts

Potential unavoidable adverse environmental impacts of the land disposal and future industrial development are described in Section 3.14 of the 2015 EA (TVA 1015). Because the construction and operation of the switching station and transmission connections would occur on land that is already heavily disturbed, they are not expected to result in additional unavoidable adverse impacts.

3.16 Relationship of Short-Term Uses and Long-Term Productivity

This relationship is described in Section 3.15 of the 2015 EA (TVA 2015).

3.17 Irreversible and Irretrievable Commitments of Resources

The commitment of resources is described in Section 3.16 of the 2015 EA (TVA 2015). An additional commitment of resources would occur due to the materials used to construct the switching station and transmission connections.

CHAPTER 4 – LIST OF PREPARERS

4.1 NEPA Project Management

Charles P. Nicholson

Education: PhD, Ecology and Evolutionary Biology; M.S., Wildlife Management; B.S., Wildlife and Fisheries Science

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Involvement: NEPA Compliance, Document Preparation

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Involvement: Project Management

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Involvement: Vegetation and Threatened and Endangered Species

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Experience: 20 years in Wetlands Assessment and Delineation

Involvement: Wetlands

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Experience: 7 years sampling and hydrologic determination for streams and wet-weather conveyances; 5 years in environmental reviews

Involvement: Aquatic Ecology and Threatened and Endangered Species

Carrie C. Williamson, PE, CFM

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Appendix A – Correspondence

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Dudley, Cynthia S

From: Harle, Michaelyn S
Sent: Tuesday, October 27, 2015 3:52 PM
To: 'e106@achp.gov'
Cc: Dudley, Cynthia S
Subject: Tennessee Valley Authority (TVA) Permanent Easement over an additional 337 Acres of Property Adjoining Widows Creek Fossil Plant (WCF), Jackson County, Alabama
Attachments: e106 I form TVA Widows Creek.doc; TVA Widows Creek Addl 337 Acres Land Disposal Jackson County AL Tribal.pdf; Widows Creek Addl 336 Acres Land Disposal AL SHPO 20151027 (3).pdf

TVA is sending this email to notify the Council regarding TVA's adverse effect finding and inviting the Council to participate in the consultation for the development of a PA for phased compliance, pursuant to 36 CFR § 800.14(b), That would address the evaluation of and the mitigation of effects to two sites with the APE for the proposed 337 acre permanent easement of TVA fee owned land adjoining the Widows Creek Fossil Plant. Please find attached the ACHP's e106 form and consultation letters to the Alabama SHPO and consulting tribes. The 800.11(e) documentation can be view in the Phase I report located at the following link

http://www.tvaresearch.com/download/TVA_Widows_Creek_Land_Disposal_Consultation_Draft

Thanks,
Michaelyn Harle

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Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902

October 27, 2015

Ms. Lee Anne Wofford
Deputy State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36130-0900

Dear Ms. Wofford:

TENNESSEE VALLEY AUTHORITY (TVA), PERMANENT EASEMENT OVER AN ADDITIONAL 337 ACRES OF PROPERTY ADJOINING WIDOWS CREEK FOSSIL PLANT (WCF), JACKSON COUNTY, ALABAMA (Associated with AHC 10-1042)

TVA previously consulted with your office regarding the proposed disposal of a 360-acre piece of property on TVA's WCF Reservation. In a letter dated December 30, 2014, your office concurred with TVA that the proposed undertaking would have no effect to historic properties. TVA issued a permanent easement for this 360-acre piece to Wiessner Enterprises, LLC (Wiessner) for the proposed construction and operation of a data center. In order to support the potential for future development and provide a buffer around the data center, Wiessner is now requesting TVA grant a permanent easement on an additional eight parcels of property totaling 337 acres. TVA is currently grading a portion of the original 360-acre parcel. TVA proposes to extend this grading onto adjacent small portions of the Parcels A and B that are part of the current easement request. This grading on Parcels A and B is proposed regardless of whether the requested easement is granted. TVA finds the area of potential effects (APE) for its undertaking, including the proposed grading and granting the permanent easement, to be the entire 337 acres of property.

TVA contracted with Tennessee Valley Archaeological Research (TVAR) to conduct a Phase I archaeological survey of the APE. Please find enclosed the resulting report titled *A Phase I Archaeological Survey of Tennessee Valley Authority's Planned Widow Creek Land Disposal in Jackson County, Alabama*. The survey resulted in revisiting two previously recorded sites (1JA694 and 1JA1129) and the identification of four newly identified sites (1JA1178, 1JA1179, 1JA1180, and 1JA1181) within the APE.

1JA694 and 1JA1129 were previously determined, in consultation, to be ineligible for the National Register of Historic Places (NRHP). The site visit confirmed this earlier determination relating to sites 1JA694 and 1JA1129. Site 1JA1178 is a small, high-density, historic, artifact scatter with an extant brick and stone chimney stack. While this site appears to be typical of rural homestead sites common on TVA land, TVA agrees with TVAR's recommendation that the site should remain "undetermined" for the NRHP prior to additional archival research. Site 1JA1179 is a moderately dense historic artifact scatter. TVAR recommends that this site remain

Ms. Lee Anne Wofford
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“undetermined” for purposes of eligibility for listing on the NRHP. For the purpose of this consultation, however, TVA will proceed on the assumption that site 1JA1179 is eligible for the NRHP. TVAR’s research indicates that the structures associated with sites 1JA1178 and 1JA1179 were razed sometime between 2007 and 2010, prior to TVA’s acquisition of the property in 2010. Site 1JA1180 is a large, high-density, lithic, artifact scatter and site 1JA1181 consists of a small, possibly prehistoric, stone pile. TVA agrees with TVAR’s recommendation that sites 1JA1181 and 1JA1180’s eligibility should be considered “undetermined” for the NRHP.

The proposed grading activities to be undertaken by TVA, which will disturb the small portions of land in Parcels A and B, are outside the boundaries of any of the identified archaeological sites and would not have an effect on historic properties. TVA staff met with Wiessner to discuss options for preservation and protection of sites 1JA1178, 1JA1179, 1JA1180 and 1JA1181 from the effects of any future expansion of the proposed data center. Wiessner agreed to accept restrictions in the permanent easement to protect 1JA1180 and 1JA1181. Specifically, a 20-meter buffer will be placed around 1JA1180 and 1JA1181 and restrictions will be included in the permanent easement to prohibit work within those buffers. In order to avoid the possibility of inadvertent disturbance to the sites, the buffers will be clearly marked. Due to the possible future development of the data center in relation to the location of sites 1JA1178 and 1JA1179, these sites may not be able to be avoided. Therefore, TVA finds that the proposed undertaking has the potential to adversely affect 1JA1178 and 1JA1179.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), TVA proposes to develop a Programmatic Agreement (PA) with your office to govern the evaluation and resolution of adverse effects to sites 1JA1178 and 1JA1179. The PA would set out the process for conducting a Phase II evaluation of site 1JA1178, and for the development of a treatment plan if site 1JA1178 is determined to be eligible. For 1JA1179, TVA will assume this site to be eligible and include provisions in the PA for the development of treatment plan for this site.

Pursuant to Section 106 of the NHPA, we are seeking your concurrence with TVA’s findings and recommendations regarding the following:

- TVA’s undertaking to grant the proposed easement would have no effect to sites 1JA1180 and 1JA1181 provided a 20 foot buffer is placed around the sites, and appropriate restrictions are placed in the permanent easement prohibiting work within this buffer.
- The issuance of a permanent easement has the potential to adversely affect sites 1JA1178 and 1JA1179.
- The development of a PA for phased compliance, pursuant to 36 CFR § 800.14(b), would address the evaluation of and the mitigation of effects to sites 1JA1178 and 1JA1179.

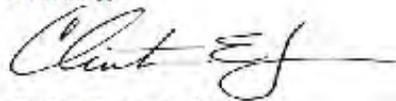
Pursuant to 36 CFR Part 800.3(f)(2), TVA is consulting with federally recognized Indian tribes that might attach religious and cultural significance to historic properties in the APE and invite them to be consulting parties. Further, pursuant to 36 CFR § 800.6(b), TVA is inviting the

Ms. Lee Anne Wofford
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Advisory Council on Historic Preservation (ACHP) to participate in the consultation for the development of the PA.

If you have any questions or comments, please contact Michaelyn Harle in Knoxville, Tennessee, at (865) 632-2248 or by email at mharle@tva.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Clinton E. Jones". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Clinton E. Jones, Manager
Biological and Cultural Compliance
Safety, River Management and Environment
WT 11C-K

MSH:CSD
Enclosures

**Advisory Council on Historic Preservation
Electronic Section 106 Documentation Submittal System (e106) Form
MS Word format**

Send to: e106@achp.gov

I. Basic information

- 1. Name of federal agency. (If multiple agencies, state them all and indicate whether one is the lead agency):**

Tennessee Valley Authority

- 2. Name of undertaking/project. (Include project/permit/application number if applicable):**

Permanent Easement Over An Additional 337 Acres of Property Adjoining Widows Creek Fossil Plant

- 3. Location of undertaking. (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands):**

Jackson County, Alabama

TVA fee Owned Land

No tribal land involved

- 4. Name and title of federal agency official and contact person for this undertaking, including email address and phone number:**

Agency Official – Bill Johnson – TVA President and CEO

Contact information – Michaelyn Harle email: mharle@tva.gov phone: 865-632-2248

- 5. Purpose of notification. Indicate whether this documentation is to:**

- **notify the ACHP of a finding that an undertaking may adversely affect historic properties, and/or**
- **invite the ACHP to participate in a section 106 consultation, and/or**
- **propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings in accordance with 36 C.F.R. 800.14(b)(3).**

II. Information on the undertaking*

6. Describe the undertaking and nature of federal involvement (if multiple federal agencies are involved, specify involvement of each):

TVA previously consulted with your office regarding the proposed disposal of a 360-acre piece of property on TVA's WCF Reservation. In a letter dated December 30, 2014, your office concurred with TVA that the proposed undertaking would have no effect to historic properties. TVA issued a permanent easement for this 360-acre piece to Wiessner Enterprises, LLC (Wiessner) for the proposed construction and operation of a data center. In order to support the potential for future development and provide a buffer around the data center, Wiessner is now requesting TVA grant a permanent easement on an additional eight parcels of property totaling 337 acres. TVA is currently grading a portion of the original 360-acre parcel. TVA proposes to extend this grading onto adjacent small portions of the Parcels A and B that are part of the current easement request. This grading on Parcels A and B is proposed regardless of whether the requested easement is granted.

7. Describe the area of potential effects:

TVA finds the area of potential effects (APE) for its undertaking to build a substation and grant a permanent easement to be the entire 337 acres of property.

8. Describe steps taken to identify historic properties:

TVA contracted with Tennessee Valley Archaeological Research (TVAR) to conduct a Phase I archaeological survey of the APE. Please find attached the resulting report titled *A Phase I Archaeological Survey of Tennessee Valley Authority's Planned Widow Creek Land Disposal in Jackson County, Alabama*.

9. Describe the historic property (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information):

Please see attached report titled *A Phase I Archaeological Survey of Tennessee Valley Authority's Planned Widow Creek Land Disposal in Jackson County, Alabama* at http://www.tvaresearch.com/download/TVA_Widows_Creek_Land_Disposal_Consultation_Draft.pdf

10. Describe the undertaking's effects on historic properties:

The Phase I cultural resources survey resulted in the identification of four newly identified sites (1JA1178, 1JA1179, 1JA1180, and 1JA1181) within the APE. The sites were recommended potentially eligible for the NRHP. The proposed grading and substation construction activities to be undertaken by TVA are outside the boundaries of any of the identified archaeological sites and would not have an effect on historic properties. TVA staff met with Wiessner to discuss options for preservation and protection of sites 1JA1178, 1JA1179, 1JA1180 and 1JA1181 from the effects of any future expansion of the data center. Wiessner agreed to avoid sites 1JA1180 and 1JA1181. A 20-meter buffer will be placed around 1JA1180 and 1JA1181 and restrictions included in the permanent easement that would prohibit work within those buffers. In order to avoid the possibility of inadvertent disturbance to the sites, the buffers will be clearly marked. Sites 1JA1178 and 1JA1179 cannot be avoided due to the location of these sites in relation to the scope of development of the data center. Therefore, TVA finds that the proposed undertaking has the potential to adversely affect 1JA1178 and 1JA1179.

11. Explain how this undertaking would adversely affect historic properties (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects):

See Above

12. Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public, including any correspondence from the SHPO and/or THPO.

See Attached documentation

** see Instructions for Completing the ACHP e106 Form*

III. Optional Information

13. Please indicate the status of any consultation that has occurred to date. Are there any consulting parties involved other than the SHPO/THPO? Are there any outstanding or unresolved concerns or issues that the ACHP should know about in deciding whether to participate in consultation?

TVA sent Section 106 consultation to the AL SHPO and federally recognized tribes, we are waiting for their response.

14. Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links:

TVA solicits public comment through the NEPA process. The below link was used to provide public comments to the original 360-acre piece of Widows Creek Land Disposal Property. The draft EA for the additional acreage will also be placed on the website for public comment

15. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard or other federal interagency project tracking system? If so, please provide the link or reference number:

The following are attached to this form (check all that apply):

- Section 106 consultation correspondence
- Maps, photographs, drawings, and/or plans
- Additional historic property information
- Other: Phase I report



STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
408 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

November 24, 2015

Tel: 334-242-8184
Fax: 334-240-4277

LISA J. JONES
ACTING EXECUTIVE DIRECTOR
STATE HISTORIC PRESERVATION OFFICE

Clinton E. Jones
Biological and Cultural Compliance
Safety, River Management and Environment
WT/C-K
TVA
400 West Summit Hill Drive
Knoxville, Tennessee 37902

Re: AHC 2010-1042
CRA
Permanent Easement over an Additional
337 Acres of Property Adjoining Widows Creek Fossil Plant
Jackson County

Dear Mr. Jones:

Upon review of the cultural resource assessment conducted by TVAR for the above referenced project we have determined we agree with your determinations. Specifically, we agree with the following:

1. TVA's undertaking to grant the proposed easement would have no effect to sites 1Ja1180 and 1Ja1181 provided a 20-meter buffer is placed around the sites, and appropriate restrictions are placed in the permanent easement prohibiting work within this buffer.
2. The issuance of a permanent easement has the potential to adversely affect sites 1Ja1178 and 1Ja1179.
3. The development of an agreement document for phased compliance, pursuant to 36 CFR § 600.14(b) would address the evaluation of and the mitigation of effects to sites 1Ja1178 and 1Ja1179.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Stacey Hathorn at 334.230.2649 or Stacey.Hathorn@preservnet.org. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

AW/SGH/nmh

ALABAMA HISTORIC PRESERVATION OFFICE
www.preservnet.org