

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**TVA SYSTEM OPERATIONS CENTER AND**  
**POWER SUPPLY SYSTEM**  
**ENVIRONMENTAL ASSESSMENT**  
**BRADLEY, HAMILTON, AND MEIGS COUNTIES, TENNESSEE**

Tennessee Valley Authority (TVA) continuously manages its transmission system, which serves approximately ten million residents in a more than 82,000-square-mile power service area (PSA), from the current System Operations Center (SOC) located in downtown Chattanooga, Tennessee, with backup from the Regional Operations Center (ROC) located approximately 6 miles away. Recent third-party consultant recommendations coupled with internal review of the mandatory North American Electric Reliability Corporation/Critical Infrastructure Protection requirements resulted in the identification of both physical and reliability risk factors associated with the current SOC. Physical security vulnerabilities exist due to the nature of the SOC's current urban location, especially in the event of natural disasters or emergency situations. In addition, an updated Supervisory Control and Data Acquisition (SCADA)/Energy Management System (EMS) computer system is needed; however, there is no space in the current SOC and ROC computer rooms for the next generation of new servers. To ensure reliability of the TVA system, there can be no downtime while the new systems are installed – they must run in parallel while the new system is being tested. The construction of a new standalone facility would address these risks by being located on a site with ample perimeter security, outside of a highly populated urban environment; being constructed to high seismic standard and designed to withstand locally severe weather and man-made catastrophic events to further enhance TVA's disaster resiliency capability; and featuring state-of-the-art SCADA/EMS service as well as redundant back-up systems to allow for continuous 24/7 operations.

TVA needs to decide whether to address the current physical and reliability risks present in the existing SOC. If TVA addresses these risks, other secondary decisions will be involved, including the timing of the proposed improvements, whether to construct a new facility or augment the existing one, the most suitable power and communication routes, and any necessary mitigation and/or monitoring to meet TVA standards and to minimize the potential for damage to environmental resources.

**Alternatives**

During the development of this proposal, TVA considered alternatives other than a new standalone SOC facility, including the retrofit of the existing ROC to become the primary Operations Center, and the expansion of the existing SOC into an adjacent space. However, these alternatives were rejected from detailed analysis in the Environmental Assessment (EA) because they did not meet the project purpose and need or had unacceptable levels of risk associated with maintaining reliable operations during construction.

TVA carried forward the following alternatives for analysis in the EA:

- Alternative A – No Action Alternative
- Alternative B – TVA Constructs a New Standalone System Operations Control Center, Gunstocker Creek 161-kV Substation, and Associated 161-kV Transmission Line

The impacts of these alternatives were assessed in the attached EA, which is incorporated herein by reference.

Alternative A: Under the No Action Alternative, TVA would not construct a new standalone SOC. As a result, the existing SOC would remain in operation under current conditions, increasing the exposure to both man-made and weather-related physical security events as well as vulnerabilities associated with aged SCADA/EMS service and the existing electrical, mechanical and data systems that affect reliability. TVA's ability to provide reliable service within the PSA would be jeopardized, which would not support TVA's overall mission. As such, this alternative is not a reasonable alternative. However, the No Action Alternative is included because it provides a baseline for comparison with respect to the potential effects of implementing the proposed action.

Alternative B: Under Alternative B, TVA would construct, operate, and maintain a new standalone SOC facility located northeast of the intersection of State Highways 58 and 60 in Meigs County in Georgetown, Tennessee. The campus would be located on a 166-acre parcel of which approximately 22 acres would accommodate the two-story SOC building in addition to a Receiving/Maintenance building, Entrance Guard House, Fire Pump House, protected equipment yard helipad, walkway canopies, and parking areas. A gated entrance from State Highway 58 would serve as the primary entrance for the facility.

The SOC would receive power from the proposed Gunstocker Creek 161-kilovolt (kV) Substation, which would be located on the same 166-acre parcel. TVA also proposes to build approximately 5.25 miles of double-circuit transmission line (TL) to power the new substation. The TL would be a combination of an approximately one-mile section of new construction centered on 100-foot-wide right-of-way (ROW) and 4.25 miles of existing 100-foot-wide TL ROW from which TVA would remove the existing TL and construct a new TL. Temporary access roads would also be required for construction and maintenance of the proposed TL.

During construction of the replacement SOC and Gunstocker Creek 161-kV Substation, TVA would clear vegetation, remove topsoil, and grade in accordance with TVA's *Site Clearing and Grading Specifications*. If needed, fill material would be obtained from an approved/permitted borrow area and temporary spoil storage would be located in designated onsite areas. Additionally, depending upon site specific geologic conditions, rock removal could require explosive blasting. Approximately 77.5 acres of the 166-acre property are proposed to be disturbed over the life of the project, but work would be broken into phases such that no more than 50 acres are disturbed at any one time, as detailed in the site-specific Storm Water Pollution Prevention Plan. Following clearing, grading and construction, disturbed areas on the property (excluding the areas utilized for the SOC, parking and ancillary facilities) would be restored to approximate pre-construction conditions, to the extent practicable.

In order to accommodate the construction of the new 161-kV TL, TVA would purchase ROW easements from landowners whose land the proposed new ROW would cross. These easements would give TVA the right to clear the ROW and to construct, operate, and maintain the TL, as well as remove “danger trees” adjacent to the ROW. TVA would adhere to previously developed guidance and specification documents for ROW clearing, construction, maintenance and vegetation management activities. Under the proposed schedule, construction of a replacement SOC and associated 161-kV substation and TL connection would be completed by the end of 2022.

### **Preferred Alternative**

TVA’s preferred alternative is Alternative B - TVA Constructs a New Standalone SOC, Gunstocker Creek 161-kV Substation, and Associated Gunstocker Creek 161-kV TL. Implementation of this alternative would result in minor impacts to the environment. However, Alternative B is preferred because it would achieve the Purpose and Need of the project and would avoid the potential physical and reliability risks associated with continuing to operate the existing SOC under current conditions.

### **Impacts Assessment**

Based on the analyses in the EA, TVA concludes that the implementation of Alternative B would not adversely affect climate change, public health and safety, hazardous and nonhazardous wastes, archaeological and historic resources, recreation, parks and natural areas, or socioeconomics and environmental justice. There would be minor impacts to air quality, groundwater, soils and prime farmland, surface water and aquatic resources, plant and animal communities, floodplains, wetlands, visual resources, noise and vibration, and transportation.

Construction activities would result in the production of fugitive dust, noise emissions, and visual discord above ambient levels, resulting in temporary impacts to air quality and aesthetic resources for the duration of construction. Following construction, these resources would also experience minor, long-term impacts associated with the operation and maintenance of the SOC and TL, though they would be less than construction impacts.

During construction, there would be short-term increases in employment, payroll, and tax payments, resulting in minor beneficial direct and indirect economic impacts. Implementing Alternative B would not cause low-income or minority populations to be disproportionately affected by adverse environmental impacts.

Construction and operation of the proposed SOC facility and new build section of the TL would occur on land currently undeveloped that supports forested and herbaceous vegetation. Clearing and grading of the site and the new build section of the TL would result in an unavoidable alteration of habitats that would result in long-term impacts to localized species composition and wildlife habitat for the lands immediately affected. However, due to the abundant habitat of similar quality within the vicinity of the project site, the overall impact to vegetation and wildlife is considered minor. In addition, TVA would integrate on-going standard Best Management Practices (BMPs) and procedures that are designed to avoid and minimize impacts to federally or state-listed species, including minimization of potential impacts to foraging bat habitat as described and in accordance with TVA’s Programmatic Consultation on Bats on routine actions.

The construction of the proposed SOC would also result in unavoidable adverse effects to surface water and wetland resources that include the relocation of 621 feet of intermittent stream, the encapsulation of 328 feet of ephemeral stream, and filling of one wetland (0.17 acres). These impacts would be mitigated through adherence to CWA permit requirements and implementation of applicable compensatory mitigation measures identified through the permitting process. Temporary impacts to water quality from runoff during construction, as well as vegetation maintenance along the TL, could impact nearby receiving water bodies and/or groundwater resources but would be reduced with application of appropriate BMPs.

Additional traffic generated during the construction phase is expected to disperse into the surrounding road network and have negligible effects on the transportation network and associated traffic conditions. Impacts from SOC operations would include a minor delay for the northbound traffic at State Highway 60 and Old Highway 58; however, the maximum increase is just 1.2 seconds. Additionally, SOC operations would involve occasional helicopter traffic in the vicinity, all of which would abide by FAA and any local regulations. Therefore, impacts to transportation under Alternative B would be minor.

Onsite clearing, grading and construction activities would potentially disturb soil stability and increase erosion, resulting in temporary, minor impacts to soils. Additionally, Alternative B would result in a loss of approximately 1.9 acres of prime farmland soils which are located within the proposed footprint for the SOC. However, this minor loss of prime farmland is negligible when compared to the amount of land designated as prime farmland within the surrounding region.

Past, present, and reasonably foreseeable future actions identified within the geographic areas of analysis include the previous construction of the existing TL and associated ROW and changes in land use and development such as agricultural use, infrastructure projects, and forest management. Based on the analyses in the EA, there would be no significant cumulative adverse environmental impact from the construction and operation of the proposed SOC, Gunstocker Creek 161-kV Substation, and associated 161-kV TL when considered together with these other past, present, and reasonably foreseeable future actions in the area.

### **Public and Intergovernmental Review**

The Draft EA was released for public review and comment for 30 days beginning on October 29, 2019. TVA received two comment letters from members of the public. TVA considered all of the substantive comments received on the Draft EA and has responded to them in the Final EA. In addition, TVA notified local, state, and federal agencies and federally recognized Indian tribes of its availability through their required consultations. Pursuant to Section 106 of the National Historic Preservation Act, TVA consulted with the Tennessee State Historic Preservation Officer (SHPO) and federally recognized tribes requesting concurrence that the proposed SOC would have no effect on cultural resources and that the TL construction would not adversely affect the NRHP-listed Bradford Rymer Stone Barn and the Beaty Cantilever Barn. The SHPO concurred with these determinations by letters dated April 11, 2017, March 1, 2018, and May 17, 2019, and no tribe objected or raised concerns.

## Mitigation

TVA would implement the standard practices and routine BMPs described in the EA to avoid or reduce the potential for adverse environmental effects during the construction, operation, and maintenance of the proposed SOC, TL, and access roads. In addition, non-routine mitigation measures designed to avoid, minimize, or compensate for adverse impacts associated with the proposed activities include:

- Spanning of streams and aquatic habitats potentially suitable for use by the Cumberland bean mussel.
- Integration of BMPs during construction and maintenance to minimize potential impacts to foraging bat habitat as described and in accordance with the Programmatic Biological Assessment for Evaluation of the Impacts of TVA's Routine Actions on Federally Listed Bats.
- A protective buffer of 200-foot-radius would be implemented during TL construction and maintenance activities around the opening of a possible cave observed in the existing TL ROW to prevent vehicle use outside of access roads, herbicide use, and heavy machinery operation.
- To minimize impacts to ground nesting birds, when practicable, mowing within the SOC parcel would be avoided during the height of the breeding season (May 1 to July 15) and would ideally occur before mid-March and after August. Grassland nesting species designated by USFWS as Birds of Conservation Concern in this area are Henslow's sparrow and prairie warbler. Other ground nesting birds in the region include field sparrow, grasshopper sparrow, eastern meadowlark, dickcissel, and northern bobwhite.
- To minimize impacts to wetlands, TVA would implement standard BMPs across all delineated wetlands. This includes the use of low ground-pressure equipment, mats, no rutting greater than 12 inches, dry season work, etc. for access across three delineated wetlands along the proposed TL ROW. TVA would incorporate the mapped wetlands into a sensitive area database to ensure wetland BMPs are implemented during future ROW vegetation maintenance activities within the delineated wetland boundaries.
- To compensate for impacts to wetlands, the USACE and TDEC would require mitigation for the 0.17-acre wetland fill via purchase of wetland credits from Tennessee's approved wetland in-lieu-fee program. Similar jurisdictional authority and compliance measures for the 0.04-acre forested wetland habitat conversion could be required at agency discretion.
- There are currently no stream restoration credits available at local mitigation banks. As such, to compensate for direct impacts to streams identified within the SOC site, TVA would contract with a 3<sup>rd</sup> party to complete a Permittee Responsible Mitigation project scaled to account for 331 Stream Quantification Tool stream credits.

The following measures would be taken to compensate for impacts to prairie habitat at the proposed SOC site:

- Revegetate disturbed areas on the SOC parcel using native or non-invasive species and would not use species identified by the Tennessee Invasive Plant Council as Emerging or Established invasive threats in Tennessee;
- Restore pollinator friendly, prairie habitat on at least 10 acres of currently un-forested land on the SOC parcel using purchased local-genotype native seed and seed collected from the SOC site;
- Maintain restored prairie in the long-term by using selective application of herbicide to control encroachment of woody plants and invasive species and/or by mowing only between November and March 15, unless otherwise approved by the TVA botanist; and
- Demarcate prairie restoration areas using temporary fencing or other comparable methods before work begins to exclude equipment and prevent disturbance during construction.

### Conclusion and Findings

Based on the findings in the EA, TVA concludes that implementing Alternative B – TVA Constructs a New Standalone System Operations Control Center, Gunstocker Creek 161-kV Substation, and Associated 161-kV Transmission Line, would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed