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FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

HAMPTON STATION 500-KV SUBSTATION
FINAL ENVIRONMENTAL ASSESSMENT
MONTGOMERY COUNTY, TENNESSEE
EAXX-455-00-000-1743073135

The Tennessee Valley Authority (TVA) proposes to supply the load demands requested by two customers, Google and LG Chem, and to provide additional capacity and reliability benefits for the Clarksville, Tennessee and Hopkinsville, Kentucky regions by constructing and operating the new Hampton Station 500-kilovolt (kV) Substation and associated transmission lines. TVA's proposed Hampton Station 500-kV Substation and associated transmission lines are needed to support the Google load expansion and to supply the load for the new LG Chem battery cathode facility, which is currently under construction. TVA would also construct two 0.8-mile-long 161-kV loop lines and new 0.5-mile-long 161-kV transmission lines to connect the proposed substation to TVA's transmission system. About 17.5 acres would be required for these transmission line right-of-way (ROW) easements.

TVA's proposal includes the purchase of an approximate 107-acre site for the proposed substation located outside the municipality of Clarksville in Montgomery County, Tennessee. The proposed substation would be constructed adjacent to TVA's existing Montgomery 500-kV Substation and the new LG Chem 161-kV Substation. As part of the 107-acre land acquisition, TVA would purchase and remove a residential house. A new, 284-foot-long permanent access road would be constructed on the substation parcel immediately off Charles Bell Road. Approximately 48 acres of the 107-acre parcel would be disturbed during construction of the new facility; however, the substation and access road would occupy approximately 35 acres. The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference. The EA addresses the proposed construction, operation, and maintenance of the new substation and associated transmission lines as well as the purchase of the substation parcel for satisfying the project's purpose and need or taking no action.

Alternatives

Two alternatives (the No Action Alternative and the Action Alternative) were addressed in the EA. TVA also considered other alternatives in identifying its preferred Action Alternative.

Under the No Action Alternative, TVA would not construct the Hampton Station 500-kV Substation and associated transmission lines. As such, the increased load demand requested by Google and LG Chem would not be met. Both customers would continue to operate under current conditions and be restricted in their operations. TVA would also not be able to provide additional capacity and reliability benefits for the Clarksville and Hopkinsville regions. As a result, the TVA power system in the project area would continue to operate under current conditions, increasing the risk for substation and transmission line overloading, loss of service, and occurrence of violations of NERC reliability criteria. TVA's ability to provide a robust, reliable source of power for continued economic, residential and commercial growth in the area would be jeopardized.

Considering TVA's obligation to provide reliable electric service, the No Action Alternative is not a reasonable alternative. However, the potential environmental effects of adopting the No

Action Alternative were considered in the EA to provide a baseline for comparison with respect to the potential effects of implementing the proposed action.

Under the Action Alternative, TVA proposes to construct and operate the Hampton Station 500-kV Substation and associated transmission lines to supply the load demands requested by two direct-served customers, Google and LG Chem, and to provide additional capacity and reliability benefits for the Clarksville and Hopkinsville regions. TVA would build, operate, and maintain about 1.3 miles of new transmission lines connecting from the proposed substation to TVA's existing transmission system and the new LG Chem 161-kV Substation. TVA would also install OPGW on the new transmission lines to facilitate communications with the TVA network.

Impacts Assessment

The EA documents potential effects to the following resources: water quality (groundwater and surface water); aquatic ecology; vegetation; wildlife; endangered and threatened species (aquatic animals, terrestrial animals, and plants) and their critical habitats; wetlands; visual resources and noise; land use and prime farmland; archaeological and historic resources; recreation, parks, and managed areas; socioeconomics; and transportation.

Potential effects related to air quality, global climate change, solid waste, hazardous and nonhazardous wastes, and health and safety were considered. Potential effects on these resources were found to be minimal or absent because of the nature of the action. Based on aerial photography, project maps, and the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer, the proposed project would be located outside 100-year floodplains, which would be consistent with EO 11988. The project would have no direct or indirect impacts on the floodplain and its natural and beneficial values.

The proposed construction activities would involve ground disturbance resulting in the potential for increased erosion and sediment release, which may temporarily affect local surface water and aquatic ecology via stormwater runoff. TVA proposes to avoid pond P001 located in the northeast portion of the proposed 107-acre substation parcel. Any potential impact to this pond would be further minimized using Standard Stream Protection (Category A) as defined in *A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities* (TVA 2022). A man-made farm pond, P002, located in the north central portion of the proposed substation parcel, would be filled to construct the substation. Two wet weather conveyances (WWC)/ephemerals streams, WWC-E001 and WWC-E002, in the proposed borrow areas would likely be impacted to obtain fill material for the construction of the substation. Applicable permits would be obtained prior to any construction for any surface water alterations located within the proposed project area. The terms and conditions of these permits would be followed including any required mitigation from the proposed activities. Appropriate best management practices (BMPs) would be followed to ensure the project would minimize potential effects and possible introduction of pollutants into nearby surface waters as a result of the grading plan and substation construction. The proposed construction activities include potential releases of contaminants into groundwater and encountering groundwater during excavation, which would require proper disposal. However, the use of appropriate BMPs would minimize the potential for such releases. Because standard BMPs and stream protection measures would be implemented during construction, operation, and maintenance activities, potential effects to surface water, groundwater and aquatic ecology would be minor and insignificant.

Converting cropland for construction of the proposed substation would be long term in duration, but insignificant. Construction of the proposed transmission lines would have negligible impacts to vegetation due to their proposed locations in agricultural fields. Less than 1 acre (~0.75 acre) of forest would be removed for the proposed project. The small areas of forested and herbaceous communities found in the project area do not support native plant communities with conservation value. The implementation of the proposed project would have a negligible impact on the terrestrial plant ecology of the region. The project area has a substantial component of invasive terrestrial plants and adoption of the Action Alternative would not significantly affect the extent or abundance of these species at the county, regional, or state level. The use of TVA BMP's, including revegetating with noninvasive species (TVA 2022) would serve to minimize the potential introduction and spread of invasive species in the project area.

Wildlife currently using the proposed project area are primarily common, habituated species that would be mostly temporarily displaced by habitat removal or alteration. Construction-associated disturbances and habitat removal would disperse mobile wildlife into surrounding similarly suitable habitat. Less mobile individuals may be directly impacted by construction, particularly if tree clearing and ground disturbance activities take place during breeding/nesting/hibernating seasons. However, the actions are not likely to affect populations of species common to the area, as similarly forested habitat exists in the surrounding landscape. Suitable foraging habitat exists for eight of the fifteen migratory bird species with potential to occur in the proposed project area. Should mature individuals occur on site, they are expected to flush if disturbed. Populations of migratory birds are not expected to be impacted by the Action Alternative.

All work would be conducted in accordance with BMPs as outlined TVA 2022. The water features documented in the proposed project area are small, WWC/ephemeral stream drainages lacking perennial flow. These drainages would not provide suitable habitat for any of the endangered, threatened, or special status aquatic species that have been documented as potentially occurring within the Elk Fork- Red River 10-digit HUC watershed encompassing the proposed project area. It is unlikely that any special status species would be present in either pond due to the lack of perennial flow at the outflow of the ponds. No federally designated critical habitat for aquatic species occurs in the project footprint and therefore, no impacts to unique or important aquatic habitats are anticipated. With proper implementation of BMPs during construction, operation, and maintenance of the proposed substation and transmission lines, no impacts to federally listed endangered, threatened, special status, or state-listed aquatic species are anticipated to occur as a result of the proposed Action Alternative.

Construction of the substation and transmission lines would result in some vegetation clearing. However, no impacts are anticipated to federally or state-listed plant species because no individual plants or habitat capable of supporting listed species are present in portions of the project area where work would occur.

Potential habitat for the state-listed barking tree frog is present on the substation parcel in and around the two ponds (P001 and P002) and the surrounding wetland (W001) associated with pond P002. Additionally, bat foraging habitat exists over the two ponds and the wetland for gray bat, Indiana bat, northern-long-eared bat, and tricolored bat. Pond P001 would be avoided and BMPS would minimize any potential impacts to water quality to the extent practicable. The filling of pond P002 (0.08-acre) and the wetland (0.31-acre, W001) in the north central portion of the proposed substation parcel for construction of the substation would remove this habitat. Approximately 0.75 acre of forested habitat would be removed for the proposed transmission line structures in the northeastern corner of the substation parcel. This area may provide minor foraging habitat for Indiana bat, northern long-eared bat, and tricolored bat, if these species are

present. Additional foraging habitat, however, exists within forested areas along the periphery of the project area. Suitable summer roosting habitat for these species is not present within the forested acreage proposed for removal. No caves, cave-like structures, or other similarly suitable habitat for gray bat is known within the project area. Tree clearing is proposed to occur between November and December 2026, when Indiana bat, northern long-eared bat, and tricolored bat are not present on the landscape. Activities associated with the Action Alternative were addressed in TVA's programmatic consultation with the U.S. Fish and Wildlife Service on routine actions and federally listed bats in accordance with ESA Section 7(a)(2). For those activities with potential to affect bats, TVA committed to implement conservation measures as identified in the EA whenever impacts to federally listed bat species are expected. With the implementation of standard BMPs around P001 and the small size of P002 and the wetland to be filled, and with adherence to relevant conservation measures outlined in the EA, the Action Alternative is expected to have only minor effects on federally or state-listed terrestrial animal species.

The small 0.31-acre wetland W001 that would be filled is a scrub-shrub wetland on the fringe of pond P002 (0.08-acre). TVA would obtain the necessary Section 404 and 401/ARAP permits and required compensatory mitigation to ensure the proposed wetland impacts are compensated to the extent deemed appropriate such that wetland functions and values remain at the current capacity within the larger affected watershed. With wetland avoidance and wetland minimization techniques in place, TVA would comply with all Clean Water Act, U.S. Army Corps of Engineers, and Tennessee Department of Conservation mandates to ensure wetland impacts within the watershed are minimized. In this context, the proposed wetland impacts would be kept to a minimum on a watershed scale due to the avoidance, minimization, and compliance measures in place. Therefore, the Action Alternative's impacts to wetlands would be insignificant.

Visual changes would occur to the project area. Direct views of the substation and transmission lines would be visible from Charles Bell Road and to users of local roadways to the west. However, the nearest residence would be about 250 feet from the eastern edge of the 35-acre substation area within the parcel and approximately 150 feet from the 0.5-mile transmission lines and 250 feet from the 0.8-mile transmission lines. The existing vegetative buffer of tall trees would block unimpeded views of the proposed facilities. Additionally, necessary security lighting at the substation would generate some additional local light during nighttime hours, which could cause a slight loss of dark sky conditions in the local area. The increase in nighttime lighting generated by the substation would be localized to the immediate 35-acre substation parcel disturbance area. The project area is influenced by existing development that generates nighttime lighting, including nearby utility infrastructure, the residential neighborhood, roadways, and commercial/industrial activity including the new battery plant. All of which contributes to ambient lighting in the viewshed. Lighting would adhere to the Illuminating Engineering Society of North America guidelines and the American National Standards Institute guidelines. including downlighting, would be used to minimize light pollution. The current ambient light in the project area exceeds the amount of light that would be generated by the project. Therefore, illumination from the substation would not contribute to the loss of dark sky conditions or visual effects. While implementation of the project would contribute to a decrease in visual integrity of the landscape, the existing scenic class would not be reduced by two or more levels, which is the threshold of significance of impact to the visual environment. Therefore, visual impacts resulting from the project would be low to moderate.

The proposed construction and operation of the substation and transmission lines would contribute to increases in ambient noise. Although noise levels may periodically surpass the EPA and HUD's recommended Ldn guidance for nearby residential areas (55 dBA and 65 dBA, respectively), the highest noise levels would be infrequent and activities, such as those associated with drilling and bulldozing, would not be anticipated substation parcel's eastern boundary. Only a few transmission structures would be installed near residential receptors and this would result in only a short-term noise level above EPA and HUD's recommendations for residential areas. Project construction would be conducted in phases proposed to start August 2026 and estimated to be completed May 2030. The bulk of the construction is anticipated to occur in the first 12 months with the remainder of the construction activities occurring only intermittently. Because construction noise would be temporary in nature and limited to daytime hours, noise impacts from construction of the substation and transmission lines would be minor to moderate. Overall, given the temporary and intermittent nature of project activities and the relatively low vehicle numbers, noise impacts associated with workforce traffic would be minor. The substation would produce a loud impulse noise when a breaker is tripped due to excessive current, high voltage, low voltage, low frequency, or other less common problems. The noise from the breaker is expected to last 1/20 of a second and range from 96 to 105 dBA at a distance of 50 feet and approximately 91 dBA at a distance of 250 feet where the nearest residence is located. Breaker noise may be audible to nearby residents; however, because of the infrequent occurrence, impacts from breaker noise would be minor. Overall, noise impacts from the operation of the substation would be minor, as the occasional corona discharge and fan cooling would not result in notable changes to background noise levels at nearby receptors and audible breaker noise would be infrequent and short-lived. Noise increases associated with construction would be temporary, and operational noise emissions of the substation would generally attenuate to levels below recommended residential noise levels and would be negligible to minor.

The proposed project would permanently convert approximately 124.7 acres of agricultural land to utility use. In addition, the single-family residence located on the north portion of the 107-acre substation parcel would be removed. Although land use would be changed from agricultural to utility facilities, the surrounding land use includes an existing utility corridor, and the proposed project would be in keeping with that element. Therefore, impacts on land use would be minor. In accordance with the 1981 Farmland Protection Policy Act evaluation procedures, a U.S. Department of Agriculture (USDA) Farmland Conversion Impact Rating (Form AD-1006) is required for the Hampton Station 500-kV/161-kV Substation Area with input from the USDA Natural Resources Conservation Service (NRCS). As part of that process, a preliminary assessment seeking confirmation of prime farmland in the project area was submitted to the NRCS on May 12, 2025. The NRCS provided a response on May 14, 2025, agreeing with the assessment that prime farmland is present in the project area. The 124.7-acre project area (107-acre substation parcel and 14.2 acres and 3.3 acres for the transmission line ROWs north of the substation parcel) received an impact rating score of 139.5 which is below the 160 NRCS threshold for potential adverse effects. Given the availability of prime farmland in the area and the small amount proposed to be removed in a 1-mile radius (3.5 percent) as well as the relatively lower impact rating, impacts to prime farmland would be minor.

TVA, in consultation with the Tennessee State Historic Preservation Office (SHPO) and federally recognized Indian tribes, found that the project would not adversely affect any listed or eligible National Register of Historic Places archaeological or architectural sites. The SHPO concurred with TVA's findings in letters dated March 28, 2025 (substation parcel) and November 18, 2024 (transmission line ROW). TVA received comments from three federally recognized Indian tribes. TVA received concurrence for no adverse effect for the transmission

line ROWs from the Eastern Shawnee Tribe of Oklahoma on December 16, 2024, and from the Creek (Muscogee) Nation on December 10, 2024. TVA received concurrence for no adverse effect for the substation parcel from the Eastern Shawnee Tribe of Oklahoma on April 10, 2025.

Installation of the proposed substation would preclude any informal recreational use of the proposed substation property. The Action Alternative has been assessed to have low to no impacts on localized recreational activities within the proposed project area considering the project area currently consists primarily of agricultural fields. The closest developed recreational facilities and managed areas were identified to be a distance of 1.1 miles and 2.8 miles, respectively, from the project area. Given their distance from the project area, no impacts to recreation or natural or managed areas are anticipated as a result of the proposed project.

Impacts associated with the proposed project on demographics and local employment would be minor given the relatively small workforce and that most workers needed would likely be drawn from the existing labor force. There is also the potential for a decrease in property value for those parcels with views of the proposed new transmission lines and substation. However, residential properties have been avoided to the greatest extent possible and most of the project features would be located in areas with existing commercial/industrial and transmission infrastructure. Most residences are a considerable distance from the proposed substation and transmission line ROWs. However, the nearest residences are located adjacent to the 107-acre substation parcel's eastern boundary and are currently separated by a vegetated buffer of tall trees. Because the substation boundary would be located farther west from the nearby residences (approximately 250 feet) and because of the already industrialized surrounding area, effects to local property values would be minor. Project construction and maintenance would not result in notable impacts to community facilities or services. Implementation of the Action Alternative would not have a notable impact on the demand for emergency services in the area.

The proposed project would potentially include traffic generated by the construction of the substation and transmission lines. Due to the relatively low number of construction vehicles and high capacity of the travel routes, the increase in Average Annual Daily Traffic associated with project construction would not adversely affect traffic conditions on the surrounding roadway network. Transportation impacts would be localized and minor, lasting through the approximate 45-month phased construction period. Following construction, ongoing operations and periodic maintenance activities would generate only occasional vehicle trips that would be minimal and would not have an impact on the surrounding traffic network.

The construction of the proposed substation and transmission lines could result in minor temporary impacts such as increased traffic, noise, fugitive dust, and air emissions during the construction period. However, these impacts would be minor with the use of BMPs as outlined in *Tennessee Valley Authority Site Clearing and Grading Specifications* (TVA 2025) and would not result in any substantial long-term impacts that would have a direct impact on human health or welfare. Potential effects from electromagnetic fields would be minor. The proposed transmission lines would not pose an increased hazard for electric shock or from lightning.

Public Review

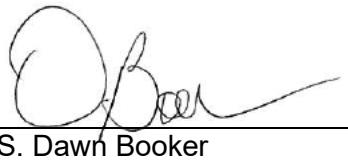
The draft EA was released for a 14-day public comment period on August 15, 2025. Notice of availability of the draft EA was posted on TVA's website, emails were sent to representatives of the Montgomery County Industrial Development Board and to local officials, and postcards about the public comment period were mailed to residents adjacent to the proposed 107-acre substation parcel. Comments on the draft EA were accepted through August 29, 2025, via TVA's website, mail, and e-mail. TVA received one letter of comment on the proposed project.

Mitigation

TVA will implement the routine environmental protection measures as listed in the EA.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, TVA concludes that the proposed actions to supply the load demands requested by two customers, Google and LG Chem, and to provide additional capacity and reliability benefits for the Clarksville and Hopkinsville regions by constructing and operating the new Hampton Station 500-kV Substation and associated transmission lines would not be a major federal action significantly affecting the environment. Accordingly, an Environmental Impact Statement is not required.



10/9/2025

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Date Signed

Reference

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