Environmental Assessment
Proposed Deed Amendment for Self-Sufficiency Parcel 2 (SSP-2), Oak Ridge, Tennessee (DOE/EA-2321)

Date Issued—November 2026

U.S. Department of Energy

Oak Ridge Office of Environmental Management

Oak Ridge, Tennessee

DISCLOSURE STATEMENT:
This Environmental Assessment was prepared under the direction and independent evaluation of the U.S. Department of Energy (DOE) pursuant to the National Environmental Policy Act (NEPA) and DOE NEPA Implementing Procedures with support from Navarro Research and Engineering, Inc. and United Cleanup Oak Ridge, LLC, and information aided by Orano Enrichment USA, LLC.

CONTENTS

FIGURES iv

TABLES iv

ACRONYMS AND ABBREVIATIONS v

1.0 INTRODUCTION 1
1.1 BACKGROUND 1
1.1.1 Comprehensive Environmental Response, Compensation, and Liability Act 4
1.1.2 Historical Context of Site 4
1.2 PURPOSE AND NEED 6
1.3 NEPA 7
1.3.1 Related NEPA Evaluations 7

2.0 DESCRIPTION OF PROPOSED ACTION AND NO ACTION ALTERNATIVE 9
2.1 PROPOSED ACTION 9
2.1.1 Description of Site Preparation Activities 11
2.2 NO ACTION ALTERNATIVE 12

3.0 AFFECTED ENVIRONMENT AND POTENTIAL ENVIRONMENTAL CONSEQUENCES 13
3.1 INTRODUCTION 13
3.2 RESOURCES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS 14
3.2.1 Air Resources 14
3.2.2 Noise and Vibration 15
3.2.3 Socioeconomics 17
3.2.4 Waste Management 18
3.2.5 Transportation 18
3.2.6 Infrastructure 19
3.2.7 Public Health and Safety 21
3.3 LAND USE AND VISUAL RESOURCES 22
3.3.1 Affected Environment 22
3.3.1.1 Land Ownership 22
3.3.1.2 Planning 22

3.3.1.3 Zoning 22
3.3.2 Potential Environmental Consequences to Land Use and Visual Resources 23
3.3.2.1 Proposed Action 23
3.3.2.2 No Action Alternative 24
3.3.2.3 Mitigation 24
3.4 ECOLOGICAL RESOURCES 24
3.4.1 Affected Environment 24
3.4.1.1 Vegetation and Habitat 27
3.4.1.2 Fish and Wildlife 27
3.4.1.3 Special Status Species 27
3.4.1.4 Water Resources 31
3.4.2 Potential Environmental Consequences to Ecological Resources 33
3.4.2.1 Proposed Action 33
3.4.2.1.1 Impacts on Vegetation, Habitat, Fish and Wildlife 33
3.4.2.1.2 Impacts on Threatened, Endangered, or Sensitive Species 34
3.4.2.1.3 Impacts on Water Resources 37
3.4.2.2 No Action Alternative 39
3.4.2.3 Mitigation 39
3.4.2.3.1 Special Status Species 39
3.4.2.3.2 Vegetation and Habitat 41
3.4.2.3.3 Water Resources 41
3.5 CULTURAL RESOURCES 42
3.5.1 Affected Environment 42
3.5.1.1 Area of Potential Effect 42
3.5.1.2 Records Review and Previous Investigations 42
3.5.1.3 Phase I Field Survey Findings 43
3.5.1.4 Phase II Field Survey Findings 46
3.5.1.5 Agency and Tribal Consultation 46
3.5.2 Potential Environmental Consequences to Cultural Resources 46
3.5.2.1 Proposed Action 46
3.5.2.2 No Action Alternative 46

3.6 GEOLOGY AND SOILS 47
3.6.1 Affected Environment 47
3.6.1.1 Local Geology 47
3.6.1.2 Soils and Topography 47
3.6.1.3 Seismic Hazard 50
3.6.2 Potential Environmental Consequences to Geology and Soils 51
3.6.2.1 Proposed Action 51
3.6.2.3 Mitigation 52
3.7 REASONABLY FORESEEABLE ACTIONS 52
4.0 CERTIFICATION 53
5.0 REFERENCES 54
APPENDIX A—CORRESPONDENCE A-1
APPENDIX B—BIRD SPECIES LIST B-1
APPENDIX C—REFERENCE PHOTOGRAPHS OF WATER RESOURCES C-1

FIGURES

Figure 1. Proposed Action Location on the Landscape.
Figure 2. Self-Sufficiency Parcel 2.
Figure 3. SSP-2 Tracts and White Wing Scrap Yard.
Figure 4. SSP-2 Location within Oak Ridge Reservation.
Figure 5. Existing Utilities Infrastructure in Vicinity of Proposed Action.
Figure 6. Topographic Map for SSP-2, Tracts 1A and 1B.
Figure 7. Action Area for Proposed Nuclear Facility.
Figure 8. Water Resources on SSP-2.
Figure 9. Jurisdictional Assessment Area for Proposed Nuclear Facility.
Figure 10. Phase I Archaeological Survey Location.
Figure 11. Phase II Archaeological Survey Locations.
Figure 12. Geologic Map of SSP-2.
Figure 13. NRCS Web Soil Survey Map of SSP-2.
Figure C1. Photograph of Wetland I.
Figure C2. Photograph of Wetland K.
Figure C3. Photograph of Wetland J.
Figure C4. Photograph of Wetland G.

TABLES

Table 1. Relevant National Environmental Policy Act Documents.
Table 2. Noise Levels of Common Construction Equipment.
Table 3. Noise Intensity Thresholds in the COR Zoning Ordinance.
Table 4. Special Status Species with Potential to Occur on SSP-2.
Table 5. Federally Listed and Proposed Species Effects Determinations for Proposed Action.
Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed).

ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
APE	area of potential effects
BCC	Birds of Conservation Concern
BCR	Bird Conservation Region
BMC	Birds of Management Concern
BMP	Best Management Practice
CAA	Clean Air Act
CBSD	Common Bird in Steep Decline
CEC	Civil & Environmental Consultants, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
COR	City of Oak Ridge
CPD	Clean Parcel Determination
CRA	Cultural Resource Analysts, Inc.
CWA	Clean Water Act
CX	Categorical Exclusion
DOE	U.S. Department of Energy
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ETTP	East Tennessee Technology Park
FEMA	Federal Emergency Management Agency
HUC	Hydrologic Unit Code
IM	Immediate Management
IPaC	Information for Planning and Consultation
L_{eq}	Equivalent continuous sound level
LiDAR	Light Detection and Ranging
L_{max}	Maximum sound level
MA	Management Attention
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NNSA	National Nuclear Security Administration
NPDES	National Pollutant Discharge Elimination System
NRC	U.S. Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OA	Overly Abundant

ORETTC	Oak Ridge Enhanced Technology Training Center
ORIDB	Industrial Development Board of the City of Oak Ridge
ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
OSHA	Occupational Safety and Health Administration
PIF	Partners in Flight
PR	Planning and Responsibility
RC	Regional Concern
RS	Regional Stewardship
SPCC	Spill Prevention, Control, and Countermeasure
SR 95	State Route 95 / Oak Ridge Turnpike
SSP-2	Self-Sufficiency Parcel 2
STR	Stream
SWPPP	Stormwater Pollution Prevention Plan
TCA	Tennessee Code Annotated
TDEC	Tennessee Department of Environment and Conservation
TNC	The Nature Conservancy
TN SHPO	Tennessee State Historic Preservation Office
tpy	tons per year
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
WOTUS	Waters of the U.S.
WTL	Wetland
WWC	Wet Weather Conveyance
WWSY	White Wing Scrap Yard

1.0 INTRODUCTION

The U.S. Department of Energy's (DOE) mission is to ensure America's security and prosperity by addressing energy, environmental, and nuclear challenges through transformative science and technology solutions. Self-Sufficiency Parcel 2 (SSP-2), in Roane County, Oak Ridge, Tennessee, is located within the 33,000-acre Oak Ridge Reservation (ORR) managed by DOE. In March 2026, DOE transferred ownership of SSP-2 (625.04 acres) to the Industrial Development Board of the City of Oak Ridge (ORIDB) pursuant to a 10 Code of Federal Regulations (CFR) Part 770 request and proposal to allow for future economic development of the property.

The National Environmental Policy Act (Volume 42 of the United States Code [U.S.C.] Section (§) 4321 et seq. [NEPA]) requires that federal agencies evaluate environmental effects of proposed federal actions. DOE's proposed federal action is to amend the deed for SSP-2 to allow for industrial/commercial uses across Tracts 1A and 1B (623.71 acres), including site preparation activities for nuclear development. The U.S. Army Corps of Engineers (USACE) is a cooperating regulatory agency on this Environmental Assessment (EA) for a proposed nuclear facility on the property. Pursuant to Section 404 of the Clean Water Act (33 U.S.C. § 1344 [CWA]), USACE's proposed federal action would be the issuance of a Department of the Army permit for discharge of fill material into Waters of the United States (WOTUS) associated with the development of a proposed nuclear facility and supporting infrastructure on the property.

This EA evaluates potential environmental impacts of DOE and USACE's proposed actions (Proposed Action) in accordance with DOE NEPA Implementing Procedures (July 13, 2026). Following the conclusion of this NEPA evaluation and the potential approval of necessary licenses and permits, further NEPA compliance will be conducted by the U.S. Nuclear Regulatory Commission (NRC) as part of their independent regulatory oversight process for issuing a 40-year license for construction and operation of any nuclear development on the property. DOE, USACE, and NRC conducted joint consultation with the U.S. Fish & Wildlife Service (USFWS) for compliance with Section 7(a)(2) of the Endangered Species Act of 1973 (16 U.S.C. §§ 1531-1544 [ESA]), as amended, for each agency's proposed federal action.

DOE met the responsibilities of DOE NEPA Implementing Procedures Section 2.3.1, by determining the required level of NEPA review, ensuring the scope of analysis and procedural steps were compliant with NEPA and other applicable requirements, conducting government-to-government consultation with Tribes and consultation with other federal agencies, independently evaluating and accepting responsibility for this document's contents, and ensuring that this EA satisfies all requirements of NEPA for the Proposed Action.

1.1 BACKGROUND

The ORR is situated in the Great Valley of East Tennessee between the Cumberland Mountains and Great Smoky Mountains. At approximately 33,000 acres, ORR is a large contiguous area of federal land in the southern Valley and Ridge Physiographic Province in Roane and Anderson counties (ORNL, 2006). Approximately 24,000 acres of the ORR is forestland managed by the Oak Ridge National Laboratory (ORNL) Natural Resources Management Program. The site for

the Proposed Action (SSP-2) is located within the ORR in Roane County, Oak Ridge, Tennessee (Figure 1).



Figure 1. Proposed Action Location on the Landscape.

The DOE Oak Ridge Office of Environmental Management evaluated transfer of SSP-2, pursuant to DOE Order 458.1, *Radiation Protection of the Public and the Environment* (Order), to verify that the authorized limits and requirements of the Order were met. A combination of historical knowledge and radiological surveys completed in 1990 and 2013, resulted in the DOE determination that SSP-2 was not impacted by residual radioactive material and could be released in accordance with the requirements of paragraph 4.k(3)(a) of the Order (DOE, 2025a).

In 2024, DOE received a proposal from ORIDB, pursuant to 10 CFR Part 770, requesting the transfer of the 625.04-acre SSP-2 property (Figure 2). The authority for transfer of SSP-2 was granted in accordance with Section 161(g) of the Atomic Energy Act of 1954 (42 U.S.C. § 2201(g)). SSP-2 was transferred out of DOE ownership to ORIDB via a quitclaim deed in March 2026, with limited allowable uses for the property. Under the conditions of the SSP-2 land transfer and DOE-CX-270776, *Site Characterization and Environmental Monitoring for Self-Sufficiency Parcel 2 Clean Parcel Disposition*, DOE, ORIDB, or a third party can conduct site characterization and environmental monitoring on the property including, but not limited to, ecological, water, and

air quality surveys (DOE, 2025d). There are currently no other allowable uses included on the deed for SSP-2.

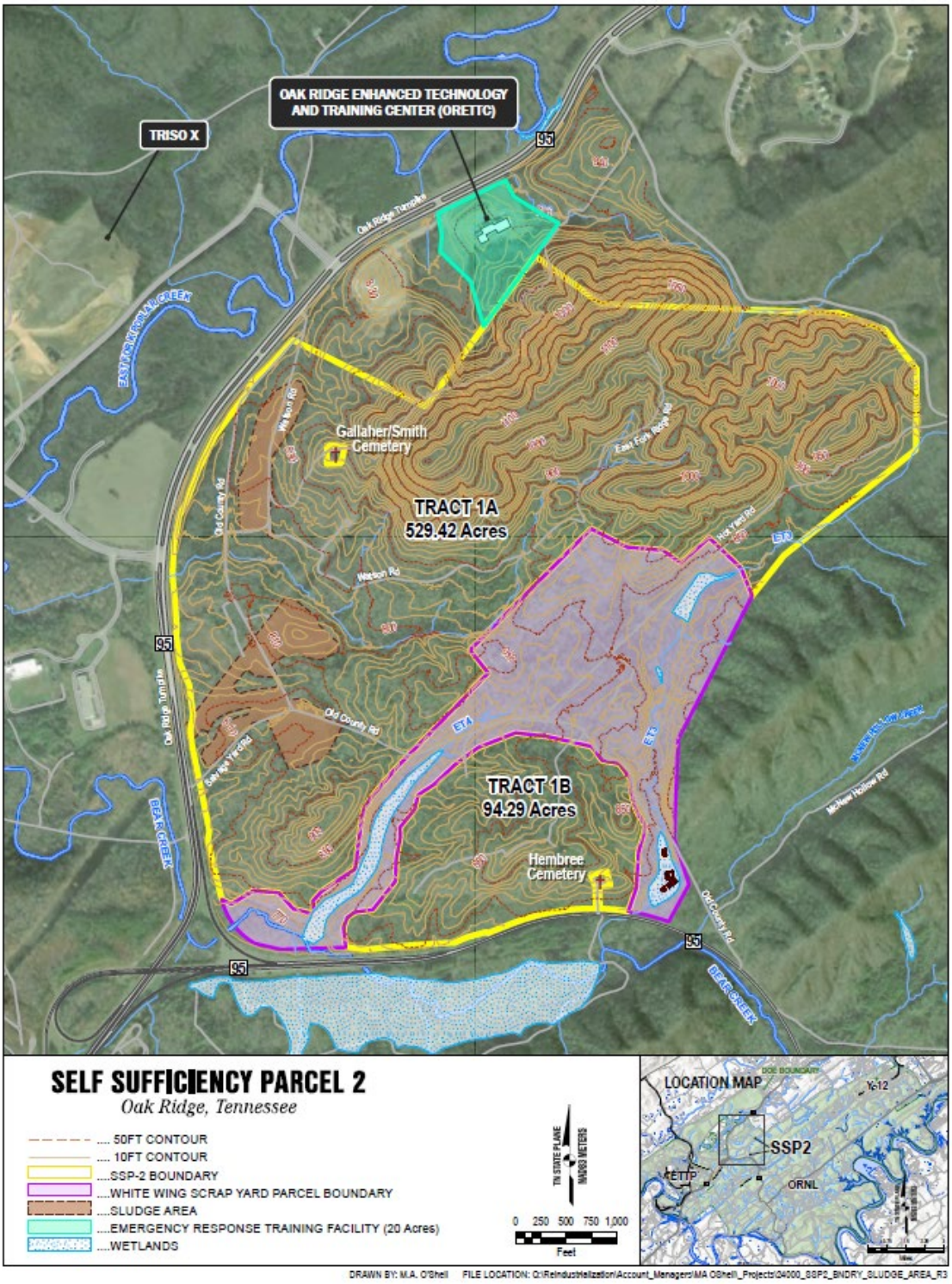


Figure 2. Self-Sufficiency Parcel 2.

1.1.1 Comprehensive Environmental Response, Compensation, and Liability Act

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §§ 9601–9675 [CERCLA]) Section 120(h), any deed entered into for the transfer of real property by the United States to any other person or entity, on which any hazardous substance was stored for one year or more, known to have been released, or disposed of, shall contain a covenant warranting that all remedial action necessary to protect human health and the environment has been taken before the date of such transfer. When site operations have not impacted a property on the Environmental Protection Agency's (EPA) National Priorities List, an Environmental Baseline Survey (EBS) is prepared in accordance with CERCLA Section 120(h)(4) requirements, for regulatory approval.

In 2013, the EPA and the Tennessee Department of Environment & Conservation (TDEC) approved the EBS for SSP-2 declaring the property "uncontaminated" with "No Further Investigation" required. DOE initiated the regulatory approval process to transfer SSP-2, pursuant to CERCLA Section 120(h)(4) in 2024. The parcel transfer did not include the White Wing Scrap Yard (WWSY) area, located between Tracts 1A and 1B, which is being retained by DOE to perform remedial actions under CERCLA. In 2025, DOE prepared the *Environmental Baseline Survey Report for Clean Parcel Determination for SSP-2 in the Vicinity of the East Tennessee Technology Park, Oak Ridge, Tennessee* (DOE/OR/01-2987; DOE, 2025b) and the *Addendum to Environmental Baseline Survey Report for Clean Parcel Determination for Self-Sufficiency Parcel 2 in the Vicinity of East Tennessee Technology Park, Oak Ridge, Tennessee* (DOE/OR/01-3009; DOE, 2025c). On March 27, 2025, the EPA concurred with DOE's determination that SSP-2 satisfied the statutory criteria for identification as uncontaminated and that the transfer of the parcel tracts could be achieved by a Clean Parcel Determination (CPD) per CERCLA Section 120(h)(4)(A).

1.1.2 Historical Context of Site

In 1966, the ORR was identified by The Nature Conservancy (TNC) as having very high ecological significance with relatively intact natural communities (TNC, 1995). TNC's early assessment was based upon the area's large, contiguous forests, diverse vegetation, and relatively undisturbed ecosystems. The ORR is designated as a National Environmental Research Park and International Biosphere Reserve (Dale and Parr, 1998).

SSP-2 was part of the original ORR footprint acquired for the Manhattan Project in 1943 and was previously used for a combination of DOE operations, agricultural purposes, homesteads, and forested buffers. Much of the parcel is heavily forested and includes mixed hardwood habitats, riparian zones, and several intermittent streams and wetlands. Two small historic cemeteries exist within SSP-2 (Tracts 1C and 1D; Figure 3) that will continue to be protected and would not be impacted by the Proposed Action.

WWSY, a major historical DOE legacy area, remains under DOE jurisdiction and was excluded from the CPD boundary and previous land transfers (Figure 3). The CERCLA investigation and remediation of WWSY are ongoing and are summarized in DOE's *Time-Critical Action Memorandum for the Phase 1 Removal Action at the White Wing Scrap Yard*, *Oak Ridge National Priorities List Site, Oak Ridge, Tennessee* (DOE/OR/01-3015&D1). DOE will continue to retain

WWSY, including a buffer zone surrounding the area, to complete remedial actions under CERCLA, and it is not part of the Proposed Action.

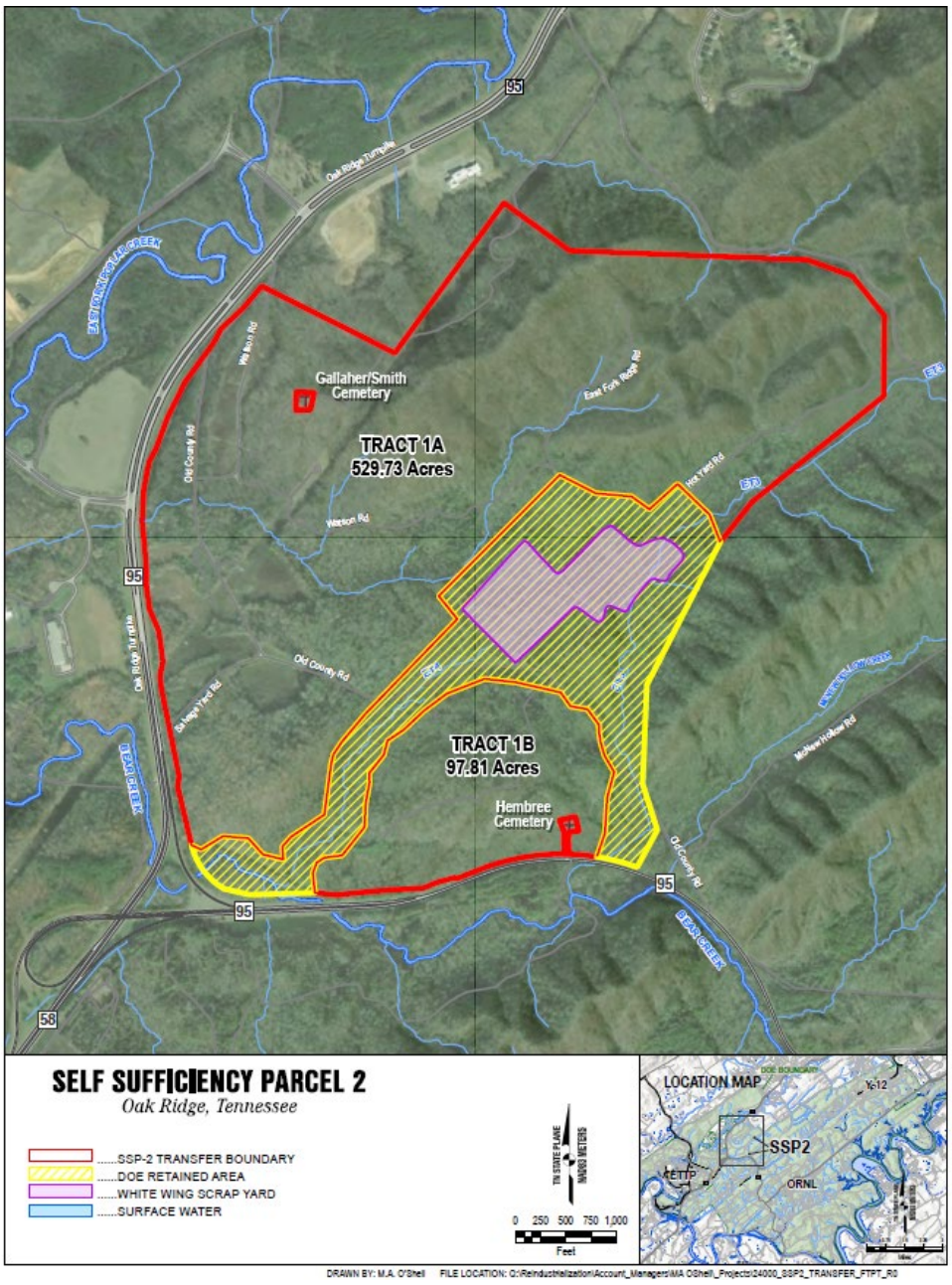


Figure 3. SSP-2 Tracts and White Wing Scrap Yard.

The City of Oak Ridge (COR) operates a publicly owned treatment works, which accepts waste from industrial, residential, and commercial sources. Under a land-license agreement with DOE, the COR has applied municipal biosolids as a beneficial soil application on the ORR since 1983. Applications were carried out under TDEC permits issued to the COR for land disposal of sewage sludge. Anaerobically digested liquid sludge (2-4 percent solids) from the COR had a relatively high nitrogen content (8 percent dry weight) and average to low concentrations of potentially

problematic metals, compared with typical municipal sludges. Few potentially hazardous organic chemicals were detected in the sludge, and when found, these were at very low concentrations. Oak Ridge sludge is somewhat unique in that it contains radionuclides ^{137}Cs, ^{60}Co, ^{131}I, ^{235}U, ^{238}U, ^{90}Sr, and occasionally ^{99}Tc at concentrations much higher than typical municipal sludges. As a result of the presence of radionuclides in the sludge, DOE, the COR, and TDEC established sludge loading rates to avoid the accumulation of radionuclides in soil to levels that might be problematic under future conditions. In 1989, the COR began to limit sludge loading to 10 megagrams per hectare (Mg/ha) [4.4 tons/acre] per year, with a lifetime maximum of 34 Mg/ha (15 tons/acre) dry weight based upon concern for radionuclide accumulation in soils. Subsequent to that, lifetime maximum loading was increased to approximately 49 Mg/ha (22 tons/acre). These loading rates are substantially below sludge loading rates allowed by federal regulations (40 CFR § 503.13), based on metal concentrations in the sludge, and by TDEC regulations, which consider available nitrogen loading.

The Watson Road site, located in the western portion of SSP-2 Tract 1A (See Figure 2, labeled "sludge area"), was a previous sludge application area used by the COR. The Watson Road site underwent a full hydrogeological evaluation prior to use and was found to be suitable for the land application of biosolids by TDEC-Division of Wastewater (letter dated May 8, 1989, from N. R. Harris, State of Tennessee Department of Health and Environment, Division of Water Pollution Control, Knoxville, TN, to J. Robinson, City of Oak Ridge, Oak Ridge, TN). Sludge application at the Watson Road site began in 1990, and continued periodically until 2006, when the COR suspended all sludge application activities. Following the completion of changes to the COR treatment process, minor use of the Watson Road site occurred in 2012, with no subsequent use since then. Over the life of the Watson Road site from 1990 to 2012, hundreds of tons of municipal sewage sludge have been applied to surface soils covering approximately 40 acres of SSP-2 Tract 1A (See Figure 2). Routine monitoring of chemical characteristics of the sludge applied to the site was conducted as part of the application process (*Sludge Application and Monitoring Program on the Oak Ridge Reservation 1986–1993*, ORNL/TM-11601 [ORNL, 1995]). The sum-of-fractions evaluation for the 2010–2014 COR monthly radiological biosolids data is well below 1.0, indicating the radionuclide content of the sludge is well below the allowable limits.

1.2 PURPOSE AND NEED

DOE is responsible for managing lands within the ORR and for ensuring that land transfers comply with the requirements of NEPA and other environmental regulations. The purpose of the Proposed Action is to allow full industrial and commercial utilization of SSP-2, which supports regional economic development and private sector jobs. The need for the Proposed Action arises from the terms of the land transfer under 10 CFR Part 770 and ORIDB's objective to transition underutilized, former DOE property into productive municipal and privately-owned resources. Amending the deed to allow for general industrial and commercial development, including nuclear advancement, provides the necessary real property rights for the COR and ORIDB to advance long-term economic goals while continuing to preserve essential environmental buffers and CERCLA land-use controls.

There is a critical need for low-enriched uranium for fuel production by U.S. commercial nuclear power plants. Forecasts of installed nuclear generating capacity suggest a continuing demand for

uranium enrichment services in the U.S. and abroad. An increasing need for nuclear generating capacity is likely with future projections of significant power needs by major technology companies. There is interest in nuclear power as a potential solution to provide clean, dependable, and safe power supply needs for data center operations. Consequently, deployment of additional nuclear power will require additional fuel enrichment capacity (North American Electric Reliability Corporation, 2026). The growing need for nuclear generation services and infrastructure development offers the potential for SSP-2 to support regional economic development in the form of industrial investment.

1.3 NEPA

NEPA requires federal agencies to consider the potential environmental effects of their proposed actions and alternatives. In accordance with NEPA and DOE's NEPA Implementing Procedures, DOE found that the Proposed Action is not excluded from NEPA and that it cannot apply a categorical exclusion (CX) to the Proposed Action. DOE is preparing this EA to assess whether:

1. the potential environmental effects of the Proposed Action and No Action Alternative would be significant, and
2. whether to prepare an environmental impact statement or a finding of no significant impact.

This EA was prepared to provide sufficient information to support a decision regarding the environmental effects of the Proposed Action. Section 3.2 describes the environmental effects that would not result in significant impacts (DOE NEPA Implementing Procedures Section 3.2) and, thus, are not further analyzed in this EA (DOE NEPA Implementing Procedures Section 6.2(b)(3)). Section 3.3 presents a discussion, by relevant resources, of the current condition of the affected environment and the potential effects of the Proposed Action and No Action Alternative. Section 3.3 focuses only on resources potentially subject to effects and includes a level of detail that is sufficient to determine whether effects are likely to be significant and whether any significant effects can be made non-significant through mitigation (DOE NEPA Implementing Procedures Section 6.2(b)(4)).

1.3.1 Related NEPA Evaluations

In June 2025, DOE completed CX-270776, *Site Characterization and Environmental Monitoring for Self-Sufficiency Parcel 2 Clean Parcel Disposition,* that allowed for the transfer of SSP-2 with limited allowable uses to ORIDB for future economic development. Following the completion of the prior CX, this EA is the next step in a phased approach to NEPA to facilitate the transfer of SSP-2 out of DOE control for industrial and commercial development by evaluating new allowable uses on the parcel.

NRC is developing an Environmental Impact Statement (EIS) to address the potential effects of constructing, operating, and maintaining a nuclear facility on SSP-2. Table 1 provides a brief description of relevant NEPA documents that are relevant to or incorporated by reference into this EA.

Table 1. Relevant National Environmental Policy Act Documents.

Title	Date Published	Relevance
CX-270776: Categorical Exclusion for Site Characterization and Environmental Monitoring for Self- Sufficiency Parcel 2 Clean Parcel Disposition	June 2025	DOE analysis for clean parcel transfer of SSP-2 to ORIDB with limited allowable uses on the deed (DOE, 2025d).
DOE/EA-2144: Final Environmental Assessment and Finding of No Significant Impact for Oak Ridge Enhanced Technology and Training Center (ORETTC)	November 2020	DOE analysis for constructing and operating ORETTC (DOE, 2020).
DOE/EA-1640: Final Environmental Assessment and Finding of No Significant Impact for Transfer of Land and Facilities within the East Tennessee Technology Park (ETTP) and Surrounding Area, Oak Ridge, TN	October 2011	DOE analysis for conveyance of property located at ETTP and surrounding area for mixed use economic development (DOE, 2011).

2.0 DESCRIPTION OF PROPOSED ACTION AND NO ACTION ALTERNATIVE

2.1 PROPOSED ACTION

The Proposed Action is for DOE to amend the SSP-2 deed to allow for industrial/commercial uses across Tracts 1A and 1B (623.71 acres) of the property, and for USACE to issue a permit for the discharge of fill material into WOTUS for a potential future nuclear facility on the parcel. The Proposed Action also includes preliminary site preparation activities for potential nuclear development that are not included in NRC's 10 CFR § 70.4 and 10 CFR § 40.4 definitions of "construction."

Reasonably foreseeable uses on SSP-2 have been developed to bound the analysis in this EA. The industrial uses considered for the Proposed Action require a Board of Zoning Appeals permit in the COR Zoning Ordinance, Industrial Districts. Additional commercial uses are those included in the Zoning Ordinance, Unified General Business Districts. Clearing, grading, and other site preparation activities may be necessary for many of the permitted uses listed below. These uses could include, but are not limited to, the following:

- Light to heavy processing, manufacturing, assembly, and fabrication plants, excluding slaughtering plants and paper or pulp mills;
- Public utility facilities with or without storage yards;
- Storage, wholesaling, distribution, warehousing, including shipping and freight terminals, and related facilities;
- Research and testing facilities, including renewable and advanced energy, industrial, and scientific research laboratories that include incidental pilot plant processing operations;
- Administrative, technical, and professional offices;
- Storage facilities for materials such as, but not limited to, salt, switch grass, other alternative fuel feedstocks, coal, coke, building material, sand, gravel, stone, lumber, and enclosed or open storage of construction contractors' equipment and supplies;
- Waste treatment facilities, including nonhazardous waste recycling centers, hazardous and mixed waste treatment for shipment to off-site storage and disposal facilities;
- Recycling operations, including those for radioactively contaminated materials and those associated with metal and other material treatment and processing;
- Bulk oil and gasoline storage or bulk storage of natural gas;
- Power plants, including renewable energy generation;
- Broadcasting, publishing, recording, and telecommunications;
- Nuclear power or other facilities; and
- Commercial uses, including restaurants and service establishments such as, gas station/convenience store, bank, post office/mailing/shipping center, copying/printing,

bulk cleaning and laundry, cold storage lockers, furniture and carpet warehouses, car washes, equipment and appliance repair, vehicle service centers etc.

Because the precise future uses of the property are not currently known, this analysis evaluates reasonably foreseeable potential industrial and commercial uses that could occur after the deed is amended, including nuclear development. Future development and new allowable uses could have potential for environmental effects on the property. This analysis evaluates two scenarios: (1) effects of future industrial and commercial uses across Tracts 1A and 1B (623.71 acres) of SSP-2; and (2) project-specific impacts from site preparation activities for a nuclear facility across approximately 188 acres of the property. To estimate the maximum potential environmental impact where specific end-users and site plans are unknown, this analysis applies conservative assumptions based on allowable parameters under the COR zoning ordinances.

In this EA, reasonably foreseeable land uses and their associated environmental effects are addressed. This analysis is based on allowable industrial and commercial uses that would be compatible for the property. Assumptions for property uses are based on the types of businesses that are currently operating nearby, including the ETTP, industrial parks (e.g., Bethel Valley Industrial Park), and those proposed for the Horizon Center, an industrial/business park located adjacent to SSP-2. The potential uses for SSP-2 would complement the industrial base being developed at the ETTP and the Horizon Center by providing related business-support needs. Based on information about the allowable property uses, assumptions were developed for potential emissions, effluents, waste streams, services, and infrastructure. Technical experts analyzed the potential for adverse impacts to resources and defined commonly used measures to reduce or mitigate potential impacts. The analysis for this EA assumes that potential future land uses would be compatible with other non-DOE uses in the surrounding area. The uses would also be compatible with other ongoing DOE missions and activities. DOE based the analysis in this EA on the following assumptions:

- The COR would review development plans to ensure compliance with all applicable zoning ordinance requirements and other engineering-related ordinances and standards.
- Construction activities involving ground disturbance would be conducted incrementally, where possible, to limit the potential for soil erosion. State and federal stormwater regulations requiring the minimization of erosion and sedimentation would be met. As applicable, notification of any disturbance would be made to the appropriate authorities prior to construction activities.
- Sensitive resources, including cultural resources, would be protected, as necessary, through deed restrictions and compliance with all applicable local, state, and federal regulations.
- Future occupants of the property may include companies engaged in the handling or use of radioactive materials and other radiological operations. Any such companies would be required to obtain all necessary permits and licenses, including radiological licenses from NRC. All required analyses would be conducted to ensure that members of the public are protected, including DOE and contractor employees.

- Certain uses, especially those that would require permits or licenses for construction and/or operation (e.g., power plant), could require additional environmental review that would be performed by the applicable permitting agency.
- Conveyances would comply with CERCLA Section 120(h) requirements and any applicable land use controls.
- Future owners and/or occupants of the property would be responsible for obtaining any applicable federal, state, and local permits and licenses for activities and operations at their facilities (e.g., building permits, permits for air emissions, industrial wastewater discharge permits, Resource Conservation and Recovery Act of 1976 permits, etc.).
- No portion of SSP-2 will be used for residential housing, elementary or secondary schools, or any childcare facility or children's playground, as specified in the property deed.

2.1.1 Description of Site Preparation Activities

Site preparation activities are necessary for a variety of the reasonably foreseeable permitted uses listed above. These activities primarily include, but are not limited to, geotechnical investigations, compaction of earth backfill to establish required building elevations, excavation for the installation of concrete foundations/footings, site clearing, vegetation management, utility installation, and grading. All grading, clearing, road construction, and utility extensions would be required to comply with COR engineering standards, TDEC stormwater regulations, and local building codes. In the event that a potential occupant proposes a facility subject to federal licensing (such as an NRC-licensed facility), any site-specific activities associated with that licensing action would be subject to the respective agency's independent regulatory review, safety analysis, and NEPA compliance.

For nuclear power or other facilities, NRC is the federal agency that regulates the nation's civilian use of radioactive materials and would be responsible for licensing the construction and operation of any nuclear facility on the property. NRC's definition of "construction" in 10 CFR § 70.4 and 10 CFR § 40.4 does not include specific activities that lack radioactive material handling. Activities that have no reasonable nexus to radioactive material handling purposes are excluded from NRC's definition of construction. These exclusions include the following:

- Site exploration, including necessary borings, to determine foundation conditions or other pre-construction monitoring to establish background information related to the suitability of a site, the environmental impacts of construction or operation, or the protection of environmental values;
- Preparation of a site for construction of a facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;
- Erection of fences and other access control measures that are not related to the safe use or security of radiological materials subject to licensing;
- Excavation;

- Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of a facility;
- Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewage treatment facilities, and transmission lines);
- Procurement and fabrication of components or portions of a facility occurring at other than the final, in-place location of a facility; or
- Taking any other action that has no reasonable nexus to radiological health and safety or common defense and security.

The Proposed Action includes allowance of preliminary site preparation activities that would occur prior to issuance of an NRC license for construction and operation of any nuclear facility on the property. If NRC decided to proceed, a license would be issued following the completion of an EIS and issuance of a Record of Decision. It is permissible to initiate site preparation activities prior to NRC issuing a license, because the aforementioned actions have no radiological nexus to health, safety, or common defense and security (10 CFR Part 52).

2.2 NO ACTION ALTERNATIVE

The No Action Alternative provides an environmental baseline for comparison with the impacts of the Proposed Action and is required under NEPA and DOE NEPA Implementing Procedures. Under the No Action Alternative, the Proposed Action would not occur. Potential environmental impacts that would result from implementation of the Proposed Action and No Action Alternative are presented in Chapter 3.0, *Affected Environment and Potential Environmental Consequences*.

3.0 AFFECTED ENVIRONMENT AND POTENTIAL ENVIRONMENTAL CONSEQUENCES

In accordance with NEPA, this section of the EA describes the affected environment and potential consequences of the Proposed Action, as defined in Section 2.1, *Proposed Action*, and the No Action Alternative, as defined in Section 2.2, *No Action Alternative*.

3.1 INTRODUCTION

The ORR spans approximately 33,000 acres and lies within the Southern Appalachian region, characterized by parallel ridges (Cumberland Mountains to the west, Great Smoky Mountains to the east), creating strong topographic influences on hydrology, vegetation, and climate. The region has a humid subtropical climate with an average annual temperature of 57.3°F, with the coldest temperatures in January and the warmest temperatures typically in July. The site for the Proposed Action (SSP-2) is on the northwestern portion of the ORR near State Route 95 (SR 95)/Oak Ridge Turnpike in Roane County, Oak Ridge, Tennessee (Figure 4).

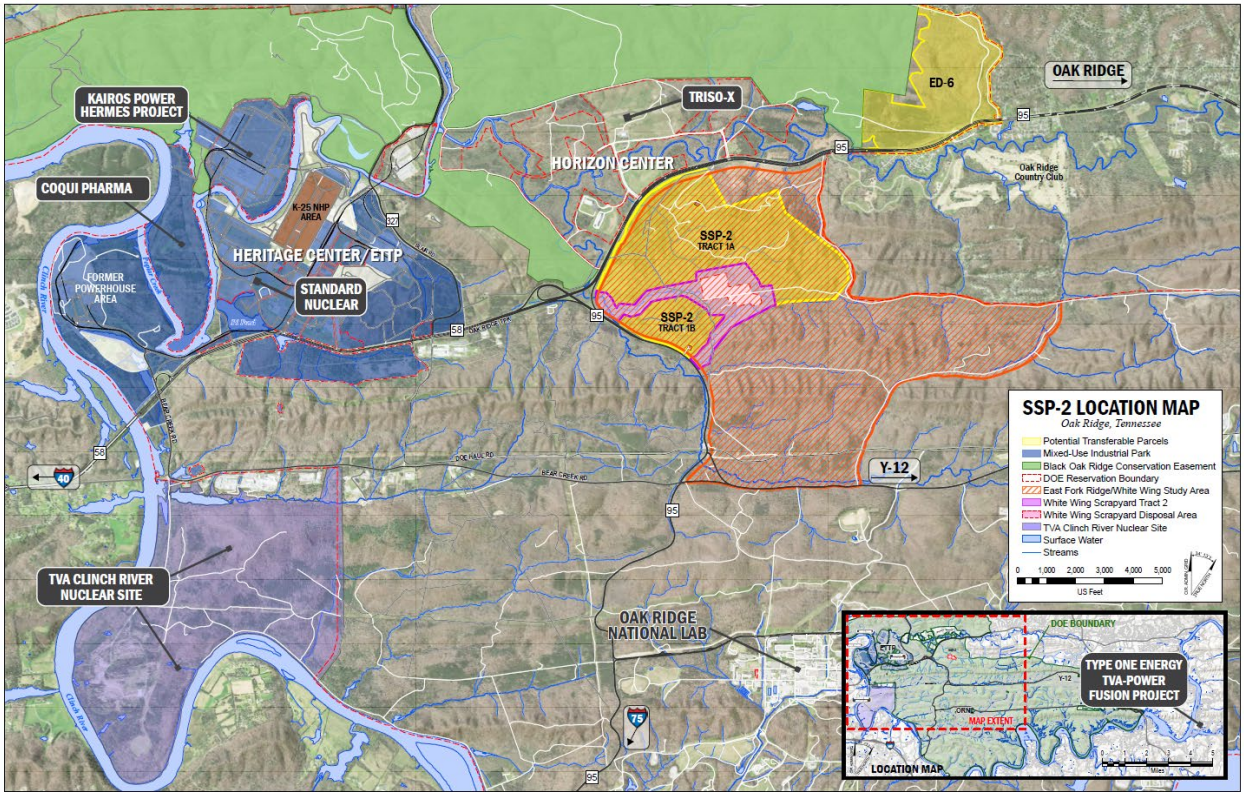


Figure 4. SSP-2 Location within Oak Ridge Reservation.

SSP-2 is currently undeveloped, heavily forested, and accessed by gravel roads and one abandoned roadway. Elevations range from ~800 feet above mean sea level (AMSL) near SR 95 up to ~1,100 feet AMSL in the northern portion of the parcel. SSP-2 is 625.04 acres in size and is divided into four tracts of land, Tract 1A (529.42 acres), Tract 1B (94.29 acres), Tract 1C (0.65 acres [Gallaher (Smith) cemetery]), and Tract 1D (0.68 acres [Hembree cemetery]). Tracts 1A and 1B are geographically separated by a tributary that is currently retained by DOE as part of the WWSY. The Proposed Action would allow for industrial and commercial uses across the entirety of Tracts 1A and 1B (623.71 acres), including site preparation for a proposed nuclear development.

3.2 RESOURCES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

3.2.1 Air Resources

Pursuant to the Clean Air Act (CAA), the EPA develops, implements, and enforces national air pollution control programs. The CAA directs the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and welfare, to prevent visibility impairment, and to prevent damage to animals, crops, vegetation, and buildings. The EPA has NAAQS for the following criteria air pollutants: carbon monoxide, lead, ozone, nitrogen dioxide, coarse particulate matter with diameters less than 10 micrometers (PM_{10}), fine particulate matter with diameters less than 2.5 micrometers ($PM_{2.5}$), and sulfur dioxide (EPA, 2025). The State of Tennessee enforces compliance with the CAA through comprehensive air emissions standards through its Air Pollution Control Regulations and the State Implementation Plan approved by EPA Region 4. The TDEC Division of Air Pollution Control Board establishes emission standards and procedural requirements to regulate industries in the state through the issuance of construction and operating permits.

As defined in the CAA, EPA issues designations indicating whether an area violates a NAAQS or contributes to a violation in a neighboring area. An attainment area is defined as a geographic area that meets the NAAQS. EPA designates a nonattainment area if air quality monitoring shows that it violates the NAAQS for a given criteria pollutant. A nonattainment area can be redesignated as an attainment area if it demonstrates compliance and adopts an approved maintenance plan showing attainment for at least 10 years (i.e., maintenance area). Roane County, the location of the Proposed Action, is a maintenance area for $PM_{2.5}$ and ozone standards, but it is currently in attainment for all NAAQS criteria pollutants (EPA, 2026).

Site clearing and grading with heavy equipment for industrial and commercial development would result in combustive emissions ($PM_{2.5}$ and nitrogen oxides) and fugitive dust ($PM_{2.5}$ and PM_{10}). However, development activities would be phased and localized, and air concentrations of criteria pollutants from vehicle emissions and fugitive dust would remain below the NAAQS. Construction contractors would implement BMPs to minimize the generation of fugitive dust (e.g., applying water and water-extender solution to suppress dust). Any on-site temporary diesel generators would comply with applicable EPA and TDEC air emissions limitations.

Potential impacts to air resources from site preparation and construction for industrial/ commercial facilities would be short-term, sporadic, and localized (except for emissions associated with the personal commuter vehicles of construction workers and trucks hauling construction materials and

equipment). Dispersion would decrease concentrations as distance from the construction site increases. The quantities of air pollutants produced by vehicles and equipment associated with construction would not contribute substantially to the total emissions from mobile sources already operating in the area and would not be expected to adversely affect local air quality.

Specific details about atmospheric pollutants that may be emitted by potential industrial facilities on the property are unknown at this time. However, the types of commercial businesses and industries recruited to the site could produce air emissions (e.g., volatile organic compounds [VOCs], particulates, etc.) typical of standard industrial and commercial operations. Any new stationary source with the potential to emit more than 100 tons per year (tpy) of any regulated air pollutant, 10 tpy of any single hazardous air pollutant, or 25 tpy of any combination of hazardous air pollutants is considered a major source. Major sources of air emissions typical of heavy industries would be required to obtain a Title V construction and subsequent operating permit. Operators of potential major pollutant sources may elect to operate under a non-Title V permit as a synthetic minor source by accepting legally enforceable operational or emission limits to maintain emissions below major source thresholds. New facility operations that are minor sources of air contaminants would be required to obtain non-Title V construction and subsequent operating permits from TDEC. The terms and conditions of Title V and non-Title V operating permits would include emission limits and outline specific monitoring, operating conditions, and recordkeeping requirements for the source.

All required permits would be obtained prior to construction and operation of newly developed areas on SSP-2. Impacts on air resources from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document. The NRC regulatory process would prevent violations of air quality standards and mitigate the potential for adverse air quality impacts.

3.2.2 Noise and Vibration

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Sound level is described using the decibel (dB), a logarithmic unit of measure. The human ear responds differently to sounds depending on frequencies. A-weighted dB (dBA) approximates a frequency response expressing the perception of sound by humans. Noise-producing activities associated with the Proposed Action on the property would consist of construction activities and local traffic, similar to levels experienced at other industrial or commercial sites. Most nonconstruction noise would be contained within the potential facilities operated on the property.

Sounds can be described using their maximum sound level (L_{max}). For construction equipment, the L_{max} would be experienced while the equipment is operating at full power. Equivalent continuous sound level (L_{eq}) is the steady sound level that contains the same total energy as a fluctuating sound over a specified period. L_{max} generated by common equipment used in site preparation and construction are included in Table 2, at a reference distance of 1,000 feet (Federal Highway Administration, 2006). At this distance, the L_{max} generated by the equipment types listed would be 64 dBA with an L_{eq} of 64 dBA if all equipment types were running simultaneously.

Table 2. Noise Levels of Common Construction Equipment.

Equipment Type	L_{max} at 1000ft (dBA)
Crane	55
Dozer	56
Dump truck	50
Excavator	55
Forklift	49
Front end loader	53
Concrete saw	64
L_{eq} during workday hours at 1,000 ft (Total)	**64**

The Noise Control Act of 1972 (42 U.S.C. § 4901 et seq) directs federal agencies to comply with applicable federal, state, and local noise control regulations. Neither the state of Tennessee, nor Roane County, currently maintain noise ordinances that set strict not-to-exceed levels. However, the EPA provided information suggesting that continuous and long-term noise levels in excess of 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals (EPA, 1974).

Industrial uses that involve processing, manufacturing, assembly, and fabrication plants would likely contribute more noise than commercial uses such as offices or storage and warehousing facilities. While the area directly adjacent to SSP-2 is primarily industrial or forested land, there are several low-density residential areas beyond the parcel bordering the northeast property line. If future industrial or commercial uses are conducted in the northeast portion of the property, the distance of a potential noise source to a residential receptor would be approximately 1,500 feet. Private owners or future developers of the property would be subject to complying with the L_{max} limits for any operations adjacent to various uses as mandated in the COR Zoning Ordinance (Table 3).

Table 3. Noise Intensity Thresholds in the COR Zoning Ordinance.

Adjacent Use	Daytime L_{max} (dBA)	Nighttime L_{max} (dBA)
Residential	80	75
Business	80	80
Industrial	80	80

Note: The daytime duration for noise restrictions adjacent to residential use is from 7a.m. - 10 p.m., and the nighttime duration is from 10p.m. to 7a.m. The daytime duration for noise restrictions adjacent to business and industrial uses is from 7a.m. - Midnight, and the nighttime duration is from Midnight to 7a.m.

Vibration and noise may impact wildlife and result in fleeing from an area during site preparation or construction activities. Some species may abandon territories or foraging grounds when noise and vibration levels exceed natural background levels (Shannon et al., 2015). Anticipated L_{max} for site preparation or construction activities would be short-term, remain below the recommended threshold for noise-sensitive uses, and be buffered by forestland.

Impacts from noise and vibration from ongoing industrial and commercial facilities would be mitigated via Occupational Safety and Health Administration (OSHA) standards for workers (29 CFR § 1910.95). On June 29, 2026, OSHA's Regional Office in Birmingham, Alabama, working with the OSHA Nashville Area Office, confirmed that the Tennessee Occupational Safety and Health Administration has authority and assumed coverage over occupational safety and health of SSP-2. Noise and vibration impacts from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document. Any potential industrial/commercial development on SSP-2 would be required to follow all local, state, and federal regulations for the analysis and/or amelioration of noise and vibration impacts, as applicable; therefore, these impacts are not considered further in this EA.

3.2.3 Socioeconomics

Socioeconomic considerations include the labor market, general population, housing, public services, and personal income. Site preparation or construction activities associated with potential industrial or commercial development would require a temporary workforce ranging from 50 to 120 personnel during peak grading, excavation, and utility installation. This workforce would be hired primarily from the surrounding Roane and Anderson County labor markets. Because workers would commute from within the existing commuter shed, site preparation and construction activities would not result in an increase of permanent residents, would not create demands on local housing markets or public schools, and would have no adverse effects on municipal public safety services. Local purchases of fuel, materials, and daily contractor expenditures (e.g., food, retail) would generate a short-term, minor benefit to the local economy.

While tenants for the remaining use of SSP-2 are not yet identified, reasonably foreseeable future development within the allowable industrial and commercial zoning designations would produce long-term, beneficial socioeconomic impacts. Industrial and commercial development across the parcel would create sustained direct employment opportunities in manufacturing, warehousing, scientific research, and commercial services. Transitioning the property from tax-exempt federal ownership to private ownership and leaseholds via the ORIDB would generate recurring property tax revenues, sales taxes, and local business tax collections for Roane County and the COR. The indirect impacts associated with industrial and commercial development would depend on the specific industry and the extent to which the region of influence could supply the goods and services that those industries would use. Changes in regional income would depend on the potential wages but would likely be proportional to the amount of new direct jobs.

The Proposed Action would not trigger significant socioeconomic shifts in employment, population, housing demand, or the need for new public services; therefore, these impacts are not considered further in this EA. Socioeconomic impacts from the construction, operation, and

maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document.

3.2.4 Waste Management

Waste management impacts associated with the Proposed Action are expected to be non-hazardous, routine in nature, and managed under existing, pre-approved site protocols. The Tennessee Solid Waste Disposal Act (Tennessee Code Annotated § 68-211-101 et seq.) is the state's primary statute governing the management, disposal, and regulation of solid waste. It is administered by TDEC through its Solid Waste Program. TDEC regulates all aspects of storage, collection, transportation, and disposal of solid waste, including the regulation of composting facilities. Excavated soils would likely be used as fill for site preparation and woody wastes would be sent off for recycling, burned, or chipped to use as mulch on-site; therefore, these materials would not be expected to impact solid waste resources.

Activities, such as clearing and grubbing, would generate non-hazardous land debris (e.g., vegetation, soil, and wood). The non-hazardous waste would be disposed of at a local, permitted sanitary landfill or a landfill permitted solely for construction-type debris. All debris would be managed in accordance with TDEC's regulations and BMPs; therefore, these impacts are not considered further in this EA. Waste management impacts from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document.

Although the potential reasonably foreseeable operations from industrial and commercial development are currently unknown, waste production likely would be similar to amounts experienced at other industrial or commercial sites. Depending on the nature of future development, industrial facilities would have the potential to generate hazardous waste. All generators of hazardous waste would be required to meet all applicable laws and obtain any required permits. Hazardous waste would be disposed at a permitted treatment and disposal facility, while non-hazardous waste would be disposed of at a permitted sanitary landfill. Any potential future development on SSP-2 would be required to follow all local, state, and federal waste management laws and regulations.

3.2.5 Transportation

SSP-2 is bordered by SR 95 (Oak Ridge Turnpike) to the west, which currently provides the only access points to the parcel. Based on heat maps for January-March 2025 from the *Oak Ridge Police Department Crime and Traffic Analysis*, the roadways surrounding SSP-2 have fewer crashes, call-in traffic complaints, and traffic stops compared to other roadways in Oak Ridge (Oak Ridge Police Department [ORPD], 2025). Temporary increases in traffic and equipment deliveries would occur during site preparation or construction phases for the proposed industrial/commercial uses. Any new access road entrances would require a permit via the Tennessee Department of Transportation. Transportation activities related to construction activities are expected to result in limited atmospheric releases from motor vehicles. The transport of materials and equipment associated with industrial/commercial development of SSP-2 would be over regional and local roadways to the site. The additional amount of vehicle and truck traffic from operations associated with the new development would have a negligible effect on existing traffic since the affected roadways

presently have sufficient design capacity. A minor increase in the amount of traffic should also not substantially increase the chance of accidents occurring. Installing turn lanes, additional traffic signals, and frontage roads could mitigate these types of potential impacts, if necessary. Transportation impacts from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document. No significant long-term transportation impacts are expected from the Proposed Action. Any potential future development on SSP-2 would be required to follow all local, state, and federal laws and regulations related to transportation, as applicable.

3.2.6 Infrastructure

Infrastructure includes electricity, domestic water (potable and fire), natural gas, wastewater, stormwater, and communications in the immediate area of the Proposed Action. The Tennessee Valley Authority (TVA) generates electric power for the region. Most residences and businesses receive their power through distribution companies that purchase wholesale power from TVA. The COR operates its own electric utility, and provides natural gas, water, and wastewater services to the area. The Oak Ridge Stormwater Management Ordinance provides design requirements to follow for stormwater control. Ordinances within the COR require runoff and rainfall stormwater mitigation. All stormwater runoff from developed areas on-site for industrial and commercial use would be required to be managed. The existing utilities infrastructure in the vicinity of SSP-2 is shown in Figure 5.

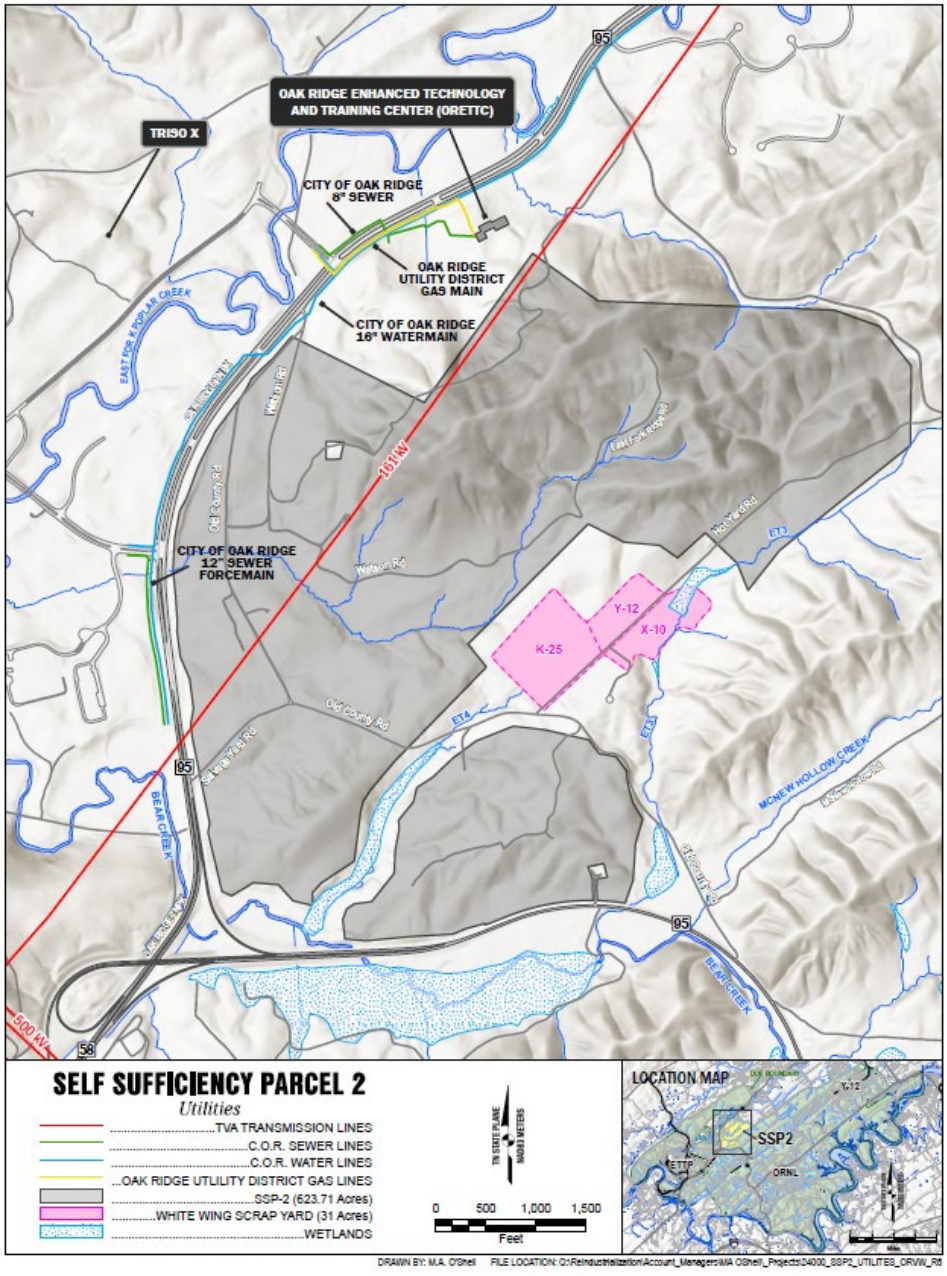


Figure 5. Existing Utilities Infrastructure in Vicinity of Proposed Action.

Underground utilities and storage tanks may be installed to support future development of the parcel. The storage tanks may be used for emergency generator fuel (diesel), process-related chemicals, or stormwater attenuation. Installation of the tanks would involve excavation and placement of reinforced concrete pads or engineered bedding, and integration of leak detection and secondary containment systems.

The following utility connections would likely be required for industrial/commercial development:

- Connection to the COR municipal water distribution system and Publicly Owned Treatment Works;
- Connection to COR municipal natural gas line;
- Connection to existing electrical lines at relocated COR Electric Department/TVA substation; and
- Connection to telecommunication/fiber optic lines, including potential relocation of fiber optic lines.

The aforementioned activities would utilize backhoes, excavators, and trenchers for digging utility runs and may require front-end loaders for backfilling material and plate compactors or "jumping jacks" to ensure soil stability around the pipes and tanks. Cranes or boom trucks would be used to lower storage tanks into position.

Reasonably foreseeable future industrial/commercial uses would result in incremental increases in utility usage. However, there is currently sufficient capacity to meet the demand, and continued improvements in the local and regional utility systems would offset or accommodate any potential utility use increases. Potential individual projects would likely be implemented in phases over the course of several years, thus enabling the utilization of new, more energy-efficient technologies to minimize energy consumption and to provide utility systems sufficient opportunity to meet demand through upgrades and improvements. The cumulative impact on local and regional infrastructure is expected to be minimal. BMPs and regulations would be implemented for installation of utilities and supporting structures; therefore, infrastructure impacts are not considered further in this EA. Infrastructure impacts from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document.

3.2.7 Public Health and Safety

The review of potential human health and safety impacts from the Proposed Action includes public and occupational health, and potential accident scenarios. The activities under the Proposed Action would not involve radioactive material or nuclear safety-related systems, and no safety-related structures would be built. Prior to work being performed, hazard identification and risk assessments would be conducted for all industrial/commercial development activities in accordance with OSHA (29 CFR § 1926.20), EPA, TDEC, and other applicable regulatory standards.

Potential accidents associated with future industrial and commercial facilities could result from equipment malfunction, operator error, or from natural disasters (e.g., flooding, fires, earthquakes, etc.). Potential hazards that may be encountered during facility operation could include flammable materials; kinetic, electrical, or stored energy; toxic, corrosive, or reactive materials; and sources of radiation. Future workers would receive all required and applicable training necessary to safely comply with OSHA standards.

Impacts to public and occupational health and safety from the Proposed Action would be mitigated with appropriate safety equipment and procedures; therefore, health and safety impacts are not considered further in this EA. Public health and safety impacts from the construction, operation,

and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document. Any potential future development on SSP-2 would be required to follow all local, state, and federal regulations for public health and safety, as applicable.

3.3 LAND USE AND VISUAL RESOURCES

3.3.1 Affected Environment

The Proposed Action encompasses Tracts 1A and 1B (623.71 acres) of SSP-2. Tracts 1C and 1D are historic cemeteries, and they would not be impacted by the Proposed Action. The current allowable land uses on the deed are limited to site characterization and environmental monitoring activities. If approved, the deed amendment would allow for industrial/commercial uses on the property, including potential future development and site preparation activities for a proposed nuclear facility.

The entire ORR, which includes SSP-2, was designated a National Priorities List site under CERCLA by EPA in 1989. As described above, SSP-2, the site for the Proposed Action, has been determined to be uncontaminated under CERCLA 120(h)(4). More specifically, the site has not had hazardous substances stored on it for one year or more, has not been known to have any hazardous substance released/spilled on it, and has not been used to dispose of any hazardous substance. According to the EBS conducted in 2013, DOE identified no evidence of past activities involving hazardous substances prior to federal land acquisition. Post-acquisition activities have primarily included ecological and environmental studies that resulted in no unacceptable contamination, though other areas outside the proposed site (e.g., WWSY) have been environmentally contaminated by activities involving hazardous substances. DOE determined the parcels satisfy the statutory criteria for identification as uncontaminated by hazardous substances (DOE, 2013).

3.3.1.1 Land Ownership

SSP-2 is located within the ORR in Roane County, Oak Ridge, Tennessee. The entire 625.04-acre parcel was previously transferred from DOE ownership to the ORIDB for economic development in March 2026. DOE will continue to retain ownership of the WWSY, which was not included in the 625.04-acre transfer.

3.3.1.2 Planning

According to the *City of Oak Ridge Comprehensive Plan*, adopted June 8, 2026, the Future Land Use Map codes SSP-2 for industrial use. The plan states that: “The industrial land use designation accommodates light and heavy industrial uses, including manufacturing, warehousing, logistics, and research facilities. These areas are intended for high-intensity operations that may generate noise, traffic, or other impacts” (COR, 2026a).

3.3.1.3 Zoning

Currently, SSP-2 is zoned for "Federal Industry and Research" per the *City of Oak Ridge Zoning Map* (COR, 2026b), which is the standard zoning for federally owned land. However, with the transfer of this property to ORIDB, a zoning change would be required for SSP-2 for the industrial and commercial uses considered in this EA. Any necessary zoning district designations would be subject to the COR Regional Planning Commission recommendations and City Council classification, which may include a Board of Zoning Appeals permit, public hearings, and other applicable laws and regulations.

3.3.2 Potential Environmental Consequences to Land Use and Visual Resources

3.3.2.1 Proposed Action

Approximately 25,000 of the ORR's roughly 33,000 acres have remained undeveloped in a relatively natural state. Approximately 20,000 of the 25,000 acres were designated a DOE National Environmental Research Park (NERP), an international biosphere reserve, and part of the Southern Appalachian Man and the Biosphere Cooperative. At the time of initial acquisition in the 1940s, the landscape was primarily agrarian in nature and about 50 percent forested. In 1994, remote-sensing analyses revealed an expansion of forest cover to about 70 percent of the ORR (Mann et al. 1996).

The Proposed Action would change the allowable land uses on the deed to include industrial/commercial development for the entirety of Tracts 1A and 1B of SSP-2. Extensive industrial or commercial development would create the greatest change to the visual character of the property. The visual character of the property could change from a more natural to a more man-made-looking environment. This change would only occur for those uses that would require extensive industrial or commercial development. Visual resource impacts from construction, operation, and maintenance of for any nuclear development will be analyzed by NRC in an EIS. Any potential future development on SSP-2 would be required to follow all local, state, and federal regulations for visual resources, as applicable.

Land development activities would change the current land use characteristics on-site by clearing trees, excavating and grading soils, installing structural and stormwater countermeasures, and constructing access/egress roads. The Proposed Action would transition SSP-2 from a primarily undisturbed environment to a site with infrastructure capable of supporting a proposed nuclear facility and other future industrial/commercial development on the parcel.

Clearing and grading of the land for development could increase erosion potential on steep slopes within SSP-2. Excavation for building pads and stream reconfiguration would disturb soils and require engineered controls. Long-term impacts include permanent conversion of forested land to a built environment, reducing available habitat for wildlife and plants. For future industrial and commercial developments on the remaining area of Tracts 1A and 1B, specific engineering layouts would be prepared by developers and submitted to the COR for site plan review. Future development across the remainder of the parcel would be required to avoid delineated wetlands and stream channels to the extent practicable, preserve required riparian buffers, adhere to deed covenants prohibiting groundwater extraction, comply with local stormwater quantity and quality detention ordinances, and obtain all necessary CWA Section 404/401 and other applicable environmental permits prior to initiating ground disturbance.

Overall, the Proposed Action is not anticipated to result in significant impacts to resources in the region. The Proposed Action would be consistent with the *City of Oak Ridge Comprehensive Plan's* industrial uses identified for the parcel. Land use impacts from the construction, operation, and maintenance of any nuclear development would be subject to NRC regulations and licensure and would be analyzed by NRC in a separate NEPA document. Any future development on SSP-2 would consider the results of the CERCLA 120(h) reviews, adhere to applicable Oak Ridge zoning requirements, and require the property owner to obtain applicable construction and operating permits and licenses.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The current allowable uses on the deed would not change, and no industrial or commercial development would occur on SSP-2. There would be no impacts from changing land use and subsequent site preparation activities associated with development.

3.3.2.3 Mitigation

There are no additional land use mitigation measures to evaluate for this EA beyond the required local, state, and federal regulatory requirements.

3.4 ECOLOGICAL RESOURCES

Ecological resources include plant and animal species, habitats, and land and water processes within and adjacent to SSP-2, which is defined as the area directly or indirectly affected by the Proposed Action, as described in Section 2.1, *Proposed Action*. For the purposes of this EA, "Special Status Species" includes plants and animals that are federally protected under the ESA, Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), and state-listed or rare species. Species listed in the State of Tennessee are protected under the Tennessee Nongame and Endangered or Threatened Wildlife Species Conservation Act of 1974 (Tennessee Code Annotated [TCA] § 70-8-101-112) and the Rare Plant Protection and Conservation Act of 1985 (TCA §§70-8-301-314).

3.4.1 Affected Environment

This section provides an overview of SSP-2's current ecological baseline summarized from existing documentation and field studies. Environmental studies, including DOE's 2024 EBS and 2025 Addendum to the EBS (DOE, 2025b; DOE, 2025c), jurisdictional waters delineations, biological assessments, and cultural resources reviews were completed for SSP-2 and provide the baseline technical foundation for this EA. Currently, the property is heavily wooded with a limited amount of gravel/dirt roads available to access the site. Elevations at the property range from 800 ft above mean sea level (AMSL), along the Oak Ridge Turnpike and the southern portions of the property, to 1,100 ft AMSL on the northern portion of the property (Figure 6) (DOE, 2025b).

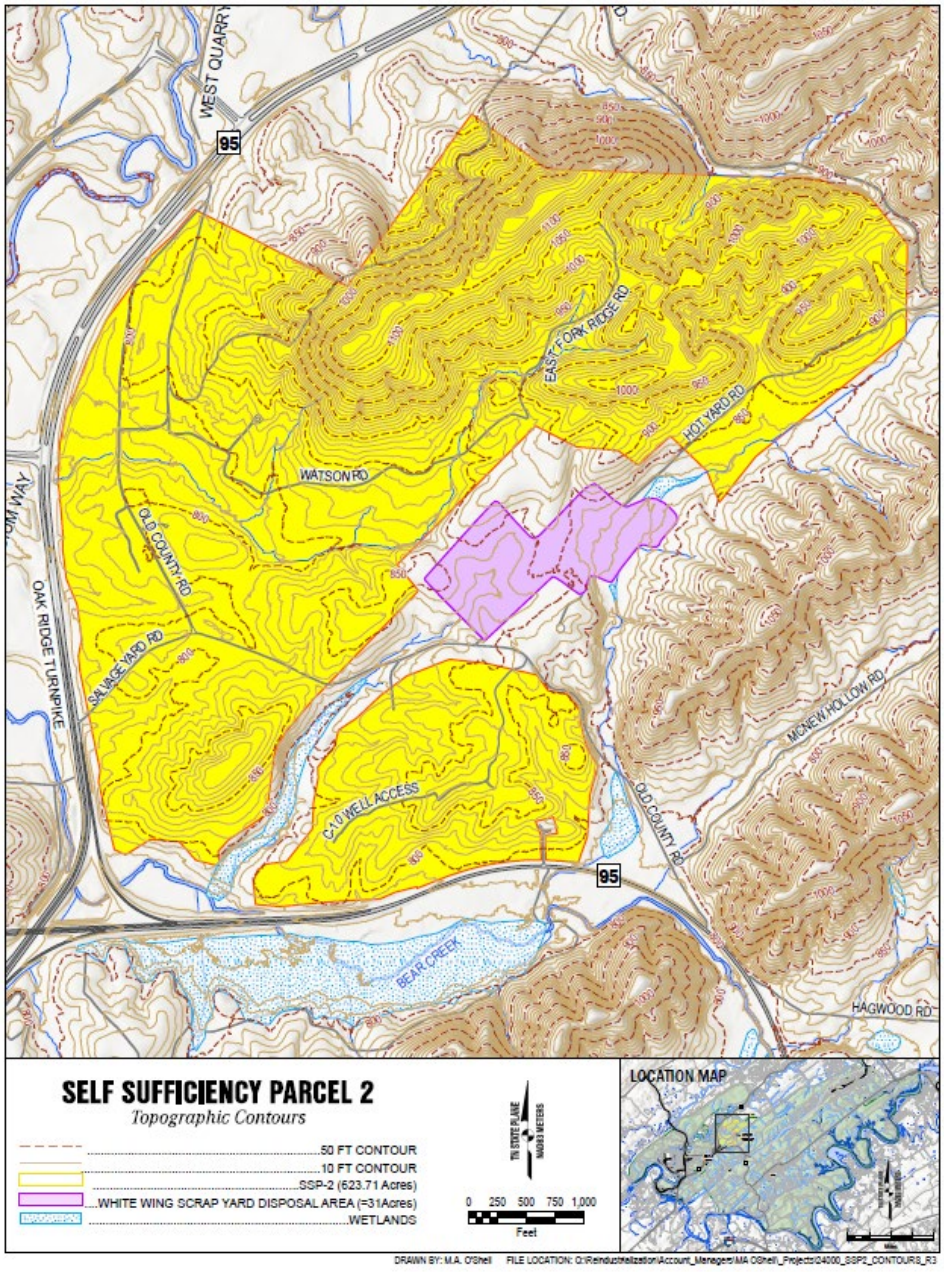


Figure 6. Topographic Map for SSP-2, Tracts 1A and 1B.

The proposed nuclear facility scenario where trees are anticipated to be removed is approximately 146 acres, which is a portion of the 623.71 acres for the Proposed Action (Tracts 1A and 1B). The action area for the proposed nuclear facility is 188 acres, which includes all areas of potential direct and indirect impacts, as outlined in yellow in Figure 7 (Note: Figure 7 indicates 144.5 acres of clearing, but actual total cleared area would be approximately 146 acres). The entirety of Tracts 1A and 1B may be used for industrial and commercial purposes, including allowable uses listed in Section 2.1, *Proposed Action*. If the proposed nuclear facility is developed, approximately 435.71 acres would remain on SSP-2 that could be used for unknown industrial and commercial purposes.

If the proposed nuclear facility is not constructed, the entire property would be open to unknown industrial and commercial development.

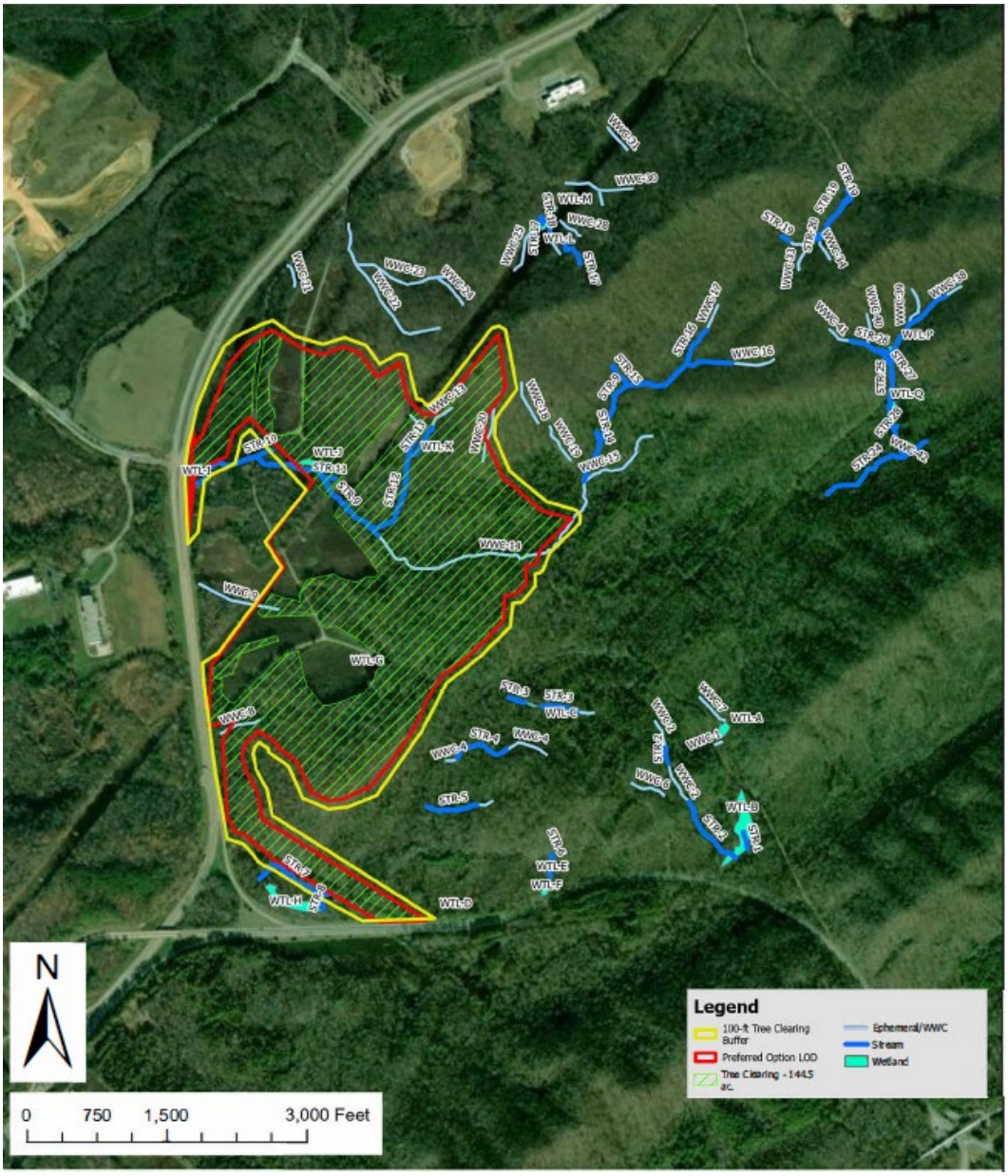


Figure 7. Action Area for Proposed Nuclear Facility.

3.4.1.1 Vegetation and Habitat

Riparian zones in the ORR exhibit diverse vegetation and hydrologic complexity, supporting wildlife habitat and high ecological function. More than 1,100 vascular plant species have been identified at the ORR (Mann et al., 1996). Of the 168 non-native plant species on ORR, 54 are considered to be severe or significant threats to natural areas. The Invasive Plant Management Plan for the ORR addresses the impacts of invasive plants on facility operations and natural areas (ORNL, 2017).

Mixed deciduous forest is the dominant landcover type within the area of the Proposed Action. The forest is concentrated along low hillslopes and the slopes of draws. Old-growth trees within multiple canopy layers occur in areas adjacent to streams, seeps, and smaller wetlands on-site. Species typical of deciduous evergreen forests occur on SSP-2 along with red and white oaks (*Quercus* spp.), maples (*Acer* spp.), hackberry (*Celtis occidentalis*), loblolly pine (*Pinus taeda*), hickories (*Carya* spp.), American beech (*Fagus grandifolia*), sweetgum (*Liquidambar styraciflua)*, eastern red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), eastern redbud (*Cercis canadensis)*, dogwoods (*Cornus* spp.), and elms (*Ulmus* spp.) (CEC, 2025).

3.4.1.2 Fish and Wildlife

The ORR hosts more than 340 wildlife species, including over 200 species of birds, 34 types of mammals, 72 fish species, 45 reptiles and amphibians, and many invertebrate species (NERP, 2006). The bald eagle (*Haliaeetus leucocephalus*) has been documented in the ORR and is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. § 668c; 50 CFR § 22.3) of 1942, and the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712 [MBTA]) of 1918 (USFWS, 2026a).

SSP-2 intersects a wildlife corridor in East Tennessee, which is the subject of ongoing research in the ORNL Environmental Sciences Division. Active hunting programs are conducted for white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), and Canada goose (*Branta canadensis*). Other wildlife species in the area include raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), and woodchuck (*Marmota monax*). The wildlife management goals on the ORR are directed toward preserving populations and habitat, maintaining and enhancing biodiversity, integrating multiple use objectives, minimizing wildlife damage to property, and public safety (ORNL 2007).

3.4.1.3 Special Status Species

Threatened, Endangered, and Sensitive Species

Section 7 of the ESA requires that any action likely to adversely affect a species classified as federally protected be subject to review by USFWS. On May 18, 2026, DOE, NRC, and USACE, initiated formal consultation with USFWS, with DOE as the lead federal agency, to fulfill each agency's responsibilities for compliance with Section 7(a)(2) of the ESA. On September 21, 2026, DOE updated the species determinations and the scope of the Proposed Action to include industrial and commercial use across the entire parcel. USFWS concluded the Section 7 consultation with DOE, NRC, and USACE on October 27, 2026. For more details on the consultation history for the Proposed Action, relevant correspondence is included in Appendix A.

In support of Section 7 consultation, on July 30, 2025, and as updated on March 18, 2026, the NRC obtained an official species list from the *USFWS Information for Planning and Consultation* (IPaC) online tool, ADAMS Accession No. ML26077A045 (USFWS, 2026a). The IPaC official species list identified federally protected species with potential to occur within and adjacent to SSP-2 (USFWS, 2026a). TDEC's Environmental Review Tool was accessed January 30, 2025, to provide a list of potential rare or state-listed species that may occur within one mile of SSP-2 (TDEC, 2025a). On September 21, 2026, the Tennessee Wildlife Resources Agency (TWRA) reviewed the Proposed Action and determined that no adverse effects are anticipated to state protected wildlife species from industrial and commercial uses across the property, provided that erosion and sediment BMPs would be implemented during construction activities. Table 4 presents the federally protected, state-protected, and rare species that may occur within SSP-2 (USFWS, 2026a; TDEC, 2025a; TWRA, 2026). There is no federally designated or proposed critical habitat within the immediate vicinity of SSP-2.

Table 4. Special Status Species with Potential to Occur on SSP-2.

Common Name	Scientific Name	Federal	State	Occurrences within or adjacent to SSP-2?	Habitat within or adjacent to SSP-2?
Mammals					
Indiana bat	*Myotis sodalis*	FE	SE	Y	Y
Northern long-eared bat	*Myotis septentrionalis*	FE	ST	Y	Y
Gray bat	*Myotis grisescens*	FE	SE	Y	Y
Tricolored bat	*Perimyotis subflavus*	PT	ST	Y	Y
Southern bog lemming	*Synaptomys cooperi*	--	D	Y*	Y
Meadow jumping mouse	*Zapus hudsonius*	--	D	Y*	Y
Birds					
Whooping crane	*Grus americana*	EXPN	--	N	N
Bachman's Sparrow	*Peucaea aestivalis*	--	SE	Y*	Y
Swainson's warbler	*Limnothlypis swainsonii*	--	D	Y*	Y
Bald eagle	*Haliaeetus leucocephalus*	DE	--	N	Y
Fish					
Spotfin chub	*Erimonax monachus*	FT	ST	N	N
Flame chub	*Hemitremia flammea*	--	D	Y*	Y
Tennessee dace	*Chrosomus tennesseensis*	--	D	Y*	Y
Insects					
Monarch butterfly	*Danaus plexippus*	PT	--	N	Y
Plants					
White fringeless orchid	*Platanthera integrilabia*	FT	SE	N	Y
Virginia spiraea	*Spiraea virginiana*	FT	SE	N	Y
Nuttall's waterweed	*Elodea nuttallii*	--	SS	Y*	Y
Small-headed rush	*Juncus brachycephalus*	--	SS	Y*	Y
Fen orchis	*Liparis loeselii*	--	ST	Y*	Y

Table 4. Special Status Species with Potential to Occur on SSP-2.

Common Name	Scientific Name	Federal	State	Occurrences within or adjacent to SSP-2?	Habitat within or adjacent to SSP-2?
Tubercled rein orchid	*Platanthera flava var. herbiola*	--	ST	Y*	Y
Reptiles and Amphibians					
Northern pine snake	*Pituophis melanoleucus melanoleucus*	--	ST	Y*	Y
Eastern slender glass lizard	*Ophisaurus attenuatus longicaudus*	--	D	Y*	Y
Four-toed salamander	*Hemidactylium scutatum*	--	D	Y*	Y
Green salamander	*Aneides aeneus*	--	R	Y*	Y

*From TDEC Environmental Review Report: Occurrences within 1-mile of SSP-2

D = State, Deemed in Need of Management
DE = Federally Delisted
EXPN = Experimental, Non-essential Population
FE = Federally Endangered
FT = Federally Threatened
PT = Federally Proposed Threatened
R = State Rare, Not State-listed
SE = State Endangered
SS = State, Special Concern
ST = State Threatened

Mammals

There are three federally listed bat species and one bat species proposed for listing under the ESA that have been documented in and/or adjacent to SSP-2: Indiana bat, northern long-eared bat, gray bat, and tricolored bat (USFWS, 2026a). All four bat species are also state listed.

In the spring, bats migrate to summer forest habitat. Most reproductive females occupy roost sites under the exfoliating bark of dead trees that retain large, thick slabs of peeling bark, although some roost in live trees with loose bark (Pruitt and TeWinkel, 2007). A suitable roost tree could be any tree (live or dead) that has exfoliating bark, crevices, or cracks. Bats often return to the same roosting areas each year. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often in canopy gaps in a forest, in a fence line, or along a wooded edge; bats typically select trees larger than 16 inches in diameter (Pruitt and TeWinkel, 2007). Maternity roosts may occur in riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Gray bats use caves as primary roost sites. Bats generally forage in open understory forested habitats, forest edges, and riparian areas.

The southern bog lemming and meadow jumping mouse have the potential to occur in or adjacent to SSP-2 (TDEC, 2025a). They are species deemed in need of management protection by the state; however, no adverse effects are anticipated from the Proposed Action.

Migratory Birds

The MBTA prohibits actions resulting in the pursuit, capture, killing, and/or possession of any protected migratory bird, nest, egg, or parts thereof. Any activity resulting in take of migratory

birds, including eagles, is prohibited unless otherwise permitted by USFWS (50 CFR § 10.12 and 16 U.S.C. § 668(a)). Additionally, Executive Order (EO) 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that may affect migratory birds, to minimize those effects and to encourage conservation measures that will improve bird populations. EO 13186 provides for the protection of migratory birds and their habitats.

USFWS maintains a list of designated migratory birds occurring in the United States. Birds of Conservation Concern (BCC) are a subset of MBTA-protected species identified by USFWS as those in the greatest need of additional conservation actions to avoid future listing under the ESA. BCCs are identified at three geographic scales: National, USFWS Regions, and Bird Conservation Regions (BCR), which are the smallest geographic scale at which BCCs are identified. The lists of BCC species at the BCR-scale are the most useful for government agencies to consider in complying with the MBTA and EO 13186 (USFWS, 2021). According to the *USFWS Birds of Conservation Concern*, SSP-2 is located within the Appalachian Mountains BCR (USFWS, 2021). A Bear Creek Watershed list of potential bird species that may occur within the vicinity of SSP-2 is included in Appendix B, Table B1.

The IPaC list included the whooping crane as having the potential to occur in the ORR; however, it is not likely to occur within SSP-2 (USFWS, 2026a). The whooping crane would not be impacted by the Proposed Action and will not be addressed further in this EA. The Bachman's sparrow (state endangered) and Swainson's warbler (state deemed in need of management) have the potential to occur in or adjacent to SSP-2 (TDEC, 2025a); however, no adverse effects are anticipated from the Proposed Action.

Bald and Golden Eagles

The bald eagle and golden eagle (*Aquila chrysaetos*) are protected by the Bald and Golden Eagle Protection Act and the MBTA. The bald eagle was listed as endangered under the ESA in 1978 and delisted in 2007. Bald eagles need perching areas, nesting areas, and a consistent food base. Their habitats include lakes, reservoirs, rivers, estuaries, coastal areas, farmlands, and urban and suburban areas. In winter, bald eagles congregate near open water in tall trees. Trees provide perches for hunting, night roosts, and sheltering. Winter roosts may be used all season or for a short duration, depending on food availability. The golden eagle is distributed across North America. Golden eagles use large tracts of forests across the state (Tennessee State Wildlife Action Plan Team, 2025). The bald eagle has potential to occur within SSP-2, but the golden eagle is less likely to be present based upon documented occurrences (USFWS, 2026a).

Plants

Federally listed plant species are considered unlikely to occur within SSP-2. Several seeps and springs are suitable for the federally threatened (state endangered) white fringeless orchid, which is known from wetlands and stream margins adjacent to the ORR. However, no specimens are known from SSP-2 (USFWS, 2026a). There is potential habitat in the vicinity of SSP-2 for the federally threatened (state endangered) Virginia spiraea (USFWS, 2026a). However, no impacts are anticipated from the Proposed Action; therefore, Virginia spiraea will not be addressed further in this EA. Some state-listed plant species may occur within SSP-2, particularly near springs and

smaller seep wetlands (ORNL, 2020). Nuttall's waterweed (state species of concern), small-headed rush (state species of concern), fen orchis (state threatened), and tubercled rein orchid (state threatened) may be present within or adjacent to SSP-2 (TDEC, 2025a); however, no adverse effects are anticipated from the Proposed Action.

Reptiles and Amphibians

The northern pine snake (state threatened), eastern slender glass lizard (state deemed in need of management), four-toed salamander (state deemed in need of management), and green salamander (state rare) have the potential to occur within the vicinity of SSP-2 (TDEC, 2025a), but no adverse effects are anticipated from the Proposed Action.

Insects

There are no documented occurrences of the monarch butterfly or milkweed (*Asclepias* spp.), its hostplant, within or adjacent to SSP-2 (USFWS, 2026a). The Proposed Action is not anticipated to result in impacts to the monarch butterfly; therefore, the species will not be addressed further in this EA.

Fish

There are no documented occurrences or suitable habitat for the federally threatened spotfin chub within SSP-2 (USFWS, 2026a); therefore, it is not anticipated to be impacted by the Proposed Action, and it will not be addressed further in this EA. The flame chub (state deemed in need of management) and Tennessee dace (state deemed in need of management) may occur in the vicinity of SSP-2 (TDEC, 2025a), but no adverse effects are anticipated from the Proposed Action.

3.4.1.4 Water Resources

Title 10 CFR Part 1022 establishes procedures for complying with EO 11988: *Floodplain Management*, and EO 11990: *Protection of Wetlands*. Impacts to WOTUS and Waters of the State are subject to USACE and TDEC jurisdiction and the CWA Section 404/401 permitting requirements. Pursuant to Section 404 of the CWA, the USACE determines whether to issue a Department of the Army Permit for the discharge of fill material into WOTUS associated with site preparation, construction, supporting infrastructure, and other impactful activities.

Groundwater

Most groundwater flow in the carbonate bedrock groundwater basins on the ORR originates as intergranular or fracture seepage through the soil mantle, and flow progresses through coalescing networks of conduits that culminate at spring discharges. Baseflow springs often occur near major geologic outcrop boundaries, where semi-confining bedrock lithologies tend to limit the orientation of conduit development and promote upward flow of groundwater to discharge at the land surface. In portions of the ORR underlain by shale-rich bedrock, such as the Conasauga Group bedrock of Bear Creek Valley and Melton Valley, groundwater seepage is typically through fractures in weathered bedrock with discharge to nearby streams. Discrete baseflow springs are not common in the shale-dominated outcrop areas; however, small seeps are abundant (ORNL, 2006).

Surface Water

Numerous seeps, springs, and intermittent and perennial streams drain the crest, slopes, and ravines of East Fork and Pine Ridges within the area of SSP-2. Surface water flow from these sources ultimately drains to either Bear Creek (located southwest of the parcel) or to East Fork Poplar Creek (located northwest of the parcel). Springs and seeps identified within SSP-2 are limited to Tract 1B and the southern end of Tract 1A, south and southwest of the WWSY.

SSP-2 is located within the Lower Clinch River watershed (hydrologic unit code [HUC]-8: 06010207) and the East Fork Poplar Creek watershed (HUC-12: 060102070302), as well as the 67f (Southern Limestone/Dolomite Valleys and Low Rolling Hills) and 67i (Southern Dissected Ridges and Knobs) Level IV ecoregions. A review of the USGS Topographic Map Bethel Valley Quadrangle identified six National Hydrography Dataset streams within the action area for the proposed nuclear facility. Based on the USGS topographic map, the proposed nuclear facility site drains to the south and west. The west side drains to the west via unnamed tributaries, and the east side drains south via an unnamed tributary located between the proposed nuclear facility location and the WWSY. Based on USGS Light Detection and Ranging (LiDAR) data, existing elevations within the proposed nuclear facility action area range from approximately 760 feet near the roadway on the eastern portion to 1150 feet at the high point in the northern portion.

Floodplains

Floodplains are defined by EO 11988, *Floodplain Management*, as "the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands including, at a minimum, the area subject to a 1 percent or greater chance of flooding in any given year" (that area inundated by a hundred-year flood). EO 11988 requires federal agencies 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 or indirect support of floodplain development wherever there is a practicable alternative. SSP-2 is not within a floodplain area; therefore, the Proposed Action would not impact floodplains. The parcel is within Federal Emergency Management Agency (FEMA) Zone X, an area of minimal flood hazard (FEMA, 2026).

Wetlands

USACE defines wetlands as "those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory, 1987). Wetlands usually include swamps, marshes, bogs, and similar areas. A wetland contains three primary characteristics: (1) presence of hydrophytic vegetation that has morphological or physiological adaptations to grow, compete, or persist in anaerobic soil conditions; (2) hydric soils are present and possess or are associated with reducing soil conditions; and (3) area is influenced by wetland hydrology, meaning the area is inundated or saturated to the surface at some time during the growing season of the prevalent vegetation (Environmental Laboratory, 1987; USACE, 2012).

Civil & Environmental Consultants, Inc. (CEC) completed a jurisdictional waters assessment on SSP-2, on June 24, 2025, as shown in Figure 8 below (CEC, 2025). The assessment identified 17

wetlands, 28 streams/relatively permanent waterways, and 42 wet weather conveyances/non-relatively permanent waterways on the SSP-2 parcel.

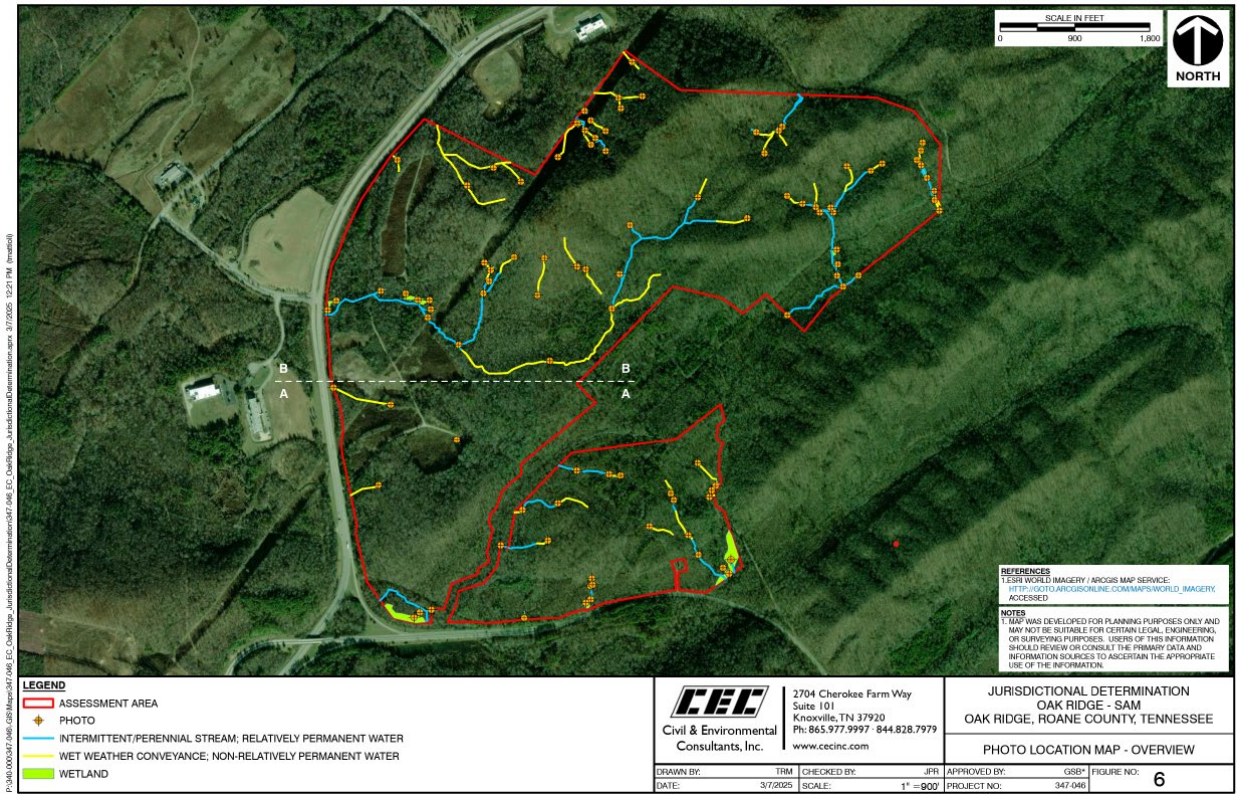


Figure 8. Water Resources on SSP-2.

3.4.2 Potential Environmental Consequences to Ecological Resources

Under the Proposed Action, potential impacts on ecological resources could include temporary and permanent disturbance, degradation, and loss of habitat from land-clearing activities or displacement of wildlife due to an increase in noise and human activity. Impacts could also include fragmentation of remaining habitats resulting from project developments and an increase in human-wildlife interactions (e.g., collisions from motor vehicles). Based on implementation of avoidance and minimization measures for impacts on wildlife, plants, and wetlands when feasible, the Proposed Action would not reduce the distribution or viability of species or habitats of concern, including take of listed species. Future development may occur on SSP-2, and the landowner and project proponents would be required to adhere to all applicable local, state, and federal laws and regulations.

3.4.2.1 Proposed Action

3.4.2.1.1 Impacts on Vegetation, Habitat, Fish and Wildlife

Permanent loss of habitat from the Proposed Action due to a change in land use and subsequent clearing and grading would result in direct impacts to wildlife, plants, and their habitats within SSP-2. Presence of workers may result in wildlife avoidance of habitats immediately adjacent to

development areas. Although most site preparation and construction work would occur during daytime hours, some work may occur at night when artificial lighting may be required. Wildlife species have the potential to be affected by the use of artificial lighting. Nighttime activities would be limited to the maximum extent possible. Industrial and commercial development of the entire parcel will likely necessitate clearing and grading of at least 146 acres, with total direct and indirect effects to 188 acres, for the proposed nuclear facility scenario. However, additional clearing and grading would be necessary for any other industrial and commercial uses, including allowable uses listed in Section 2.1, *Proposed Action*.

Wildlife impacts, such as the interruption of breeding patterns and behavioral modification, could occur from construction-related noise and vibration, as animals in the vicinity could be temporarily disturbed by the change to the ambient environment and additional human activity. However, noise and vibration resulting from the proposed site preparation and construction activities would be localized, relatively short- term, and primarily occur during daylight hours. During construction phases, mobile wildlife species would likely flush from the site to similar habitat(s) available nearby, including adjacent locations within the ORR.

Indirect impacts on wildlife from habitat fragmentation could also occur. Land clearing would cause disturbances in the landscape resulting in new habitat edges, potentially disrupting wildlife ecosystem processes and habitats. The degree of loss would depend on the behavioral response of individual species. Infrastructure and traffic could impose dispersal barriers and potential vehicle collision impacts to non-flying terrestrial animals. While the loss of continuous available habitat would occur in developed areas on the parcel, large tracts of unaffected habitats able to support wildlife movement would still be available in direct proximity to the site.

3.4.2.1.2 Impacts on Threatened, Endangered, or Sensitive Species

Table 5 summarizes the federally listed and proposed species effects determinations for the Proposed Action, including the basis for the determination, and the approach to avoid and minimize impacts to the species. State-listed species were considered, and TWRA determined that no adverse effects are anticipated from the Proposed Action; therefore, these species are not addressed further in this EA.

Table 5. Federally Listed and Proposed Species Effects Determinations for Proposed Action.

Species	Effects Determination	Basis for Determination	Approach to Avoid and Minimize Impacts
Northern long-eared bat	May affect and likely to adversely affect	Suitable habitat and occurrences on SSP-2	Implement *Conservation Strategy for Indiana and Northern Long-eared Bats in the State of Tennessee* (USFWS, 2026b [Bat Conservation Strategy])
Indiana bat	May affect and likely to adversely affect	Suitable habitat and occurrences on SSP-2	Implement Bat Conservation Strategy
Gray bat	May affect, but not likely to adversely affect	No caves present for roosting on SSP-2	Habitat avoidance and minimization measures

Table 5. Federally Listed and Proposed Species Effects Determinations for Proposed Action.

Species	Effects Determination	Basis for Determination	Approach to Avoid and Minimize Impacts
Tricolored bat	Not likely to jeopardize the continued existence	Determination based upon species' range and scope of project	Habitat avoidance and minimization measures
Spotfin Chub	No effect	No occurrences or suitable habitat on SSP-2	Will not be addressed further due to no effect
Whooping Crane	No effect	No occurrences or suitable habitat on SSP-2	Will not be addressed further due to no effect
Monarch Butterfly	No likely to jeopardize the continued existence	No occurrences or suitable habitat on SSP-2	Will not be addressed further due to no effect
White fringeless orchid	May affect, but not likely to adversely affect	Suitable habitat but no occurrences on SSP-2	Habitat avoidance and minimization measures
Virginia spiraea	No effect	No occurrences on SSP-2	Will not be addressed further due to no effect

Bats

The northern long-eared bat, Indiana bat, and gray bat are federally endangered species. The tricolored bat is proposed for federal listing under the ESA. Potential adverse effects to the northern long-eared bat and Indiana bat are anticipated from the Proposed Action. The gray bat is not likely to be adversely affected, as no caves are present within a 5-mile radius of the project area for roosting and there is abundant foraging habitat. Suitable tricolored bat roosting and foraging habitat is present within SSP-2, and multiple bat surveys of SSP-2 conducted in June 2024 documented species presence within SSP-2. Due to the small size of SSP-2 in relation to the species' range, and the small number of individual bats that could potentially be affected by the Proposed Action relative to the overall species population, potential effects on the tricolored bat from removal of suitable forested habitat are anticipated to be minimal. For both the gray bat and tricolored bat, potential effects would be further minimized by implementation of conservation measures and best management practices during construction activities.

- *Potential loss of habitat*: Industrial and commercial development on SSP-2 would result in removal of forested habitat and/or roost trees for bats. Tree clearing is a principal concern for the Indiana and northern long-eared bats that roost in trees. Any trees, dead or alive, with exfoliating bark, cracks or crevices can provide potential roosting habitat.
- *Mortality or injury*: Bat injuries and/or mortalities would likely occur from tree clearing for industrial and commercial development on SSP-2.
- *Noise and vibration*: Noise from heavy equipment and increased traffic during construction phases for development on SSP-2 may result in reduced use of nearby on-site and off-site

habitat for roosting and foraging bats. Bats may move away from noise sources to other available trees and suitable habitat on the SSP-2 site and ORR.

- *Lighting*: Site preparation and construction activities would occur primarily during the daytime; however, it may be necessary to sometimes work at night and use temporary lighting. There is potential for bats to become disoriented and/or to avoid foraging near areas where temporary lighting is used.
- *Presence of humans/construction personnel*: Human presence may result in avoidance of habitat immediately adjacent to areas when workers are on-site.

The voluntary Bat Conservation Strategy and associated Programmatic Biological Opinion establish a framework for conserving and supporting the recovery of the federally listed Indiana bat and northern long-eared bat in Tennessee. The strategy streamlines the consultation process for project proponents by offering predictable, recovery-focused pathways even when project impacts cannot be fully avoided, including in-lieu fee investments, conservation banking (where available), and proponent-responsible mitigation. Implementation of the strategy may provide broader ecological benefits to other bat species; however, the strategy exclusively applies to the covered species (i.e., Indiana bat and northern long-eared bat). Requirements related to recovery-focused conservation options are based on habitat type, seasonal sensitivity, species presence, and the ecological value of the affected landscape. Protection of summer and maternity habitats, hibernacula, and swarming/staging areas is central to the recovery of both species. Overall, the Bat Conservation Strategy provides a coordinated, landscape-level approach that supports necessary development while advancing the long-term conservation and recovery of the Indiana bat and northern long-eared bat in Tennessee.

The proposed nuclear facility project proponent has enrolled in the Bat Conservation Strategy and would implement all mutually agreed upon avoidance, minimization, and mitigation measures for the proposed nuclear facility. If future development is proposed, the landowner and/or project proponent would coordinate with USFWS to determine the necessary steps for ESA compliance. While the loss of bat habitat and other direct and indirect effects would occur via the Proposed Action, large tracts of unaffected habitats are present across the ORR that are able to support bats throughout their lifecycles. With the enactment of all agreed upon measures in the Bat Conservation Strategy, impacts to bats from the Proposed Action are not expected to be significant.

Plants

The white fringeless orchid is a federally threatened plant. There are wetland areas that may include suitable habitat on SSP-2; however, the species has not been documented on SSP-2. Erosion and sedimentation prevention BMPs would be incorporated into development activities to reduce the likelihood of impacts to suitable habitat; therefore, the Proposed Action is not likely to adversely affect the species.

Migratory Birds

The undeveloped land within SSP-2 is habitat for many bird species (Appendix B, Table B1). While habitat loss could affect individual birds, the amount of impacted habitat would be relatively small compared to similar habitats available on the ORR. USFWS recommends excluding

vegetation clearing during migratory bird nesting season (April 1-July 15). To comply with these recommendations and to reduce potential impacts to migratory birds, tree clearing would occur outside of the migratory bird nesting season for any development, when possible. Noise resulting from development activities would be localized, short-term, and primarily occur during daylight hours. As such, no significant impacts on migratory birds would be anticipated from the Proposed Action.

Bald and Golden Eagles

Potential future commercial and industrial development actions would be conducted outside of the migratory bird nesting season (April 1-July 15), when feasible, and this would provide benefits to eagles as well. Bald eagles may occur on SSP-2, but the golden eagle is not likely to occur on-site beyond stop overs during migration. If an eagle nest is discovered during site preparation activities or during future potential development actions that may disturb an eagle nest, the project proponent and/or landowner would contact USFWS to determine appropriate avoidance and minimization measures. No significant impacts on eagles are anticipated from the Proposed Action.

3.4.2.1.3 Impacts on Water Resources

On October 14, 2025, TDEC accepted the jurisdictional determination recommendations documented in the June 24, 2025, jurisdictional waters report for a proposed nuclear facility on the SSP-2 (TDEC, 2025b). On November 21, 2025, USACE made a jurisdictional determination for approximately 350 acres that may be impacted by future development under the Proposed Action, as shown below in Figure 9 (USACE, 2025). Any future industrial or commercial site development plan involving stream alterations, culvert installations, or wetland impacts would require independent, site-specific design approval and would need to comply with the USACE construction restrictions contained in 33 CFR, Sections 320 through 330, as amended, and any other applicable federal, state, or local wetlands regulations. Additional jurisdictional determinations may be necessary for any additional industrial and commercial use beyond the 350-acre assessment shown in Figure 9. Work within or near wetlands could also require that a Tennessee-specific Aquatic Resources Alteration Permit be obtained from TDEC. Developers may be required to implement compensatory stream and wetland mitigation to maintain off-site hydrologic connectivity and water quality to East Fork Poplar Creek.

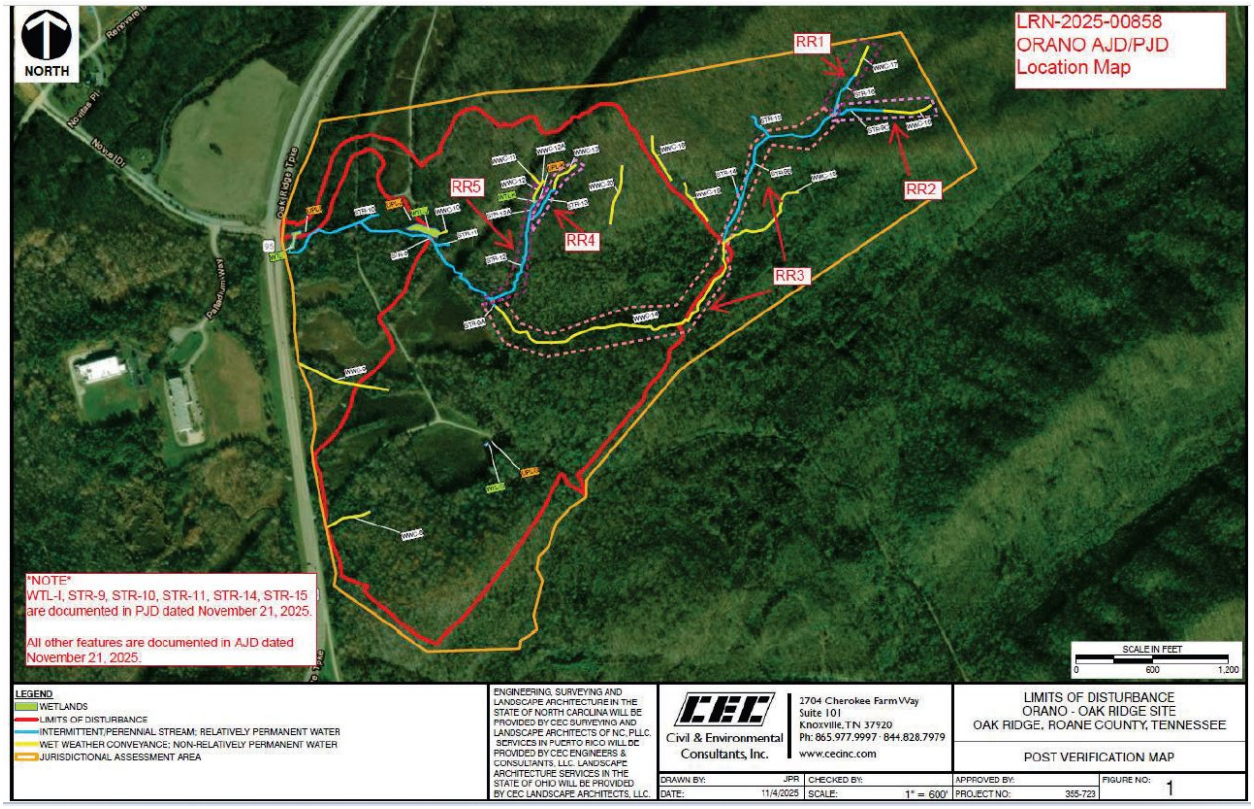


Figure 9. Jurisdictional Assessment Area for Proposed Nuclear Facility.

There are four wetlands delineated within the jurisdictional assessment area that could be affected by the proposed nuclear facility scenario. Two wetlands, WTL-I (0.12 acres) and WTL-K (0.03 acres), are WOTUS. The remaining two impacted wetlands, WTL-G (0.01 acres) and WTL-J (0.32 acres), are not WOTUS. Figure C1 of Appendix C shows WTL-I, a small wetland adjacent to STR-10, that runs from the parcel and under the Oak Ridge Turnpike via a culvert. WTL-K is a small woodland depression connecting STR-12A and WWC-12, as can be seen in Figure C2 of Appendix C. WTL-J, which is a small flat area to the north of STR-9, appears to hold water but is not fed by a spring or directly connected to any stream. Figure C3 of Appendix C is a photograph taken of WTL-J during the February 2025 waters jurisdictional survey. WTL-G is a very small depression in an open area that can be seen in Figure C4 of Appendix C.

The proposed nuclear facility scenario would also potentially impact wet-weather conveyance (WWC)-14, which is not WOTUS, and multiple WOTUS, including STR-9, STR-11, STR-12, STR-12A, WWC-12, and WWC-13. Depending on the specific layout and grading plans of future development, portions of these surface water features may be altered or eliminated. Any such development would be required through the regulatory permitting process to manage stream routing, hydrologic connectivity, downstream capacity, and water quality towards East Fork Poplar Creek.

Additional future industrial and commercial development may impact other water resources on the parcel, including those shown on Figure 8. The future landowners/developers that may impact the remaining water resources not captured by the jurisdictional determination on Figure 9 may be

required to seek additional jurisdictional determinations by the appropriate regulatory authority. Any industrial and commercial development on the parcel that may impact water resources is required to comply with USACE and State laws and regulations. It would be the responsibility of future owners and/or occupants to secure these permits prior to initiating work in any wetlands. Permit conditions would stipulate which activities could occur in or around the affected wetlands or streams.

Spills, increased sedimentation, and stormwater runoff could potentially impact wetlands associated with on-site and off-site riparian areas from industrial/commercial use. However, with the implementation of stream and wetland buffer zones, spill prevention and response plans, National Pollutant Discharge Elimination System (NPDES) permit requirements, and COR stormwater ordinances, impacts to on-site and off-site wetlands would not be significant.

An SSP-2 deed covenant prohibits the use of groundwater underlying the property, or water from any stream or pond on the property, without prior written approval from DOE. “Use" of groundwater includes extraction of groundwater from the property for the purpose of consumption, industrial processes, or any other beneficial use of the groundwater itself. The Proposed Action would not impact the current groundwater use prohibition contained in the deed. The deed specifies that any and all construction which may occur within any floodplain or floodway or which may affect a floodplain must comply with applicable state and federal laws with respect to such construction. SSP-2 is not located within a critical floodplain or floodway; therefore, these resources would not be impacted by the Proposed Action. Prior to any disturbance of wetlands or streams on SSP-2, any future property owner or developer would follow all applicable laws and regulations to ensure protection of these resources.

3.4.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not proceed. There would be no impacts to vegetation, fish and wildlife and their habitats, or water resources through permanent conversion of undeveloped forestland to industrial land. There would be no impacts from construction related noise and disturbance from human activity, and no vehicle or equipment wildlife collision injuries or mortalities from pre-construction, industrial, or commercial activities. Ecological resources would remain unchanged when compared to existing conditions.

3.4.2.3 Mitigation

The following sections include a list of conservation measures and BMPs to mitigate, avoid, and/or minimize impacts to special status species, vegetation and habitats, and water resources from industrial and commercial development, including the proposed nuclear facility.

3.4.2.3.1 Special Status Species

Bats

Landowner and/or project proponents would coordinate with USFWS to determine the required steps for ESA compliance to avoid and minimize impacts to bats, as applicable. All agreed upon conservation measures to mitigate impacts to bats would be followed, including implementation

of the Bat Conservation Strategy, as applicable. The following USFWS recommendations would be incorporated into development activities where practicable:

- Conduct tree removals from November 16 - March 31.
- No tree clearing or vegetation removal during the bat pup season (May 15 – July 31).
- Prior to tree clearing, conduct appropriate pre-construction bat surveys to determine whether federally listed bats are using the project area.
- Limit tree clearing to the identified project footprint and clearly mark clearing boundaries before work begins.
- Downed trees will be kept in place until they are mulched.
- Artificial bat roosting structures would be installed in undisturbed forest edge areas.
- If a cave, mine, sinkhole, fissure, or other potentially suitable hibernaculum is discovered, or if the action is modified in a manner that could affect such a feature, suspend work in the affected area and coordinate with USFWS before proceeding.
- If a federally listed bat or roost location is encountered, or if a bat is injured or killed during project implementation, stop work in the immediate area and contact USFWS promptly.
- A designated environmental monitor would oversee implementation of conservation measures during site clearing activities.
- Forest patches would be retained, wherever possible, to preserve bat habitat and minimize fragmentation and to preserve roosting, foraging and travel corridors.
- Disturbed areas that are not permanently developed would be revegetated with native plant species.
- Nighttime construction activities would be limited to the maximum extent possible. If nighttime activities are necessary, temporary lighting would be directed away from adjacent forest habitat and downward facing.
- Dust suppression and sedimentation controls, including a temporary sediment capture pond, would be implemented and installed, as applicable.
- Environmental awareness training would be provided for construction crews.

White fringeless orchid

Suitable habitat for the orchid exists near SSP-2's wetlands and groundwater seeps. Implementation of development BMPs for Water Resources listed below in Section 3.4.2.3.3 would provide benefits for potential white fringeless orchid habitat by minimizing dust, sedimentation, and erosion. Additionally, presence/absence surveys would be conducted prior to any land clearing.

3.4.2.3.2 Vegetation and Habitat

Invasive Species Prevention

Construction equipment may introduce invasive plants such as stiltgrass (*Microstegium* spp.*)* or privet (*Ligustrum* spp.) to development areas. BMPs to minimize the spread of invasive plants include:

- Cleaning equipment before entering SSP-2;
- Removing or treating invasives during revegetation; and
- Using only native species in post-construction seeding.

3.4.2.3.3 Water Resources

CWA Section 404 / Section 401 Water Quality Certification

Alterations to streams and wetlands due to industrial/commercial use would comply with applicable federal and state permit requirements. It would be the responsibility of the new owners and/or occupants to secure these permits prior to initiating work in any regulated water resources. Permit conditions would stipulate which activities could occur in or around the affected wetlands or streams. Regulatory permits would also specify all required mitigative measures, including potential compensation.

Stream Rerouting

For the proposed nuclear facility, STR-9's eastern branch would be rerouted into a newly engineered channel system designed to maintain flow toward East Fork Poplar Creek, ensuring downstream connectivity. Additional stream rerouting may be necessary for future unknown industrial/commercial use of the parcel.

Engineered Hydrology

Installation of the following would ensure hydrologic continuity if STR-11, STR-12, and WWC-14 are removed for a proposed nuclear facility.

- French drains;
- Culverts;
- Stormwater conveyance ditches; and
- Retention and sediment basins.

Stormwater, Erosion, and Sedimentation Control

Given the slopes of SSP-2 and the presence of impaired waters downstream, erosion prevention and sediment control is a key mitigation priority for industrial/commercial development of the parcel. A TDEC-approved Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented, which may include:

- Silt fencing, wattles, and erosion control blankets;
- Stabilized construction entrances;
- Sediment basins sized for watershed runoff;
- Regular inspection and maintenance; and
- Rapid spill response per Spill Prevention, Control, and Countermeasure (SPCC) requirements.

3.5 CULTURAL RESOURCES

Cultural resources refer to the physical evidence or places of past human activity, including prehistoric and historic sites, structures, objects, artifacts, and landscapes with cultural, historical, archaeological, or architectural significance. In accordance with NEPA, federal agencies must identify, evaluate, and disclose potential impacts to cultural resources caused by federal actions. This process is often coordinated with Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 300101 et seq. [NHPA]), and other relevant laws.

Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties. Pursuant to Title 36, CFR § 800.16, historic properties are defined 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) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register Criteria for Evaluation.

3.5.1 Affected Environment

The following sections describe the existing condition of cultural resources within SSP-2.

3.5.1.1 Area of Potential Effect

The Area of Potential Effects (APE) for this EA includes 623.71 acres of the SSP-2 property (Tracts 1A and 1B). The following sections describe the current cultural resources baseline at SSP-2 that were informed by recent evaluations and field studies.

3.5.1.2 Records Review and Previous Investigations

Two cemeteries are located on SSP-2, including the Gallaher (Smith) Cemetery and the Hembree Cemetery, and they would not be disturbed by the Proposed Action. All actions on the property will follow federal and state laws and regulations regarding protection of the cemeteries and providing public access to the cemeteries. Providing access to and road maintenance for the two known cemeteries will continue to be required in the property deed.

On June 20, 2025, DOE conducted Section 106 consultation with the Tennessee State Historic Preservation Office (TN SHPO) for the transfer of SSP-2 to the ORIDB. Based on previous

archeological surveys and the limited ground disturbance authorized by the restricted deed, DOE recommended that the transfer of SSP-2 would not have a potential adverse effect on historic properties. On June 26, 2025, TN SHPO concurred with DOE's finding that no historic properties eligible for listing in the NRHP would be affected by the property transfer.

3.5.1.3 Phase I Field Survey Findings

Cultural Resource Analysts, Inc., (CRA) conducted a phase I archaeological survey for the entirety of SSP-2 between May 27 and June 30, 2025, shown in Figure 10. The purpose of the archeological survey was to determine if any historic properties eligible for inclusion on the NRHP exist on SSP-2 that would be impacted by development of the property. Based on the criteria for eligibility, CRA recommended three sites, 40RE650, 40RE651, and 40RE655, for further archaeological investigation to assess their NRHP eligibility (Figure 11).

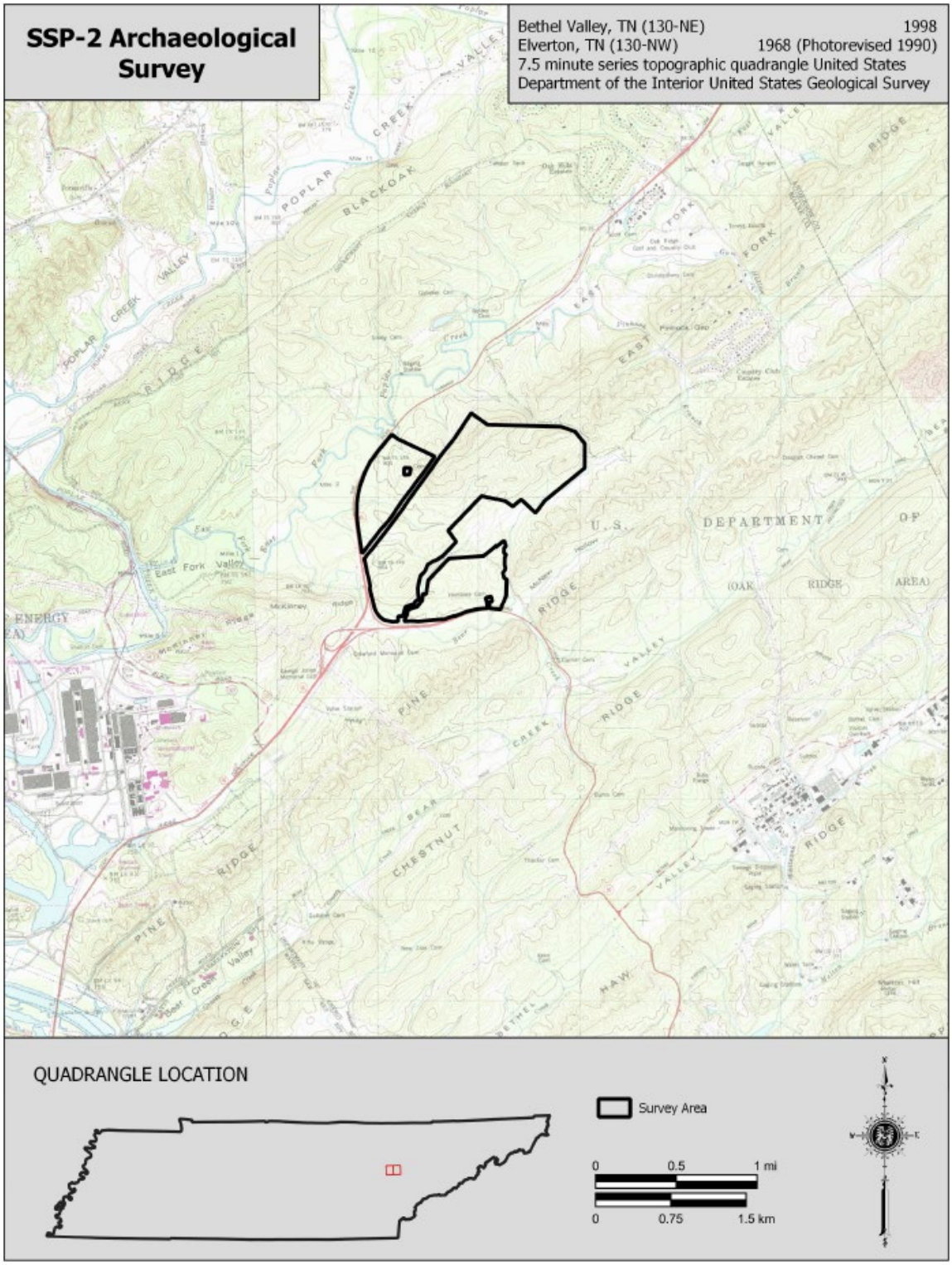


Figure 10. Phase I Archaeological Survey Location.

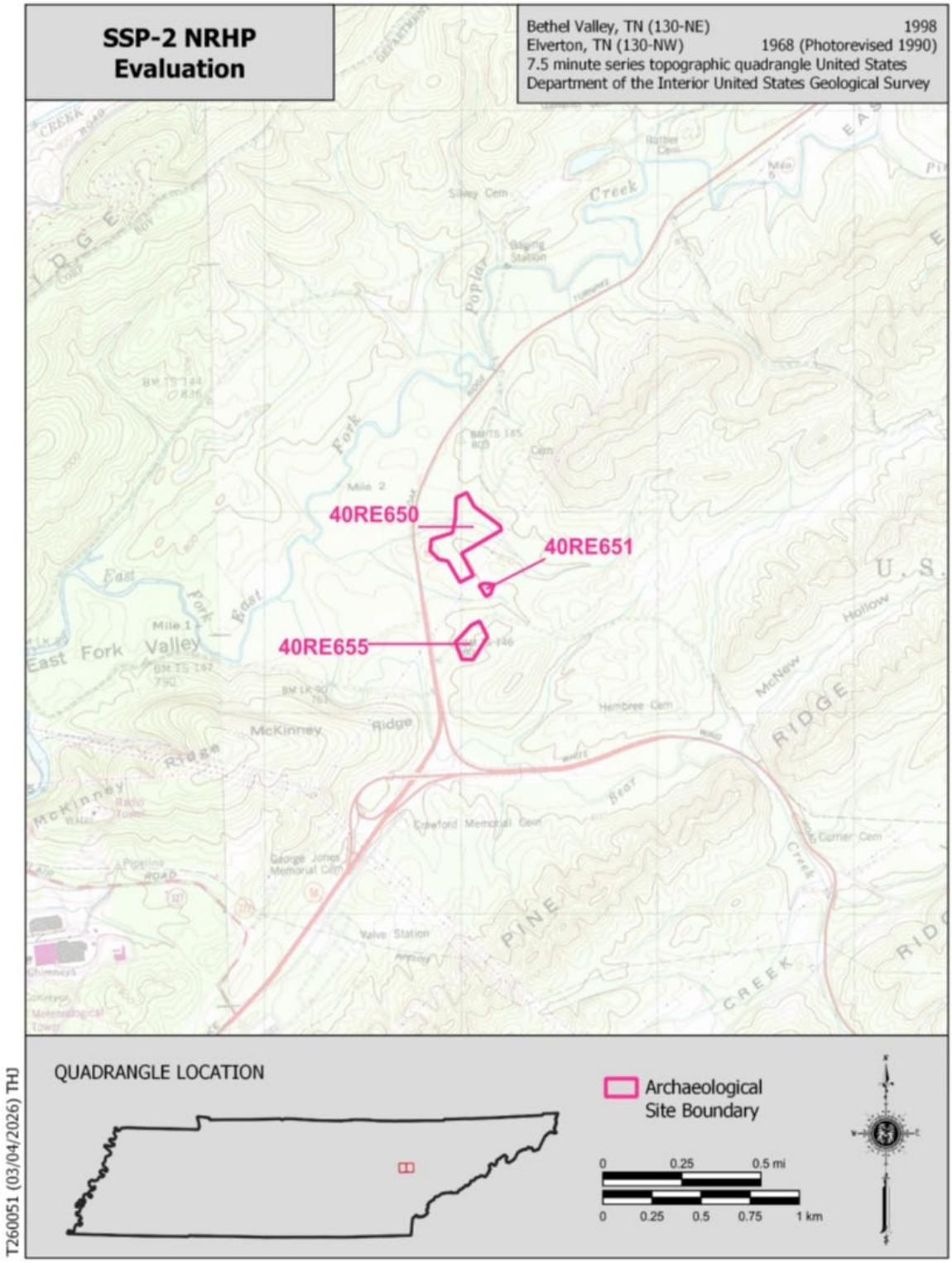


Figure 11. Phase II Archaeological Survey Locations.

3.5.1.4 Phase II Field Survey Findings

Between March 9 and May 8, 2026, CRA completed a phase II archaeological survey of the three sites: 40RE650, 40RE651, and 40RE655. Phase II field methods included site clearing and intensive pedestrian surveys, remote sensing (LiDAR), subsurface investigations using shovel test pits and metal detection, hand and mechanical excavation, and a subsequent analysis of data via geospatial mapping of the site. No historic properties were identified within the APE during the phase II survey; therefore, no further archaeological work was recommended prior to development of the site.

3.5.1.5 Agency and Tribal Consultation

In accordance with 36 CFR Part 800, *Protection of Historic Properties*, DOE and USACE initiated consultation with TN SHPO on June 16, 2026, and requested concurrence that no historic properties on SSP-2 would be impacted by the Proposed Action. In June and July of 2026, DOE and USACE initiated consultation on the Proposed Action with ten federally recognized Tribes: Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, Muscogee (Creek) Nation, Shawnee Tribe, United Keetoowah Band of Cherokee Indians in Oklahoma, Alabama-Coushatta Tribe of Texas, Coushatta Tribe of Louisiana, and Absentee Shawnee. On June 16, 2026, TN SHPO concurred with DOE and USACE's finding that SSP-2 contains no historic properties for listing in the NRHP that would be impacted by development of the property. None of the ten Tribes that were contacted requested further consultation regarding the property and Proposed Action.

3.5.2 Potential Environmental Consequences to Cultural Resources

3.5.2.1 Proposed Action

Currently, there are no NRHP-eligible resources present within the APE. Therefore, the Proposed Action is not expected to have any adverse effects on cultural resources. Potential impacts on cultural resources from construction, operation, and maintenance of the proposed nuclear facility will be analyzed by NRC in an EIS. The Proposed Action on SSP-2 would follow all applicable federal, state, and local cultural resource regulations, including protection of the two known cemeteries, as codified in the property deed.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur, and no development would be allowed on the property. Consequently, no new direct or indirect impacts to cultural resources would take place.

3.6 GEOLOGY AND SOILS

3.6.1 Affected Environment

This section describes aspects of geology and soils at SSP-2 that are relevant to the determination of impacts associated with the Proposed Action. Specifically, this section describes local geology, soils, and seismic hazards at SSP-2.

3.6.1.1 Local Geology

The ORR is located in the Valley and Ridge Physiographic Province, which developed on thick, folded beds of sedimentary rock deposited during the Paleozoic era. The long axes of the folded beds control the shapes and orientations of a series of long, narrow parallel ridges and intervening valleys (ORNL, 2006). Portions of the ORR underlain by carbonate bedrock commonly exhibit karst geomorphic features. About 60% of the ORR is underlain by carbonate-dominated bedrock (DOE, 2025b).

The geology of SSP-2 is complex as a result of extensive thrust faults and folds. The parcel is underlain by bedrock of the Chickamauga Group, which is primarily limestone with layers of shale and siltstone and clastic bedrock of the Rockwood and Sequatchie Formations, the Reedsville Shale, and clastic bedrock of the older Rome Formation. Although major thrust faults are numerous in the vicinity of SSP-2, these faults are associated with mountain building episodes that ended more than 200 million years ago. These faults are no longer active, but stress stored up at depth in these rocks is periodically released as minor earthquakes. Topographic maps and historical investigations indicate that karst conditions, such as enclosed drainage basins and sinkholes, are present in both the Knox Group and Chickamauga Group formations in the vicinity of SSP-2. Because a portion of the parcel is underlain by carbonate rocks of the Chickamauga Group, the possibility exists for karst conditions to be encountered (ORNL, 2006).

3.6.1.2 Soils and Topography

Two broad hydrologic units have been identified on the ORR: (1) Knox Aquifer, which includes Maynardville limestone and is highly permeable, and (2) ORR aquitards, which consist of less permeable geologic units. Bedrock included in these formations is predominantly clastic sediment (i.e., shales, siltstones, well-cemented sandstones, and clayey to silty limestones). The ORR aquitards include local zones where groundwater occurs in quantities sufficient to provide a potential resource of limited use. These zones typically occur within karstic carbonate members of the clastic bedrock formations. Although marginal localized groundwater resources occur within the ORR aquitards, these formations are far less important to regional water resources than is the Knox Aquifer (ORNL, 2006).

The soil mantle forms a physical and geochemical filter that reduces the direct infiltration of rainfall and contaminants into the groundwater system. Geochemical retardation of contaminants in the soil mantle reduces the mobility of many types of contaminants. Groundwater flow in karst terrains manifests itself in multiple scales of porosity, such as diffusion in intergranular pores of weathered or inherently porous bedrock, flow by seepage in rock fractures with water and rock matrix interaction on fracture surfaces, or flow in conduits in which rapid velocities limit the interaction between the water and bedrock. Groundwater discharge from springs and seeps is

abundant on the ORR and accounts for the normal baseflow of natural stream systems in the area. Most recharge to the groundwater system occurs through dispersed percolation of rainwater through the soil mantle and through capture in surface dolines (i.e., sinkholes) during the winter and early spring months, when evapotranspiration losses of soil moisture are negligible. Groundwater storage in thick soil profiles and in the weathered bedrock zone of the Knox Group outcrop areas such as Black Oak, Chestnut, and Copper Ridges provides most of the dry season baseflow and feeds the area's largest springs (ORNL, 2006). A map of the geologic features of SSP-2 is shown in Figure 12.

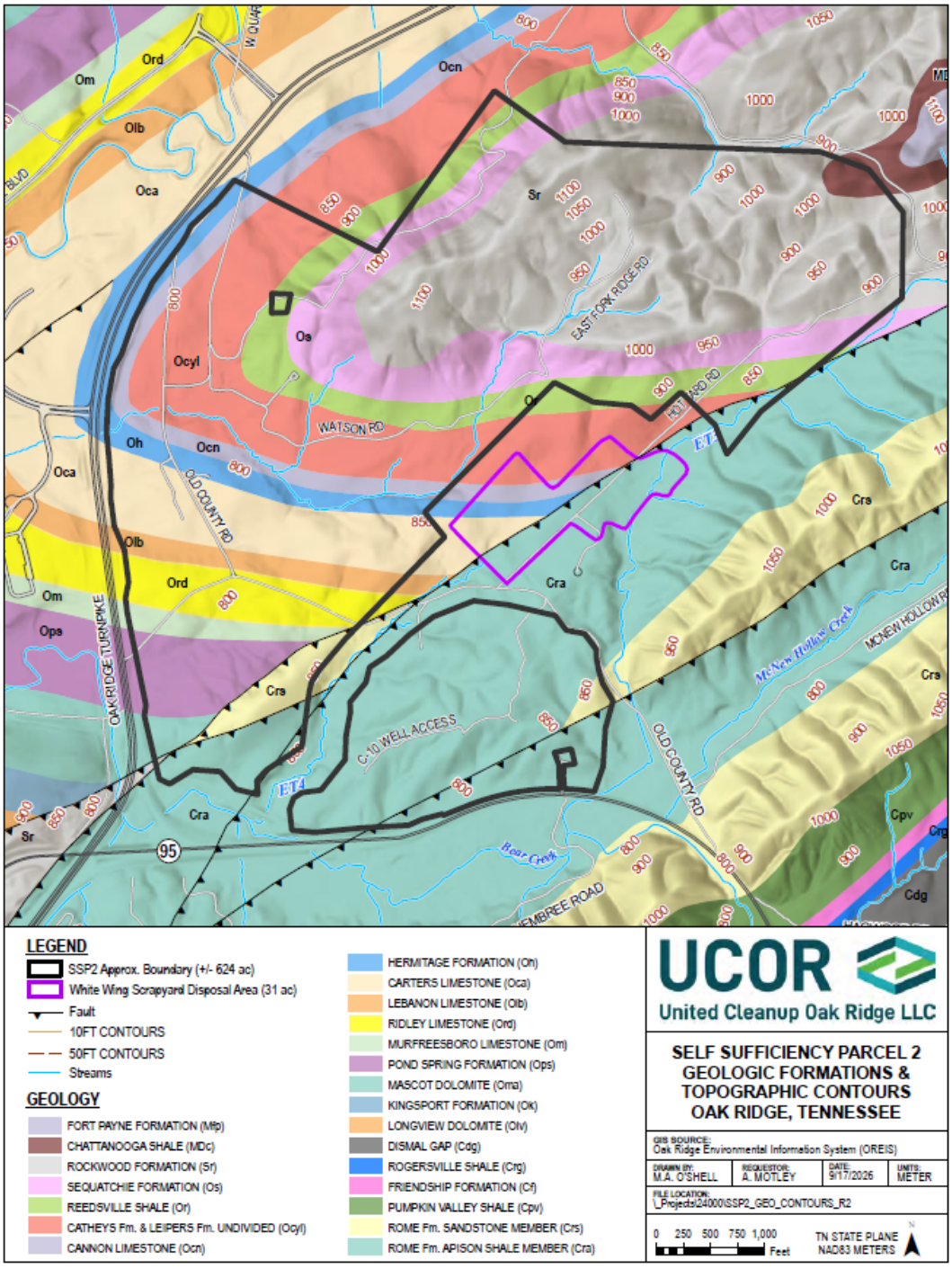


Figure 12. Geologic Map of SSP-2.

The Natural Resources Conservation Service (NRCS) Web Soil Survey for Roane County was used to assess SSP-2 soils as shown in Figure 13 (United States Department of Agriculture [USDA], 2026). This area was reviewed to evaluate the potential presence of hydric and poorly draining soils. The soil survey information identifies multiple soil types within the site including:

- Armuchee silt loam (AmC, AmD, AmE);

- Apison-Sunlight complex (ApC, ApD, ApF);
- Capshaw silt loam (CaB);
- Colbert-Lyerly-Rock outcrop (CdD);
- Collegedale silt loam (CoB, CoC, CoD);
- Etowah silt loam (EtB, EtC);
- Hamblen silt loam (Ha);
- Townley silt loam (TeC, TeD); and
- Waynesboro silt loam (WaC, WaD)

Based on the NRCS soils data, the soils at the site are well to moderately well-drained and non-hydric, except for CaB, CbD, and Ha which are well-drained and predominately non-hydric, having hydric components less than 6 percent.

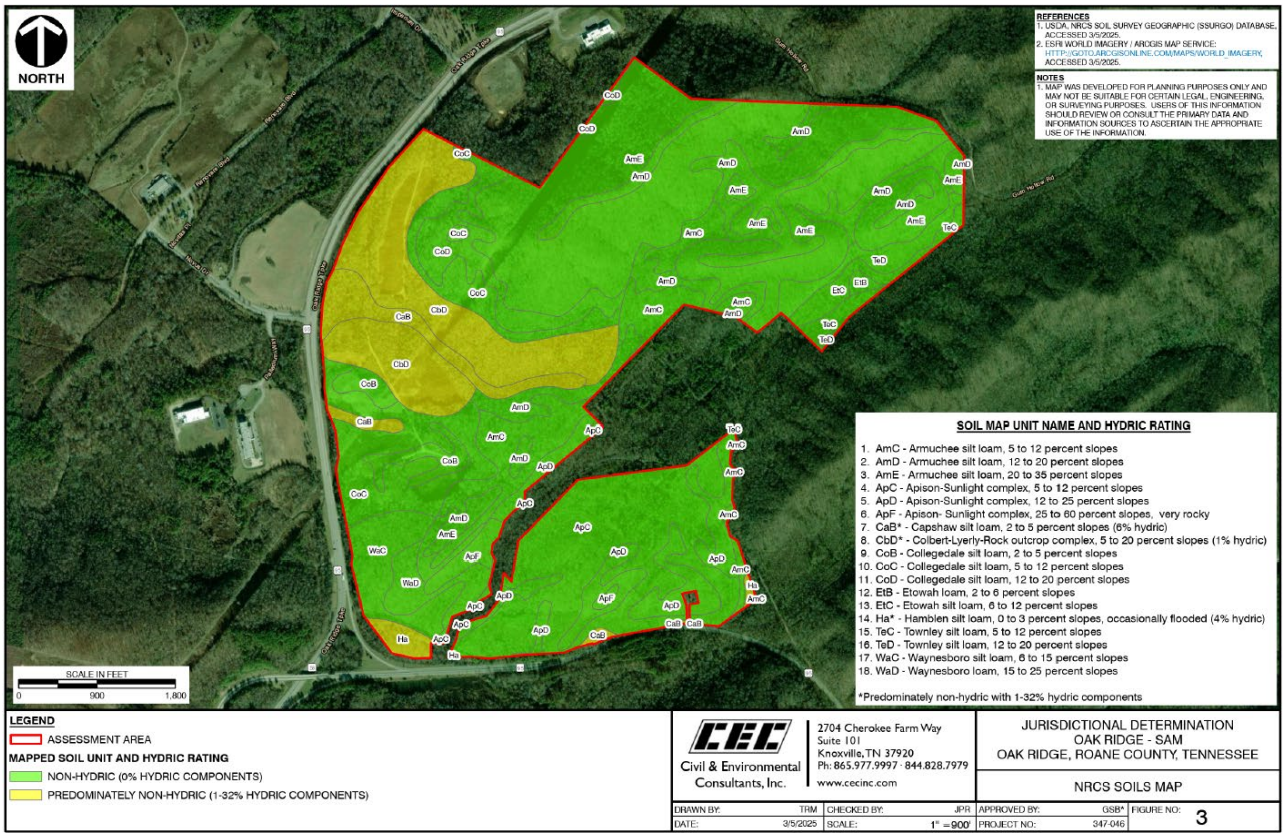


Figure 13. NRCS Web Soil Survey Map of SSP-2.

3.6.1.3 Seismic Hazard

Although major thrust faults are numerous in the ORR, these faults are associated with mountain building episodes that ended more than 200 million years ago. These faults are no longer active, but stress stored up at depth in these rocks is periodically released as minor earthquakes. From

1973-2020, 139 earthquakes were recorded within 62 miles of SSP-2 with the highest magnitude of 4.7 (U.S. Geological Survey [USGS], 2020). The USGS *Earthquake Hazards Program's 2018 Long-term Model for the Conterminous United States* shows earthquake ground motions for various probability levels across the U.S. (USGS, 2018). USGS rates ground motions using peak ground acceleration, which is the maximum acceleration experienced during an earthquake and is measured in units of acceleration due to gravity ("g"). The seismic map for 2018 indicates that the Proposed Action is located in an area with a moderate seismic hazard class rating: 0.34g peak horizontal ground acceleration with a 2 percent probability of exceedance in 50 years; and 0.10g peak horizontal ground acceleration with a 10 percent probability of exceedance in 50 years. An earthquake generating 0.3g would produce very strong perceived shaking. Damage would be slight in specially designed structures. An earthquake generating 0.10g would be perceived by all, with minimal damage to well-built ordinary structures (USGS, 2018; National Nuclear Security Administration [NNSA], 2011; NNSA, 2020).

3.6.2 Potential Environmental Consequences to Geology and Soils

The analysis in this section evaluates the potential soils and geological impacts of the Proposed Action and No Action alternatives and presents potential mitigation measures.

3.6.2.1 Proposed Action

Site clearing, grading, and contouring would alter the topography of SSP-2 under the Proposed Action, but the geologic formations underlying the site would not be adversely affected. Development for industrial and commercial use would disturb soils, and some topsoil may be removed in the process; however, ground disturbance would be conducted incrementally to limit the potential for soil erosion. Construction projects that disturb one acre or more of land require a stormwater permit under the NPDES program from TDEC. The permit process also requires a SWPPP for the site. This plan includes erosion, sediment, and stormwater management controls (e.g., silt fences, sediment basins, erosion control mattings, blankets, etc.) to minimize the potential for adverse impacts.

Geotechnical studies conducted prior development activities would likely identify any karst conditions. If karst conditions or other hazards are encountered during surveys or site preparation, the area(s) would be avoided, if possible, and additional geotechnical studies would be conducted, if needed or required. If appropriate, shallow footings, micro piles, etc., would be used to minimize any potential disturbance of underlying geological resources. Ground disturbance would be conducted incrementally to limit the potential for soil erosion and best management practices (i.e., erosion prevention and sediment control) would be implemented.

Although the site soils are not classified as prime farmland, topsoil could be stripped and conserved prior to grading hazards. The earthquake risk near the site is considered moderate due to the presence of historic thrust faults (USGS, 2018); however, there are no quaternary faults (i.e., faults less than 1.6 million years old) near the site. To minimize the potential hazards associated with earthquakes, commercial and industrial development would be in accordance with applicable building code guidelines for facilities in seismic zones, which would minimize life-threatening structural damage during an earthquake. Due to the clay content and shallow depth to bedrock, the subsurface conditions are not susceptible to liquefaction from a seismic event. Other potential

hazards such as subsidence from karst and landslides are low risk. Landslide risk is low because slopes are gentle and there is a low-incidence rate.

Given the typical required BMPs for industrial and commercial activities, the impacts on geology and soils are not anticipated to be significant from the Proposed Action. Potential impacts on geology and soils from the construction, operation, and maintenance of the proposed nuclear facility will be analyzed by NRC in an EIS. Any potential future development on SSP-2 would be required to follow all applicable local, state, and federal regulations for impacts to geology and soils.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. Therefore, no site preparation for nuclear facilities or potential future development at SSP-2 would proceed or result in impacts to geology and soils.

3.6.2.3 Mitigation

In general, potential impacts on geology and soils from the Proposed Action would be minimized through the development and implementation of a SWPPP in accordance with the state of Tennessee, Division of Water Resources; geotechnical surveys; implementation of erosion and sediment control measures during development activities, and the implementation of a revegetation plan for areas disturbed by pre-construction activities.

3.7 REASONABLY FORESEEABLE ACTIONS

This EA considers the effects of the Proposed Action when added to the effects of current and reasonably foreseeable future actions. Industrial and commercial development activities under the Proposed Action are likely to lead to the construction of a nuclear facility, following a NEPA analysis by NRC and obtaining required licenses and permits. The proposed nuclear facility would be constructed in accordance with appropriate geotechnical and structural specifications, engineering design criteria, applicable building codes, and relevant NRC Regulatory Guides. Industrial and commercial development of SSP-2 may alter local viewsheds, but it would not introduce uncharacteristic industrial elements into the larger ORR. Utility demands to sustain industrial and commercial development of the site would increase compared to the site's currently undeveloped state. NRC is developing an EIS and is analyzing the potential environmental impacts under NEPA for construction, operation, and maintenance of a proposed nuclear facility. Any future developments on the property would be subject to all applicable federal, state, and local regulations.

4.0 CERTIFICATION

I, Acting Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, John Zimmerman, certify that this environmental assessment represents DOE's good-faith effort to prioritize fulfill NEPA's requirements within the Congressionally mandated page and time limits including using DOE's expert judgement to prioritize documentation of the most important considerations required by statute; that DOE has considered the factors mandated by NEPA; and that any considerations addressed briefly or left unaddressed were, in DOE's judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision. (DOE NEPA Implementing Procedures 6.3(a) and 6.4(f)).

JUSTIN MARBLE

Digitally signed by JUSTIN MARBLE
Date: 2026.11.19 17:31:06 -05'00'

John Zimmerman
Acting Associate Principal Deputy Assistant
Secretary for Regulatory and Policy Affairs

5.0 REFERENCES

Bailey, R. G. (1995). *Description of the Ecoregions of the United States*. Retrieved August 25, 2025, from U.S. Forest Service: https://www.fs.usda.gov/land/ecosysmgmt/.

CEC. (2025). *Jurisdictional Waters Report, Oak Ridge Property – SAM.* Oak Ridge, Tennessee: Civil & Environmental Consultants, Inc.

COR. (2026a). *City of Oak Ridge Comprehensive Development Plan*. 143pp. https://www.oakridgetn.gov/392/Comprehensive-Plan---Oak-Ridge-2045.

COR. (2026b). *City of Oak Ridge Zoning Map*. August 2026. https://www.oakridgetn.gov/185/City-of-Oak-Ridge-Zoning-Map.

CRA. (2025). *Phase I Archaeological Survey of the Proposed Self-Sufficiency-2 (SSP-2) Parcel Land Transfer, Oak Ridge, TN.* Cultural Resource Analysts, Inc.

Dale, V. H. and P. D. Parr. (1998). *Preserving DOE's Research Parks*. Issues in Science and Technology XIV (2):73–77.

DOE. (2011). *Final Environmental Assessment for Transfer of Land and Facilities within the East Tennessee Technology Park and Surrounding Area, Oak Ridge, TN*. U.S. Department of Energy. DOE/EA-1640: https://www.energy.gov/sites/default/files/EA-1640-FEA-and FONSI.pdf.

DOE. (2013). *Environmental Baseline Survey Report for Parcels in the Vicinity of the Oak Ridge National Laboratory and Y-12 National Security Complex, Oak Ridge, Tennessee*. Office of Environmental Management, U.S. Department of Energy, Oak Ridge, TN.

DOE. (2020). *Environmental Assessment for the Oak Ridge Enhanced Technology and Training Center*. U.S. Department of Energy. DOE/EA-2144: https://www.energy.gov/sites/default/files/ 2020/11/f80/final-ea-2144-orettc-2020-11.pdf.

DOE. (2025a). *Radiation Protection of the Public and the Environment*. DOE Order 458.1, Change 5 (Admin Change), January 30, 2025. U.S. Department of Energy, Washington, DC. https://www.energy.gov/documents/radiation-protection-public-and-environment.

DOE. (2025b). *Environmental Baseline Survey Report for Clean Parcel Determination for Self-Sufficiency Parcel 2 in the Vicinity of the East Tennessee Technology Park, Oak Ridge, Tennessee.* DOE/OR/01-2987, U.S. Department of Energy, Oak Ridge, TN. https://doeic.science.energy.gov/uploads/E.0505.085.1497.pdf.

DOE. (2025c). *Addendum to Environmental Baseline Survey Report for Clean Parcel Determination for Self-Sufficiency Parcel-2 in the Vicinity of East Tennessee Technology Park, Oak Ridge, Tennessee*. U.S. Department of Energy, Oak Ridge, TN. DOE/OR/01-3009, https://doeic.science.energy.gov/uploads/E.0505.085.1504.pdf.

DOE. (2025d). *Categorical Exclusion: Site Characterization and Environmental Monitoring for Self Sufficiency Parcel 2 Clean Parcel Disposition.* U.S. Department of Energy. CX-270776: https://www.energy.gov/sites/default/files/2025-06/CX-270776.pdf.

Environmental Laboratory. (1987). *Corps of Engineers Wetlands Laboratory 1987 Delineation Manual, Technical Report Y-87-1.* U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

EPA. (1974). *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. U.S. Environmental Protection Agency, 550/9-74-004.

EPA. (2025). *NAAQS Table*. Retrieved May 14, 2026, from U.S. Environmental Protection Agency: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Last updated on October 21, 2026.

EPA. (2026). *Green Book: Tennessee Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants*. Retrieved August 27, 2026, from U.S. Environmental Protection Agency: https://www3.epa.gov/airquality/greenbook/anayo_ky.html.

FEMA. (2026). *National Flood Hazard Layer*. Retrieved June 8, 2026, from Federal Emergency Management Agency. https://hazards.fema.gov/femaportal/NFHL/searchLoad.action.

Federal Highway Administration. (2006). Roadway Construction Noise Model User's Manual. Federal Highway Administration.

Mann, L.K., P.D. Parr, L.R. Pounds, and R.L. Graham. (1996). *Protection of Biota on Nonpark Public Lands: Examples from the US Department of Energy Oak Ridge Reservation*. Environmental Management Vol. 20, No. 2, pp. 207-218.

National Environmental Research Park. (2006). *Wildlife*. Accessed September 2026, from Oak Ridge National Laboratory: https://nerp.ornl.gov/wildlife/.

NatureServe. (2026). *NatureServe Explorer*. https://explorer.natureserve.org/.

North American Electric Reliability Corporation. (2026). *2025 Long-Term Reliability Assessment*. January 2026. https://www.nerc.com/globalassets/our-work/assessments/nerc_ltra_2025.pdf.

NNSA. (2011). *Final Site-Wide Environmental Impact Statement for the Y-12 National Security Complex*. U.S. Department of Energy, National Nuclear Security Administration, DOE/EIS-0387. February 2011. https://www.energy.gov/sites/prod/files/EIS-0387-FEIS-Summary-2011.pdf.

NNSA. (2020). *Final Supplement Analysis for the Final Site-Wide Environmental Impact Statement for the Y-12 National Security Complex, Earthquake Accident Analysis.* U.S. Department of Energy, National Nuclear Security Administration. DOE/EIS-0387-SA-04. June 2020. https://www.energy.gov/sites/default/files/2020/07/f76/final-eis-0387-sa-04-seismic-y-12-2020-06.pdf.

ORNL. (1995). *Sludge Application and Monitoring Program on the Oak Ridge Reservation 1986–1993.* ORNL/TM-11601. Oak Ridge National Laboratory, Oak Ridge, TN. September 1995.

ORNL. (2006). *Oak Ridge Reservation Physical Characteristics and Natural Resources*. ORNL/TM-2006/110. Oak Ridge National Laboratory, Oak Ridge, TN. October 2006.

ORNL. (2007). *Wildlife Management Plan for the Oak Ridge Reservation*. ORNL/TM-2006/155. Oak Ridge National Laboratory, Oak Ridge, TN. August 2007.

ORNL. (2015). *Forest Management Plan for the DOE Oak Ridge Reservation: An Interdisciplinary Approach for Managing a Heritage Resource*. ORNL/TM-2015/98. September 2015.

ORNL. (2017). *Invasive Plant Management Plan for the Oak Ridge Reservation*. ORNL/TM-2004/98/R2. August 2017.

ORNL. (2020). *Sensitive Resources Assessment and Forest Analysis for the SSP-2A Parcel and Proposed Oak Ridge Enhanced Technology and Training Center (ORETTC), Oak Ridge, Tennessee*. September 2020.

ORNL. (2024). *Bat Acoustic Survey Data Collected June 2024 in and Near Self-Sufficiency Parcel-2 (SSP-2) on the Oak Ridge Reservation (ORR), Oak Ridge, Tennessee*. April 2026. https://www.osti.gov/servlets/purl/33639123912.

ORPD. (2025). *Oak Ridge Police Department Crime and Traffic Analysis (October 1, 2024-March 1, 2025)*. Retrieved October 6, 2026. https://www.oakridgetn.gov/DocumentCenter/View/3282/ORPD-Crash-and-Enforcement-Maps-Jan-Mar-2025-PDF.

PIF. (2024). *Avian Conservation Assessment and Population Estimates Databases*. Partners in Flight. https://pif.birdconservancy.org/avian-conservation-assessment-database-scores/.

Pruitt, L. and TeWinkel, L. (2007). *Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision.* U.S. Fish and Wildlife Service, Fort Snelling, Minnesota. https://iris.fws.gov/APPS/ServCat/DownloadFile/45796?Reference=449405796.

Shannon, G., M. F. McKenna, L. M. Angeloni, K. R. Crooks, K. M. Fristrup, E. Brown, K. A. Warner, M. D. Nelson, C. White, J. Briggs, S. McFarland, and G. Wittemyer. (2015). *A synthesis of two decades of research documenting the effects of noise on wildlife*. Biological Reviews 91(4): 982-1005. https://doi.org/10.1111/brv.12207.

TDEC. (2025a). *Tennessee Department of Environment & Conservation; Tennessee Natural Heritage Review Tool*. ERT Project ID: TNNHP_ERT_1443. Retrieved January 30, 2025, from https://www.tn.gov/environment/natural-areas/what-we-do/rare-species-data.html.

TDEC. (2025b). *Letter Re: Jurisdictional Waters Report (DWR ID No. 34410)*. https://dataviewers.tdec.tn.gov/dataviewers/apex_util.count_click?p_url=BGWPC.GET_HYD_DET_DOCUMENTS?p_file=93011422063903843 2&p_cat=DOCS&p_DOCUMENT_ID=93011422063903843 2&p_user=APEX_PUBLIC_USER&p_workspace=19833722515258996.

Tennessee State Wildlife Action Plan Team. (2025). *Tennessee State Wildlife Action Plan 2025*. Tennessee Wildlife Resources Agency. Nashville, TN.

TNC. (1995). *The Oak Ridge Reservation, Biodiversity, and the Common Ground Process Final Report*. Prepared by The Nature Conservancy for U.S. Department of Energy under contract DE-AC05-840R21400. October 1995.

TWRA. (2026). *Letter to DOE Re: TWRA Environmental Review – Proposed Deed Amendment for Self-Sufficiency Parcel 2 (SSP-2) Industrial Development Project, Roane County, Tennessee.* Tennessee Wildlife Resources Agency. September 21, 2026.

USACE. (2012). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0*. Eds., J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, and C. V. Noble, ERDC/EL TR-12-9, Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USACE. (2025). Memorandum for Record: U.S. Army Corps of Engineers Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of Sackett v. EPA, 143 S. Ct. 1322 (2023). November 2025. https://publibrary.sec.usace.army.mil/api/download?id=b70c9c69-d2f5-48af-f3de-666fc8395767&filename=LRN-2025-00585_20251120_AJD%20TO%20POST.pdf&token=&preview=true.

USDA. (2026). *Web Soil Survey*. United States Department of Agriculture, Natural Resources Conservation Service. https://websoilsurvey.nrcs.usda.gov/.

USGS. (2018). *National Seismic Hazard Model for the Conterminous United States*. U.S. Geological Survey. Available at: https://www.usgs.gov/programs/earthquake-hazards/national-seismic-hazard-model.

USGS. (2020). *Earthquake Catalog Search*. U.S. Geological Survey. Available at: https://earthquake.usgs.gov/earthquakes/search/.

USFWS. (2021). Birds of Conservation Concern 2021, Migratory Bird Program. U.S. Fish and Wildlife Service. May 2021. https://www.fws.gov/media/birds-conservation-concern-2021.

USFWS. (2026a). Information for Planning and Consultation Online Project Planning Tool (IPaC). Retrieved March 18, 2026, from U.S. Fish and Wildlife Service: https://www.nrc.gov/docs/ML2607/ML26077A045.pdf.

USFWS. (2026b). Conservation Strategy for Indiana and Northern Long-eared Bats in the State of Tennes*see (August 2026 v1.0)*. Tennessee Ecological Services Field Office, Cookeville, Tennessee.

APPENDIX A—CORRESPONDENCE

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 16, 2026

Ms. Miranda Montgomery
State Historic Preservation Officer
Tennessee Historical Commission
2941 Lebanon Pike
Nashville, Tennessee 37214

Dear Ms. Montgomery:

PROJECT NUMBER SHPO0007301: NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 COMPLIANCE – NOTIFICATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) for the proposed Site Preparation Activities for Self-Sufficiency Parcel 2 (SSP-2) in Oak Ridge, Tennessee. In accordance with Title 36, Code of Federal Regulations (CFR), Part 800, *Protection of Historic Properties*, this correspondence is official notification to the Tennessee State Historic Preservation Officer (TNSHPO) of the proposed action. SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation. DOE transferred SSP-2 to the Oak Ridge Industrial Development Board, who intends to use SSP-2 for future economic development, including a potential subsequent transfer to a third party to allow for a nuclear development project. To meet requirements of the National Environmental Policy Act of 1969, DOE is preparing an EA to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, U.S. Army Corps of Engineers (USACE) is a cooperating agency on the EA.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee* report, which was completed on October 20, 2025, for the project area. The Phase I survey identified three sites (40RE650, 40RE651, and 40RE655) as potentially eligible for inclusion in the National Register of Historic Places. Subsequently, a Phase II archeological survey was initiated to determine the eligibility of these three sites. The field work required for a Phase II archaeological survey was completed on May 8, 2026. Also enclosed for your review is the *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*. The Management Summary suggests that the research potential of all three sites is exhausted and recommends no further archeological work prior to proposed future land uses.

We determined in accordance with Title 36, CFR, Part 800.3, *Initiation of the section 106 process*, of the Advisory Council on Historic Preservation's regulations for the protection of historic properties, that the proposed actions of DOE and USACE pursuant to section 404 of the Clean Water Act, the undertakings, as defined in Title 36, CFR, Part 800.16, *Definitions*, Section (y), would result in no adverse effect on historic properties pursuant to the Title 36, CFR, Part 800, Subpart B, *The section 106 Process*. DOE and USACE request the concurrence of the TNSHPO with this no adverse effect determination. Simultaneously with this request to the TNSHPO, DOE and USACE are consulting with Tribes that historically lived on the Oak Ridge Reservation to receive their input on the proposed action.

PROJECT NUMBER SHPO0007301: NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 COMPLIANCE – NOTIFICATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.09 14:22:47 -04'00'

Leah M. Alexander
Program Support Branch
Quality and Mission Support Division

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

From:	TN Help
To:	jennifer.barnett@tn.gov
Cc:	Alexander, Leah
Subject:	[EXTERNAL] Conveyance of Self-Sufficiency Parcel to the Industrial Development Board of Oak Ridge - Project # SHPO0007301
Date:	Tuesday, June 16, 2026 3:58:28 PM
Attachments:	Miranda Sig.png image

TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

06-16-2026 14:55:01 CDT

Ms. Leah Alexander
Department of Energy
jennifer.barnett@tn.gov

RE: Department of Energy (DOE), Conveyance of Self-Sufficiency Parcel to the Industrial Development Board of Oak Ridge, Project#: SHPO0007301, Oak Ridge, Roane County, TN

Dear Ms. Leah Alexander:

In response to your request, we have reviewed the cultural resources documentation and determination of No Adverse Effect submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, and in accordance with our previous correspondence dated June 26, 2025, we find that no historic properties eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Please provide your Project # when submitting any additional information regarding this undertaking. Questions or comments may be directed to Jennifer Barnett, who

drafted this response, at Jennifer.Barnett@tn.gov.

Sincerely,



Miranda Montgomery
State Historic Preservation Officer

Ref:MSG18154477_tYSFhuVNcBphLPDCwyB
****
This message does not originate from a known Department of Energy email system.
Use caution if this message contains attachments, links or requests for information.

****

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 15, 2026

The Honorable Bill Anoatubby
Governor Chickasaw Nation
Post Office Box 1548
Ada, Oklahoma 74821

Mr. Kirk Perry
Historic Preservation Executive Officer
Chickasaw Nation
Post Office Box 1548
Ada, Oklahoma 74821

Dear Governor Anoatubby and Mr. Perry:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Chickasaw Nation (CN) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the CN associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the CN that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.10 13:12:18 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

From:	DOCSSP-EM
To:	Fortney, Jill; Hardin, Joanna; Hill, Abby Newberry; Melyssa.Noe.orem.doe.gov; Alexander, Leah
Cc:	DOCSSP-EM
Subject:	FW: ID 13975 FINAL- Invitation of Section 106 Consultation for Proposed Site Preparation Activities of Self-Sufficiency Parcel 2, Oak Ridge Reservation, Roane County, Tennessee
Date:	Friday, June 26, 2026 12:37:28 PM
Attachments:	image001.png

This email transmits official correspondence.

Subject: RE: ID 13975 FINAL- Invitation of Section 106 Consultation for Proposed Site Preparation Activities of Self-Sufficiency Parcel 2, Oak Ridge Reservation, Roane County, Tennessee
Barcode: 4408195796
EMATS: N/A

Thank you,
Karina Dinh
Records Specialist | Management Solutions, LLC
Support Contractor for OREM (EM-94)
Phone: 865.576.2110

Contractor for the Department of Energy
NOTICE: This E-Mail is intended only for the use of the individual(s) or entity to which it is addressed and may contain information that is privileged, company proprietary and exempt from disclosure under applicable laws. If you have received this communication in error, please do not distribute it. Please notify the sender by E-Mail at the address shown and delete the original message.

From: Vanessa Bryant <Vanessa.Bryant@chickasaw.net> **On Behalf Of** HPO
Sent: Friday, June 26, 2026 12:08 PM
To: DOCSSP-EM <DOCSSP-EM@orem.doe.gov>
Cc: hpo <hpo@chickasaw.net>
Subject: [EXTERNAL] RE: ID 13975 FINAL- Invitation of Section 106 Consultation for Proposed Site Preparation Activities of Self-Sufficiency Parcel 2, Oak Ridge Reservation, Roane County, Tennessee

Thank you for your inquiry. We have reviewed the data you provided and determined that we do not request government-to-government consultation on this specific proposed project as it is outside of our area of interest. While the Chickasaw Nation has no objection to the undertaking, we respectfully defer to the federally recognized First American tribe(s) that have identified a connection to the project area. We appreciate your efforts to preserve and protect significant historic properties. If you have any questions, please contact Ms. Karen Brunso, tribal historic preservation officer, at (580) 272-1106 or by email at hpo@chickasaw.net.

From: DOCSSP-EM <DOCSSP-EM@orem.doe.gov>

Sent: Monday, June 15, 2026 1:26 PM
To: Tammy Gray <Tammy.Gray@chickasaw.net>; HPO <HPO@chickasaw.net>
Cc: Beau.Goldstein@nrc.gov; cara.c.beverly@usace.army.mil; timothy.s.dodson@usace.army.mil; DOEIC Distribution List <DOEIC-DL@Science.doe.gov>; Fortney, Jill <Jill.Fortney@science.doe.gov>; Hardin, Joanna <Joanna.Hardin@orem.doe.gov>; Hill, Abby <Abby.Hill@orem.doe.gov>; Noe, Melyssa P <Melyssa.Noe@orem.doe.gov>; Alexander, Leah <Leah.Alexander@orem.doe.gov>; DOCSSP-EM <DOCSSP-EM@orem.doe.gov>
Subject: ID 13975 FINAL- Invitation of Section 106 Consultation for Proposed Site Preparation Activities of Self-Sufficiency Parcel 2, Oak Ridge Reservation, Roane County, Tennessee

CAUTION: This Message Is From an External Source

This message originated outside the Chickasaw Nation. Do not click links or open attachments unless you recognize the sender and know the content is safe!

Report Suspicious

This email transmits official correspondence.

Subject: ID 13975 FINAL- Invitation of Section 106 Consultation for Proposed Site Preparation Activities of Self-Sufficiency Parcel 2, Oak Ridge Reservation, Roane County, Tennessee.

Thank you,
Karina Dinh
Records Specialist | Management Solutions, LLC
Support Contractor for OREM (EM-94)
Phone: 865.576.2110



Contractor for the Department of Energy
NOTICE: This E-Mail is intended only for the use of the individual(s) or entity to which it is addressed and may contain information that is privileged, company proprietary and exempt from disclosure under applicable laws. If you have received this communication in error, please do not distribute it. Please notify the sender by E-Mail at the address shown and delete the original message.

****
This message does not originate from a known Department of Energy email system.
Use caution if this message contains attachments, links or requests for information.
****

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 15, 2026

Mr. Stephen Yerka
Tribal Historic Preservation Specialist
Eastern Band of Cherokee Indians
Qualla Boundary Post Office Box 1927
Cherokee, North Carolina 28719

Ms. Lisa Morris San Souci
Tribal Historic Preservation Officer
Eastern Band of Cherokee Indians
Qualla Boundary Post Office Box 1927
Cherokee, North Carolina 28719

Dear Mr. Yerka and Ms. San Souci:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Eastern Band of Cherokee Indians (EBCI) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the ECBI associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the EBCI that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.15 14:21:21 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 15, 2026

Mr. David W. Hill
Principal Chief
Muscogee Creek Nation
Post Office Box 580
Okmulgee, Oklahoma 74447

Dr. Savannah J. Bronson-Waters
Tribal Historic Preservation Officer
Muscogee Creek Nation
Post Office Box 580
Okmulgee, Oklahoma 74447

Dear Mr. Hill and Dr. Bronson-Waters:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Muscogee Creek Nation (MCN) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the MCN associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the MCN that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER Digitally signed by LEAH ALEXANDER Date: 2026.06.10 13:04:21 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 16, 2026

Mr. Rick Sylestine
Tribal Council Chairman
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, Texas 77351

Mr. Delvin Johnson
Historic Preservation Officer
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, Texas 77351

Dear Mr. Sylestine and Mr. Johnson:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Alabama-Coushatta Tribe of Texas (ACTT) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the ACTT associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the ACTT that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.11 05:37:42 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 16, 2026

Mr. Kristian Poncho
Tribal Historic Preservation Officer
Coushatta Tribe of Louisiana
Post Office Box 10
Elton, Louisiana 70532

Ms. Crystal Williams
Acting Chairman
Coushatta Tribe of Louisiana
Post Office Box 10
Elton, Louisiana 70532

Dear Mr. Poncho and Ms. Williams:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Coushatta Tribe of Louisiana (CTOL) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the CTOL associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the CTOL that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.10 15:26:52 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 16, 2026

Ms. Elizabeth Toombs
Tribal Historic Preservation Officer
Cherokee Nation
Post Office Box 948
Tahlequah, Oklahoma 74465

Dear Ms. Toombs:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Cherokee Nation (CN) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the CN associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the CN that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.15 07:26:19 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 16, 2026

Ms. Glenna J. Wallace
Chief
Eastern Shawnee Tribe of Oklahoma
12755 South 705 Road
Wyandotte, Oklahoma 74370

Ms. Lora Nuckolls
Tribal Historic Preservation Officer
Eastern Shawnee Tribe of Oklahoma
70500 East 128 Road
Wyandotte, Oklahoma 74370

Dear Ms. Wallace and Ms. Nuckolls:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Eastern Shawnee Tribe of Oklahoma (ESTO) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the ESTO associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the ESTO that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.15 07:23:18 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 17, 2026

Ms. Tonya Tipton
Tribal Historic Preservation Officer
Shawnee Tribe
Post Office Box 189
Miami, Oklahoma 74354

Ms. Erin Paden
Tribal Historic Preservation Specialist
Shawnee Tribe
Post Office Box 189
Miami, Oklahoma 74354

Dear Ms. Tipton and Ms. Paden:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Shawnee Tribe (ST) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the ST associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the ST that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.16 10:39:15 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

June 17, 2026

Mr. Roger Cain
Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians
Post Office Box 746
Tahlequah, Oklahoma 74465

Dear Mr. Cain:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the United Keetoowah Band of Cherokee Indians (UKB) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the UKB associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the UKB that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.06.16 10:55:04 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

July 6, 2026

Mr. Jeffery Harjo
Tribal Historic Preservation Officer
Absentee Shawnee Tribe
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Dear Mr. Harjo:

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management and U.S. Army Corps of Engineers Nashville District (USACE) is hereby initiating a government-to-government consultation with the Absentee Shawnee Tribe (AST) pursuant to section 106 of the National Historic Preservation Act (Title 54, U.S. Code, Subsection 306108, *Effect of undertaking on historic property*) and its implementing regulations at Title 36, Code of Federal Regulations, Part 800, *Protection of Historic Properties*. The purpose of this consultation is to discuss the potential effects on historic properties and cultural resources of significance for the AST associated with the proposed site preparation activities by DOE and permit evaluation pursuant to section 404 of the Clean Water Act by USACE at the Self-Sufficiency Parcel 2 (SSP-2). SSP-2 is a 625.04-acre clean parcel of land located in Roane County, Tennessee, on the Oak Ridge Reservation, and is not currently used or needed for the DOE mission. To meet requirements of the National Environmental Policy Act of 1969, DOE will prepare an Environmental Assessment to analyze impacts of site preparation activities, including clearing and grading, for the construction of a uranium enrichment facility on SSP-2. Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, USACE is a cooperating agency on the Environmental Assessment.

Enclosed is the *Phase I Archaeological Survey of the Proposed Self-Sufficiency – 2 (SSP-2) Parcel Land Transfer, Oak Ridge, Tennessee*, and *Management Summary of Phase II Archaeological Testing at Sites 40RE650, 40RE651, and 40RE655, SSP-2, Roane County, Tennessee*, for the project.

DOE and USACE are reviewing the subject project to avoid harm to historic properties in compliance with section 106 of the National Historic Preservation Act. Pursuant to Title 36, Code of Federal Regulations, Part 800.2, *Participants in the Section 106 process*, DOE and USACE invite you to submit comments or concerns that you may have for the site preparation activities at SSP-2 within 30 days from the date of this letter.

INVITATION OF SECTION 106 CONSULTATION FOR PROPOSED SITE PREPARATION ACTIVITIES OF SELF-SUFFICIENCY PARCEL 2, OAK RIDGE RESERVATION, ROANE COUNTY, TENNESSEE

We value your assistance and look forward to consulting further on whether there are historic properties of religious or cultural significance to the AST that may be affected by this project.

If you have any questions, please contact me by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.07.06 12:06:33 -04'00'

Leah M. Alexander
Tribal Liaison Officer

Enclosures (2)

cc w/o enclosures:
Beau Goldstein, NRC
Cara Beverly, USACE
Timothy Dodson, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942
Teresa Robbins, EM-90

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

September 18, 2026

Mr. Joshua Frost, Chief
Regulatory Division
U.S. Army Corps of Engineers
Nashville District
3701 Bell Road
Nashville, Tennessee 37214

Dear Mr. Frost:

INVITATION TO PARTICIPATE AS A COOPERATING AGENCY IN AN ENVIRONMENTAL ASSESSMENT RELATED TO THE ORANO ENRICHMENT USA, LLC REQUEST TO CONSTRUCT AND OPERATE AN ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

The U.S. Department of Energy (DOE) invites the U.S. Army Corps of Engineers (USACE) to participate as a cooperating agency in the DOE Environmental Assessment (EA) regarding Orano Enrichment USA, LLC (Orano) proposed construction and operation of a uranium enrichment facility in Roane County, Tennessee.

The Orano proposed uranium enrichment facility will be located on Self-Sufficiency Parcel 2, which was previously transferred out of DOE ownership with a restricted deed. The DOE Federal action is to add an allowable use to the deed which will authorize Orano to conduct site preparation activities, including clearing and grading. In order to meet requirements of the National Environmental Policy Act of 1969 (NEPA), DOE plans to submit an EA to analyze environmental impacts of site preparation activities for the proposed facility.

Pursuant to section 107(a)(3) of the Fiscal Responsibility Act of 2023, a Federal agency may request another Federal agency having either jurisdiction by law or special expertise regarding any relevant environmental impact to participate in the NEPA process as a cooperating agency. Because of the USACE regulatory authority pursuant to section 404 of the Clean Water Act, over the discharge of dredged or fill material (e.g., soil, rock, debris) into all waters of the United States, DOE is requesting the USACE participation as a cooperating agency.

The DOE consultations will be conducted to the extent of the DOE regulatory authority for the proposed action. DOE will serve as the lead agency for consultation with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act. DOE will conduct consultation for section 106 of the National Historic Preservation Act of 1966, as amended, and is willing to serve as the lead Federal agency, if appropriate, under Title 36, Code of Federal Regulations, Part 800.2(a)(2), *Lead Federal agency*.

INVITATION TO PARTICIPATE AS A COOPERATING AGENCY IN AN ENVIRONMENTAL ASSESSMENT RELATED TO THE ORANO ENRICHMENT USA, LLC REQUEST TO CONSTRUCT AND OPERATE AN ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

DOE estimates issuance of the EA within the timeframes set in NEPA and the DOE NEPA Implementing Procedures (June 16, 2026). Depending on the results of this EA, DOE may determine that a Finding of No Significant Impact is appropriate.

If you have any questions, please contact me by email at Leah.Alexander@doe.gov or by phone at (865) 839-8752.

Sincerely,

THEODORE OLDS
Digitally signed by THEODORE OLDS
Date: 2026.09.18 15:17:31 -04'00'

Theodore E. Olds
Manager

cc:
Samantha Marcum, Navarro
Cara Beverly, USACE
DOE Information Center
Joanna Hardin, EM-94
Abby Hill, EM-942
Melyssa Noe, EM-942

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
REGULATORY DIVISION
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214

September 21, 2026

Mr. Theodore E. Olds
U.S. Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

Dear Mr. Olds:

It is our understanding that the U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, to evaluate potential environmental impacts associated with the proposed Orano Enrichment USA, LLC (Orano) development of a uranium enrichment facility in Oak Ridge, Roane County, Tennessee.

Pursuant to Section 107(a)(3) of the Fiscal Responsibility Act of 2023, DOE invited U.S. Army Corps of Engineers, Nashville District (USACE) to serve as Cooperating Agency in the preparation of the EA. As a cooperating agency, USACE will participate in the environmental evaluation process with DOE acting as Lead Federal Agency.

USACE involvement will entail aspects of the EA relevant to our jurisdiction. Though no direct writing analysis may be required from our agency in the preparation of the EA, we will be providing comments as appropriate. We request to be actively involved in the NEPA process as well as the contents of the document in order for the EA to meet our regulatory needs under NEPA, Clean Water Act, and 33 CFR Parts 330-332.

We look forward to cooperation with DOE in the NEPA/EA process for this project. Though we anticipate our mutual participation will help facilitate the federal environmental permit process, it cannot be interpreted as a guarantee of permit issuance.

If you have any questions concerning this matter, please contact Cara Beverly by telephone (865) 304-1413 or email cara.c.beverly@usace.army.mil .

Sincerely,

Joshua W Frost

Joshua W. Frost
Chief, Regulatory Division
Nashville District

cc:
Leah Alexander, DOE

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

February 3, 2026

Mr. Daniel Elbert, Field Supervisor
U.S. Fish and Wildlife Service
Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, Tennessee 38501

Dear Mr. Elbert:

DESIGNATION OF ORANO ENRICHMENT USA, LLC AS THE NONFEDERAL REPRESENTATIVE FOR THE PROPOSED ORANO URANIUM ENRICHMENT FACILITY IN OAK RIDGE, TENNESSEE

The U.S. Department of Energy (DOE) hereby gives written notice to the U.S. Fish and Wildlife Service (FWS) of the designation of Orano Enrichment USA, LLC (Orano) as its non-Federal representative to conduct informal consultation under Section 7 of the Endangered Species Act of 1973 (ESA), as amended for the Orano proposed uranium enrichment facility to be located in Oak Ridge, Tennessee, pursuant to Title 50, Code of Federal Regulations, Part 402.08, *Designation of non-Federal representative*.

DOE expects to submit an Environmental Assessment to analyze environmental impacts of site preparation activities for the proposed facility to meet requirements of the National Environmental Policy Act of 1969. As part of this analysis, DOE staff must consult with the FWS if the proposed action may affect federally listed species or critical habitats in accordance with ESA, Section 7(a)(2). By designating Orano as the non-Federal representative, Orano will conduct consultation with FWS in accordance with the regulations that guide informal consultation at Title 50, Code of Federal Regulations, Part 402.13, *Informal consultation*. DOE understands the ultimate responsibility for compliance with ESA, Section 7, remains with DOE, as the Federal action agency.

If you have any questions, please contact me via email at Leah.Alexander@orem.doe.gov or via phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.02.03 15:41:19 -05'00'

Leah M. Alexander
Program Support Branch
Quality and Mission Support Division

cc:
Damon Brewer, Orano
Steve Alexander, U.S. Fish and Wildlife Service
DOEIC
Jill Fortney, SC-GCS
Erin Sutton, EM-94

Department of Energy
Oak Ridge Office of Environmental Management
P.O. Box 4067
Oak Ridge, Tennessee 37830

May 26, 2026

Mr. Daniel Elbert
Field Supervisor
Tennessee Ecological Services Field Office
U.S. Fish and Wildlife Service
446 Neal Street
Cookeville, Tennessee 38501

Dear Mr. Elbert:

REQUEST TO INITIATE FORMAL SECTION 7 CONSULTATION RELATED TO A REQUEST FROM ORANO ENRICHMENT USA, LLC TO CONSTRUCT AND OPERATE A URANIUM ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

As the lead Federal agency, the U.S. Department of Energy (DOE) is requesting initiation of formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended Endangered Species Act (ESA), a request from Orano Enrichment USA, LLC (Orano) to construct and operate a uranium enrichment facility in Roane County, Tennessee. This consultation will be jointly conducted among DOE (the lead agency), the U.S. Nuclear Regulatory Commission (NRC), and the U.S. Army Corps of Engineers (USACE) to fulfill each agency's responsibility for compliance with section 7 of the ESA.

The Orano proposed uranium enrichment facility will be located on Self-Sufficiency Parcel 2 (SSP-2), which was previously transferred out of DOE ownership with a restricted deed. The DOE proposed Federal action is to amend the deed to authorize Orano to conduct site preparation activities, including clearing and grading. To meet the requirements of the National Environmental Policy Act of 1969 (NEPA), DOE will prepare an Environmental Assessment to analyze environmental impacts of site preparation and pre-construction activities for the proposed facility.

The NRC Federal action is the decision on whether to grant Orano licenses under Title 10, Code of Federal Regulations (CFR), Part 70, *Domestic Licensing of Special Nuclear Material*, Title 10, CFR, Part 30, *Rules of General Applicability to Domestic Licensing of Byproduct Material*, and Title 10, CFR, Part 40, *Domestic Licensing of Source Material*, which would allow Orano to undertake construction activities with a nuclear safety nexus and to operate the proposed facility. The NRC will also conduct a NEPA review for its proposed action.

Pursuant to section 404 of the Clean Water Act (Title 33, U.S.C., Subsection 1344), the USACE Federal action will be an issuance of a Department of the Army Permit for the discharge of fill material into Waters of the United States associated with construction of the proposed facility and supporting infrastructure. A NEPA review will also be required for the USACE action.

On April 9, 2025, the NRC designated Orano as its non-Federal representative to prepare a Biological Assessment (BA) and conduct informal consultation with the FWS Agencywide Documents Access and Management System (ADAMS) Accession No. ML25083A179. DOE designated Orano as its non-Federal representative on February 5, 2026 (https://doeic.science.energy.gov/uploads/A.0100.009.2998.pdf). In support of consultation on July 30, 2025, and as updated on March 18, 2026, the NRC obtained an official species list from the FWS Information for Planning and Consultation online tool ADAMS Accession No. ML26077A045.

REQUEST TO INITIATE FORMAL SECTION 7 CONSULTATION RELATED TO A REQUEST FROM ORANO ENRICHMENT USA, LLC TO CONSTRUCT AND OPERATE A URANIUM ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

While preparing the BA, the agencies determined that formal consultation was likely needed due to potential impacts to Federally listed and proposed bat species from tree clearing on the SSP-2 site during grading and construction. On February 26, 2026, DOE, NRC, and USACE had a virtual meeting with the FWS to discuss this determination, as well as receive input and approval for the three agencies to conduct joint consultation. The three agencies held a meeting with the FWS on March 26, 2026, to share information on the final tree clearing plans and acreage presented by Orano. During that meeting, the FWS confirmed that formal consultation is appropriate for the proposed actions. Accordingly, DOE and the NRC requested that Orano complete the BA and submit it to the three agencies to support the consultation. This submission, dated May 13, 2026, fulfilled the role by Orano as the non-Federal representative of DOE and NRC.

With this letter, we submit the BA prepared by Orano containing a description of the proposed actions, evaluated species, discussion of effects, and effects determinations for the Federally threatened, endangered, or proposed species with potential to occur within the action area of the project. The following table provides a summary of the three agencies effects determinations for the identified species.

Impact Determinations

Species	Status	Effects Determination
Indiana Bat (*Myotis sodalis*)	Endangered	May affect, likely to adversely affect
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	May affect, likely to adversely affect
Gray Bat (*Myotis grisescens)*	Endangered	May affect, likely to adversely affect
Tricolored Bat (*Perimyotis subflavus)*	Proposed Endangered	May affect, likely to adversely affect
Whooping Crane (*Grus americana*)	Experimental Population, Non-Essential	No effect
Virginia spiraea (*Spiraea virginiana)*	Threatened	No effect
White Fringeless Orchid (*Platanthera integrilabia*)	Threatened	May affect, not likely to adversely affect
Spotfin Chub (*Erimonax monachus*)	Threatened	No effect
Monarch Butterfly (*Danaus plexippus*)	Proposed Threatened	No effect

REQUEST TO INITIATE FORMAL SECTION 7 CONSULTATION RELATED TO A REQUEST FROM ORANO ENRICHMENT USA, LLC TO CONSTRUCT AND OPERATE A URANIUM ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

Construction of the Orano facility would involve clearing approximately 129 acres of forested land. Additionally, approximately 2,650 feet (ft) of streams, 3,300 ft of Wet Weather Conveyance, and 0.46 acres of wetlands, which would equate to a total functional loss of 1,262.7 functional ft, may be impacted due to the facility construction. Impacts would occur within multiple reaches of stream(s) with various flow regimes. A review by DOE, NRC, and USACE of existing data yielded a determination for the proposed actions of, "may affect, likely to adversely affect" for the Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), the tricolored bat (*Perimyotis subflavus*), and the gray bat (*Myotis grisescens*).

The ESA regulations at Title 50, CFR, Part 402.14(a), *Requirement for formal consultation*, stipulate that formal consultation is required when a Federal agency determines that a proposed action "may affect" listed species or critical habitat. Accordingly, DOE, NRC, and USACE request to initiate formal consultation for the Federal actions described above, which would authorize Orano to construct and operate the uranium enrichment facility on the SSP-2 site, in accordance with Title 50, CFR, Part 402.14(c), *Initiation of formal consultation*. Information supporting this request is contained in the May 2026 BA provided by Orano. The BA is available online at: ADAMS Accession No. ML26127A246.

The DOE, NRC, and USACE respectfully request that the FWS initiate formal section 7 of the ESA consultation and begin development of a biological opinion for the proposed uranium enrichment facility by Orano. To ensure the process is aligned with regulatory requirements, the three agencies also request the following as part of the consultation:

- If additional time is necessary beyond the 90-day and 45-day timelines outlined in the regulations, please coordinate with the action agencies within the 90-day consultation window to discuss an updated schedule so we can meet our obligations to notify and, as appropriate, obtain the consent of Orano [Title 50, CFR, Part 402.14(e), *Duration and extension of formal consultation*].
- Please make available a draft biological opinion so that the action agencies and Orano may review it and provide comments [Title 50, CFR, Part 402.14(g)(5), *Service responsibilities*].

We appreciate your review and assistance in this consultation process as DOE, NRC, and USACE fulfill our responsibilities under section 7(a)(2) of the ESA. We are committed to the conservation of Federally listed species that occur on the Oak Ridge Reservation.

REQUEST TO INITIATE FORMAL SECTION 7 CONSULTATION RELATED TO A REQUEST FROM ORANO ENRICHMENT USA, LLC TO CONSTRUCT AND OPERATE A URANIUM ENRICHMENT FACILITY IN ROANE COUNTY, TENNESSEE

If you have any questions, please contact Leah Alexander by email at Leah.Alexander@orem.doe.gov or by phone at (865) 839-8752.

Sincerely,

LEAH ALEXANDER
Digitally signed by LEAH ALEXANDER
Date: 2026.05.20 08:20:11 -04'00'

Leah M. Alexander
Program Support Branch
Quality and Mission Support Division

BRIANA ARLENE
Digitally signed by BRIANA ARLENE
Date: 2026.05.26 06:32:20 -06'00'

Briana S. Arlene
Endangered Species Act Consultation Coordinator
U.S. Nuclear Regulatory Commission

EHORN.CASEY.HOWARD.1279917312
Digitally signed by EHORN.CASEY.HOWARD.1279917312
Date: 2026.05.22 09:49:50 -04'00'

Casey H. Ehorn
Deputy Chief
Regulatory Division, Nashville District
U.S. Army Corps of Engineers

Enclosure:
Orano Enrichment Facility Biological Assessment

cc w/o enclosure:
Madison Polera, FWS
Robbie Sykes, FWS
Patrick Donohue, NRC
Stacey Imboden, NRC
Damon Brewer, Orano
Cara Beverly, USACE
DOE Information Center
Jill Fortney, SC-GCS
Joanna Hardin, EM-94

From:	Sykes, Robbie
To:	DOCSSP-EM
Cc:	patrick.donohue@nrc.g; stacey.imboden@nrc.gov; damon.brewer@orano.group; Beverly, Cara; Fortney, Jill; Hardin, Joanna; DOEIC Distribution List; Butler, Eva P (CONTR); Alexander, Leah; Tennessee ES, FWS
Subject:	Re: [EXTERNAL] ID 13886 FINAL- Request to Initiate Formal Section 7 Consultation Related to a Request from ORANO Enrichment USA, LLC to Construct and Operate a Uranium Enrichment Facility in Roane County, Tennessee
Date:	Friday, June 26, 2026 7:14:33 PM
Attachments:	image001.png

Ms. Alexander,

This email acknowledges the U.S. Fish and Wildlife Service's (Service) May 26, 2026, receipt of your letter and biological assessment (BA) requesting initiation of formal consultation under Section 7 of the Endangered Species Act (ESA). This consultation will be jointly conducted among the Department of Energy (DOE - the lead agency), the U.S. Nuclear Regulatory Commission (NRC), and the U.S. Army Corps of Engineers (USACE) to fulfill each agency's responsibility for compliance with section 7 of the ESA. The consultation concerns the possible effects of the Orano Enrichment USA, LLC's (Orano) proposed construction and operation of a uranium enrichment facility in Roane County, Tennessee, to the likely effects of the proposed Action on the federally endangered Indiana bat *(Myotis sodalis)* and northern long-eared bat *(Myotis septentrionalis)*. On March 9, 2026, the parcel for the proposed project site was transferred to the Oak Ridge Industrial Development Board from DOE. Ultimately, the Facility site was transferred to Orano. The DOE's proposed federal action is to amend the deed, which will authorize Orano to conduct site preparation activities on Self-Sufficiency Parcel 2 (SSP-2), including clearing and grading. The USACE's proposed action is issuance of a 404 permit for the discharge of dredged or fill material into all waters of the United States, including wetlands. The NRC's proposed federal action is to grant Orano licenses under 10 CFR 70, 10 CFR 30, and 10 CFR 40 to construct and operate a gaseous centrifuge enrichment facility at DOE's SSP-2

The associated actions include the clearing and grading of approximately 188 acres within the 649-acre SSP-2 site, which includes approximately 150 acres that are wooded to some extent. All information required of you to initiate consultation was either included with your letter, BA, emails, or is otherwise accessible for our consideration and reference. We have assigned FWS #2026-0018909 to this consultation. Please refer to that number in future correspondence on this consultation.

We also understand that you have determined this project may affect but is not likely to adversely affect (MA-NLAA) the federally threatened white fringeless orchid *(Platanthera intergrilabia)*, and after initial review of the BA and additional coordination with our office, in an email dated June 17, 2026, you have updated the determination to MA-NLAA for the endangered gray bat *(Myotis grisescens)* and no jeopardy for the proposed threatened

tricolored bat *(Perimyotis subflavus)*. Based on a review of our records and the information provided within your biological assessment, the Service concurs with the determinations of MA-NLAA for the white fringeless orchid and gray bat and acknowledge your no jeopardy determination for the tricolored bat. We also understand that you have determined this project will have no effect on the threatened Virginia spiraea *(Spiraea virginiana)*, Spotfin chub *(Erimonax monachus)*, Monarch butterfly *(Danaus plexippus),* and the Experimental Population, non-essential Whooping crane (*Grus americana)*. While the ESA gives federal action agencies the authority to make no effect determinations without additional concurrence from the Service, we certainly appreciate you notifying us of your decision. Informal consultation is concluded for these species for which a MA-NLAA , no jeopardy, or no effect has been made and will not be addressed further in the Service's biological opinion (BO).

Based on the information provided, the Service agrees that the proposed Action may affect and is likely to adversely affect the Indiana bat and northern long-eared bat and that initiation of formal consultation is appropriate for the proposed Action. Section 7 allows the Service up to 90 days to conclude formal consultation with your agency and an additional 45 days to prepare our biological opinion (unless we mutually agree to an extension). We will provide your office with a draft of the BO for review and prior to finalizing the document. Therefore, we anticipate completing the consultation by September 24, 2026, and the final biological opinion by November 8, 2026.

As a reminder, the Endangered Species Act requires that after initiation of formal consultation, the Federal action agency make no irreversible or irretrievable commitment of resources that limits future options. This practice ensures agency actions do not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats.

We appreciate your effort to further the conservation of federally listed species and look forward to working with you in the future. For further discussion, please contact me at robbie_sykes@fws.gov and refer to project code 2026-0018909 for future discussions or written correspondence.

Sincerely,

Robbie Sykes
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
446 Neal Street

From: Alexander, Leah
To: daniel_elbert@fws.gov
Cc: Sykes, Robbie; Hardin, Joanna; Marcum, Samantha (CONTR); Beverly, Cara; briana.arlene@nrc.gov
Subject: SSP-2 ESA
Date: Monday, September 21, 2026 11:35:00 AM

Good morning, Dan,

The U.S. Department of Energy (DOE), U.S. Nuclear Regulatory Commission (NRC), and U.S. Army Corps of Engineers (USACE) request to update information from our previous Section 7 of the Endangered Species Act consultation letters to the U.S. Fish & Wildlife Service (USFWS) dated May 26, 2026, and June 17, 2026, for the proposed uranium enrichment facility development project on Self Sufficiency Parcel-2 (SSP-2) in Oak Ridge, Tennessee. We would like to expand the proposed action area to encompass the entirety of the 625-acre SSP-2 parcel (i.e., Tracts 1A and 1B). We request that the following species' effects determinations are applied across the entire parcel:

1. Indiana bat (Myotis sodalis), federally endangered: May affect, likely to adversely affect; suitable habitat occurs within SSP-2;
2. Northern long-eared bat (Myotis septentrionalis), federally endangered: May affect, likely to adversely affect; suitable habitat occurs within SSP-2;
3. Gray Bat (Myotis grisescens), federally endangered: May affect, but not likely to adversely affect; no caves present for roosting within SSP-2;
4. Tricolored bat (Perimyotis subflavus), federally proposed for listing: No jeopardy; determination based upon species' range and scope of project;
5. White fringeless orchid (Platanthera integrilabia), federally threatened: May affect, but not likely to adversely affect; potential to occur, but no known recent occurrences within or adjacent to SSP-2;
6. Virginia spiraea (Spiraea virginiana), federally threatened: No effect; no known occurrences within or adjacent to SSP-2;
7. Spotfin chub (Erimonax monachus), federally threatened: No effect; no known occurrences or suitable habitat within or adjacent to SSP-2;
8. Monarch butterfly (Danaus plexippus), federally proposed for listing: No effect; no known occurrences within SSP-2;
9. Whooping crane (Grus americana), experimental, non-essential population: No effect; no known occurrences within or adjacent to SSP-2.

For the currently proposed uranium enrichment facility project on SSP-2, the applicant (Orano Enrichment USA LLC) will adhere to the USFWS project-specific Biological Opinion, once issued, in order to minimize, and/or off-set impacts to Indiana bats, northern long-eared bats, and tricolored bats, as applicable.

Please contact me if you have any questions or need further information. Thank you!

Best Regards,

Leah Alexander
U.S. Department of Energy
Oak Ridge Office of Environmental Management
2011 | 865-839-8752

Cookeville, TN 38501
(tele. 931/214-3215)

From: DOCSSP-EM <DOCSSP-EM@orem.doe.gov>
Sent: Tuesday, May 26, 2026 10:03 AM
To: Elbert, Daniel C <daniel_elbert@fws.gov>
Cc: DOCSSP-EM <DOCSSP-EM@orem.doe.gov>; Sykes, Robbie <robbie_sykes@fws.gov>; Mueller, Madison E <madison_mueller@fws.gov>; patrick.donohue@nrc.g <patrick.donohue@nrc.g>; stacey.imboden@nrc.gov <stacey.imboden@nrc.gov>; damon.brewer@orano.group <damon.brewer@orano.group>; cara.c.beverly@usace.army.mil <cara.c.beverly@usace.army.mil>; Fortney, Jill <Jill.Fortney@science.doe.gov>; Hardin, Joanna <Joanna.Hardin@orem.doe.gov>; DOEIC Distribution List <DOEIC-DL@Science.doe.gov>; Butler, Eva P (CONTR) <Eva.Butler@OREM.doe.gov>
Subject: [EXTERNAL] ID 13886 FINAL- Request to Initiate Formal Section 7 Consultation Related to a Request from ORANO Enrichment USA, LLC to Construct and Operate a Uranium Enrichment Facility in Roane County, Tennessee

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

This email transmits official correspondence.

Subject: ID 13886 FINAL- Request to Initiate Formal Section 7 Consultation Related to a Request from ORANO Enrichment USA, LLC to Construct and Operate a Uranium Enrichment Facility in Roane County, Tennessee

Attached is your distribution copy for the above subject.

Thank you,

Benita Bunch
Records Specialist | Management Solutions, LLC
Support Contractor for OREM (EM-94)
Phone: 865.576.2110



Contractor for the Department of Energy
NOTICE: This E-Mail is intended only for the use of the individual(s) or entity to which it is addressed and may contain information that is privileged, company proprietary and exempt from disclosure under applicable laws. If you have received this communication in error, please do not distribute it. Please notify the sender by E-Mail at the address shown and delete the original message.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, Tennessee 38501
(931) 528-6481

October 27, 2026

Ms. Leah Alexander
Program Support Branch, Quality and Mission Support Division
Office of Environmental Management
Department of Energy
Oak Ridge, Tennessee

Subject: FWS# 2026-0018909: Completion of ESA Section 7(a)(2) Consultation for DOE/NRC/USACE Actions Associated with Project IKE at SSP-2; Implementation of the Tennessee Bat Conservation Strategy and Programmatic Biological Opinion

Dear Ms. Alexander:

The U.S. Fish and Wildlife Service (Service) has reviewed the Department of Energy's (DOE), the U.S. Nuclear Regulatory Commission's (NRC), and the U.S. Army Corps of Engineers' (USACE) request for formal Section 7 consultation under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) for project IKE – the proposed construction and operation of the Orano Enrichment USA, LLC's (Orano) uranium enrichment facility on Self-Sufficiency Parcel 2 (SSP-2) in Oak Ridge, Tennessee. The proposed action involves amending the allowable uses of the SSP-2 deed enabling industrial and commercial use activities on the parcel, licensing under 10 CFR 30, 40, and 70 authorizing the construction and operation of a uranium enrichment facility and permitting under Section 404 and 401 of the Clean Water Act to address impacts to wet weather conveyances, intermittent/permanent waterways, and wetlands resulting from construction activities. Consultation included review of Biological Assessment submitted by DOE/NRC/USACE and prepared by Orano, updated species-effects determinations provided by DOE/NRC/USACE, and the *Conservation Strategy for Indiana and Northern Long-eared Bats in Tennessee*[1] (Conservation Strategy) and its 2026 Programmatic Biological Opinion[2].

This letter documents the Service's complete ESA Section 7(a)(2) consultation for DOE's deed amendment, NRC's licensing actions, and USACE's Clean Water Act Section 404 permitting for the proposed facility.

Federally Listed and Proposed Species
An official species list was obtained from the Service's Information for Planning and Consultation (IPaC) website on March 18, 2026, to determine the federally listed and proposed

[1] U.S. Fish and Wildlife Service. 2026. *Conservation Strategy for Indiana and Northern Long-eared Bats in the State of Tennessee.* Tennessee Ecological Services Field Office, Southeast Region, Cookeville, TN.

[2] U.S. Fish and Wildlife Service. 2026 Biological Opinion: Conservation Strategy for Indiana and Northern Long-eared Bats in Tennessee. FWS Ecosphere Project Code: 2025-0119695.

species that are known to occur or have the potential to occur within the action area. The following federally listed and proposed species have the potential to occur within the action area:

- Gray bat (*Myotis grisescens*) – Endangered
- Indiana bat (*Myotis sodalis*) – Endangered
- Northern long-eared bat (*Myotis septentrionalis*) – Endangered
- Tricolored bat (*Perimyotis subflavus*) – Proposed Endangered
- Whooping crane (*Grus americana*) – Experimental Population, Non-Essential
- Spotfin chub (*Erimonax monachus*) – Threatened
- Monarch butterfly (*Danaus plexippus*) – Proposed Threatened
- Virginia spiraea (*Spiraea virginiana*) – Threatened
- White fringeless orchid (*Platanthera integrilabia*) – Threatened

Effect Determinations

Whooping Crane, Spotfin Chub, and Virginia Spiraea – No Effect
DOE, NRC, and USACE have determined that the proposed action will have "no effect" on the whooping crane, spotfin chub, or Virginia spiraea because none of these species have suitable habitat or expected occurrence in the action area. There is no requirement to request concurrence with "no effect" determinations; however, the Service acknowledges this determination and has no additional comments regarding these species.

Tricolored Bat and Monarch Butterfly – Not Likely to Jeopardize the Continued Existence
DOE, NRC, and USACE made a "not likely to jeopardize the continued existence" of the proposed endangered tricolored bat based on the scope of the project, potential impacts, and the species range. Suitable tricolored bat roosting and foraging habitat is present within the action area, and multiple bat surveys of SSP-2 conducted in June 2024 documented species presence within the action area. Due to Orano's commitment to clear trees during the non-breeding season, the small size of the action area in relation to the species' range, and the small number of individuals that could potentially be affected by the actions relative to the overall species population, potential effects to the tricolored bat from removal of suitable forested habitat are anticipated to be minimal. Based on the minimal effects resulting from the proposed action, the Service concurs with this determination.

DOE, NRC, and USACE evaluated potential effects to the monarch butterfly and concluded that the proposed action is not likely to adversely affect (NLAA) the species due to the absence of suitable habitat (i.e., milkweed and nectar resources) within the action area. Because the monarch butterfly is a federally proposed species, the Service's concurrence framework follows ESA Section 7(a)(4), which requires the agency to determine whether the action is likely or not likely to jeopardize the continued existence of the species, rather than applying the NLAA/LAA framework used for listed species under informal consultation. Based on the lack of suitable habitat and the Biological Assessment's finding that any effects would be insignificant or discountable, the Service concurs that the proposed action is not likely to jeopardize the continued existence of the monarch butterfly.

Gray Bat and White Fringeless Orchid – May Affect, But Not Likely to Adversely Affect
DOE, NRC, and USACE updated the gray bat determination to "may affect, not likely to

adversely affect", supported by the absence of caves or karst features on SSP-2. Suitable gray bat foraging habitat is present within the action area. Gray bats have been documented on SSP-2 through acoustic surveys conducted in June 2024, consistent with prior acoustic and mist-net detections of the species on the Oak Ridge Reservation. Due to the absence of caves or karst features present at the project site and no known gray bat hibernacula or roost sites within a five-mile radius of the project area, implementation of Orano's proposed conservation measures and best management practices, and abundant adjacent foraging habitat, the Service concurs with this determination.

DOE, NRC, and USACE have determined that the proposed action may affect, but is not likely to adversely affect the white fringeless orchid, due to the absence of suitable habitat presence within the action area. Protocol-level presence and absence surveys and sediment-control best management practices will avoid and minimize impacts. The Service concurs with this determination.

<u>Indiana Bat and Northern Long-Eared Bat – May Affect and Likely to Adversely Affect</u>
DOE/NRC/USACE made a "may affect and likely to adversely affect" determination for the Indiana bat and northern long-eared bat, because suitable roosting and foraging habitat is present, these species have consistently been detected within the action area during multiple survey efforts since 2013, and tree removal may result in adverse effects. No critical habitat is present within the action area.

Based on the information provided, DOE proposes to amend the allowable uses of the 625.04-acre SSP-2 parcel to allow for industrial and commercial uses. The Biological Assessment describes an action area in the southwestern portion of SSP-2. Site preparation activities include tree clearing and grading that will remove approximately 128 acres of forested habitat to support project IKE, during the bat hibernation window between November 16, 2026, and March 31, 2027. The Service concurs with your "may affect and likely to adversely affect" determinations for these species.

Conservation Measures
Orano proposes the following conservation measures and best management practices, as identified in the Biological Assessment and written correspondence:

Long-term, landscape-scale protection
- Long-term management and protection of remaining undisturbed habitat (~400 acres) on SSP-2 to preserve bat roosting, foraging and travel corridors.

Avoidance measures
- No tree clearing or vegetation removal during the bat pup season (May 15 – July 31).\
- Clearly mark all clearing limits to prevent disturbance outside the approved work areas.
- Avoid any impact on streams.

Minimization of habitat impacts
- Retention of forest patches wherever possible to minimize habitat fragmentation.
- Revegetation of disturbed areas with native plant species.
- Installation of artificial bat roosting structures.

Species-specific surveys

- Presence/absence surveys for white fringeless orchid prior to any tree clearing.

Minimization of soil disturbance and erosion

- Dust suppression and sedimentation control during construction.
- Construction of a temporary sediment capture pond.
- Keep downed trees in place until they can be mulched.

Implementation, training, and adaptive management

- Environmental awareness training for construction crews and facility staff.
- Designated environmental monitor to oversee implementation of conservation measures.
- Limiting nighttime lighting and directing lights downward.
- Regular coordination with the Service and adaptive management if new bat presence or roost locations are identified.

Orano also requested to make a voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) on August 10, 2026, to address adverse effects to Indiana bat and the northern long-eared bat through the associated 2026 Biological Opinion. Under the Service's Conservation Strategy, IBCF contributions are an accepted recovery focused conservation option for small or time-sensitive projects. Funds are directed to permanent protection, restoration, or enhancement of forested bat habitat in Tennessee, prioritized to Conservation Opportunity Areas that include the SSP-2 landscape (e.g., Catoosa/Emory River and Berry Cave Salamander COAs that extend into Roane County). The 2026 Biological Opinion supports the Conservation Strategy and determined that suitable forested habitat removal is likely to adversely affect these species but is not likely to jeopardize their continued existence. The Service has determined that the proposed action is consistent with the actions evaluated in the 2026 Biological Opinion, and that the take exemptions for these species in the Biological Opinion are applicable to the proposed action.

The Service has also determined that the proposed IBCF contribution is appropriate to compensate for adverse effects to these species. Using the Strategy's habitat definitions the SSP-2 site is classified as "Summer 1" habitat for Indiana bat and northern long-eared bat. Suitable roosting and foraging habitat are abundant, and the presence of these species is confirmed by multiple survey records. In accordance with the Strategy's standardized approach, we applied the formula: Conservation Amount = (Suitable Bat Habitat Acres Impacted) × (Applicable Multiplier) × (Applicable USDA Land Value Rate). This ensures commitments are proportional to risk based on habitat type and seasonal timing. Applying the applicable multipliers, the conservation amount required for this project is $1,180,800.00.

Species	**Habitat Type Impacted**	**Impact Acres**	**Impact Timeframe**	**Conservation Multiplier**	**USDA Land Value**	**Conservation Amount**
Indiana bat	Summer 1	128	Hibernation	1.5	$6,150.00/acre	$1,180,800.00
Northern Long-eared bat						

For the proposed action at SSP-2, participation in the Conservation Strategy and use of IBCF as the recovery focused conservation option satisfies ESA Section 7(a)(2) by ensuring effects are minimized and mitigated consistent with the Biological Opinion and its Incidental Take Statement. The Biological Opinion exempts incidental take up to the program limits, establishes annual impact caps, and specifies monitoring and reinitiation triggers. Therefore, incidental take

of these species from forested habitat removal associated with the proposed action is not prohibited.

Orano completed payment of their voluntary contribution to the Imperiled Bat Conservation Fund on October 27, 2026 to Kentucky Natural Lands Trust (KNLT), as the fund administrator, to receive and manage the contribution consistent with the Imperiled Bat Conservation Fund framework.

Completion of Consultation
ESA Section 7(a)(2) consultation for DOE's deed amendment, NRC's licensing actions, and USACE's permitting is complete under the 2026 Programmatic Biological Opinion.

Reinitiation triggers
As written in 50 CFR Section 402.16 and the 2026 Programmatic Biological Opinion, reinitiation of consultation is required and shall be requested by the DOE/NRC/USACE or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

a) the amount or extent of taking specified in the incidental take statement is exceeded;
b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
c) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or
d) a new species is listed or critical habitat designated that may be affected by the identified action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take may not be exempted from section 9 prohibitions [16 U.S.C. §1538] until reinitiation is complete.

If incidental take exceeds exempted levels, operations causing such take must cease until reinitiation is complete.

The Service appreciates DOE's coordination and Orano's voluntary participation in the Conservation Strategy in support of Project IKE. Please contact the Tennessee Ecological Services Field Office with any questions or needs as implementation proceeds.

Sincerely,
DANIEL ELBERT
Digitally signed by DANIEL ELBERT
Date: 2026.10.27 09:49:33 -05'00'
Field Supervisor

CC:
Briana Arlene, Endangered Species Consultation Coordinator, NRC
Cara Beverly, Section 408 Coordinator, Nashville District, USACE

Environmental Review Report

Project Information

Report Generation Date:	1/30/2025 10:04 am
Project Name:	Oak Ridge - SAM Project
User-defined Project ID:	347-046
ERT Project ID:	TNNHP_ERT_1443
Project Size:	668.28 acres
County(s):	Roane
State:	TN
TN Physiographic Province:	Ridge And Valley
Watershed(s) HUC 8:	• 06010207
Watershed(s) HUC 12:	• 060102070302 (East Fork Poplar Creek)
Latitude, Longitude (Decimal Degrees):	35.953786 / -84.352794

Contact Information

Organization:	Civil and Environmental Consultants, Inc.
Name:	Sarah Rowe
Phone:	8659779997
Email:	SROWE@CECINC.COM
Address:	2704 Cherokee Farm Way, Knoxville, TN 37920

Project Description

Site is being evaluated for development.

This report is based on documented occurrences in the vicinity of your project area. As all areas of the state have not been surveyed for rare species, this report only serves as guidance as to what rare species could occur onsite.

The Tennessee Department of Environment and Conservation - Division of Natural Areas (TDEC-DNA) currently tracks over 1,100 rare and endangered plant and animal species as well as hundreds of conservation sites across the state. The Division and other scientists collect this information through ongoing research and field investigations and from scientific literature, museum collections, and other sources. We continually analyze and update the database. The data are not only important in identifying areas of ecological significance for conservation and restoration activities, but are also useful in the environmental review process.

Additional Information about the TDEC Division of Natural Areas can be found here: https://www.tn.gov/environment/program-areas/na-natural-areas.html

The following report and agency comments are based on a query of the TDEC-DNA rare species database and associated geographic information with regard to the project information you submitted through the Environmental Review Tool.

Please note that although TDEC-DNA manages data for state and federally listed plant and animal species in Tennessee, **the Tennessee Wildlife Resources Agency (TWRA) has legal authority over wildlife** and **the U.S. Fish and Wildlife Service (USFWS) has legal jurisdiction over all federally listed species**. Furthermore, both agencies may possess additional data of which we are unaware or have additional concerns not addressed herein. TDEC Division of Water Resources (TDEC-DWR) is the state authority for all Waters of the State. As such, we ask that you coordinate your project with these entities (where appropriate) and any other relevant federal, state, or local authorities beyond your coordination with TDEC-DNA. We encourage you to share this report from the TDEC-DNA rare species database when coordinating with other agencies.

Thank you for considering Tennessee's rare species throughout the planning of this project. Should you have any questions, please do not hesitate to contact our office at 615-532-4799 or environmental.review@tn.gov.

Managed Areas within 1 Mile of the Project Area

Area Name	Manager
Doe Oak Ridge Reservation	
Orr Black Oak Ridge Conservation Easement	

Rare Species Occurrences within 1 Mile of the Project Area

Type	Scientific Name	Common Name	Global Rank	State Rank	Fed. Protection	State Protection	Habitat
Vascular Plant	Elodea nuttallii	Nuttall's Waterweed	G5	S2	--	S	Aquatic; Streams And Ponds
Vascular Plant	Juncus brachycephalus	Small-headed Rush	G5	S2	--	S	Seeps And Wet Bluffs
Vascular Plant	Liparis loeselii	Fen Orchis	G5	S1	--	T	Calcareous Seeps
Vascular Plant	Platanthera flava var. herbiola	Tubercled Rein-orchid	G4?T4Q	S2	--	T	Swamps And Floodplains
Vertebrate Animal	Aneides aeneus	Green Salamander	G3G4	S3S4	--	Rare, Not State Listed	Damp crevices in shaded rock outcrops and ledges; beneath loose bark and cracks of trees and sometimes in/or under logs.
Vertebrate Animal	Chrosomus tennesseensis	Tennessee Dace	G3	S3	--	D	First order spring-fed streams of woodlands in Ridge and Valley limestone region; Tennessee River watershed.

Vertebrate Animal	Hemidactylium scutatum	Four-toed Salamander	G5	S3	--	D	Woodland swamps, shallow depressions, & sphagnum mats on acidic soils; middle & east Tennessee.
Vertebrate Animal	Hemitremia flammea	Flame Chub	G3	S3	--	D	Springs and spring-fed streams with lush aquatic vegetation; Tennessee & middle Cumberland river watersheds.
Vertebrate Animal	Limnothlypis swainsonii	Swainson's Warbler	G4	S3	--	D	Mature, rich, damp, deciduous floodplain and swamp forests.
Vertebrate Animal	Ophisaurus attenuatus longicaudus	Eastern Slender Glass Lizard	G5T5	S3	--	D	Dry upland areas including brushy, cut-over woodlands and grassy fields; nearly statewide but obscure; fossorial.
Vertebrate Animal	Peucaea aestivalis	Bachman's Sparrow	G3	S1B	--	E	Dry open pine or oak woods; nests on the ground in dense cover.

Vertebrate Animal	Pituophis melanoleucus melanoleucus	Northern Pinesnake	G4T4	S3	--	T	Well-drained sandy soils in pine/pine-oak woods; dry mountain ridges; E portions of west TN, E to lower elev of the Appalachians.
Vertebrate Animal	Synaptomys cooperi	Southern Bog Lemming	G5	S4	--	D	Marshy meadows, wet balds, & rich upland forests.

Rare Species Occurrences within 4 Miles of the Project Area

Type	Scientific Name	Common Name	Global Rank	State Rank	Fed. Protection	State Protection	Habitat
Vascular Plant	Aureolaria patula	Spreading False-foxglove	G3	S3	--	S	Oak Woods And Edges
Vascular Plant	Bolboschoenus fluviatilis	River Bulrush	G5	S1	--	S	Marshes
Vascular Plant	Delphinium exaltatum	Tall Larkspur	G3	S2	--	E	Glades And Barrens
Vascular Plant	Diervilla lonicera	Northern Bush-honeysuckle	G5	S2	--	T	Rocky Woodlands And Bluffs
Vascular Plant	Draba ramosissima	Branching Whitlow-grass	G4	S2	--	S	Calcareous Bluffs
Vascular Plant	Elodea nuttallii	Nuttall's Waterweed	G5	S2	--	S	Aquatic; Streams And Ponds
Vascular Plant	Fothergilla major	Mountain Witch-alder	G3	S2	--	T	Rocky Slopes And River Banks
Vascular Plant	Helianthus occidentalis	Naked-stem Sunflower	G5	S2	--	S	Limestone Glades And Barrens
Vascular Plant	Juglans cinerea	Butternut	G3	S3	--	T	Rich Woods And Hollows
Vascular Plant	Juncus brachycephalus	Small-headed Rush	G5	S2	--	S	Seeps And Wet Bluffs
Vascular Plant	Liparis loeselii	Fen Orchis	G5	S1	--	T	Calcareous Seeps

Vascular Plant	Platanthera flava var. herbiola	Tubercled Rein-orchid	G4?T4Q	S2	--	T	Swamps And Floodplains
Vascular Plant	Pseudognaphalium helleri	Heller's Catfoot	G4G5	S2	--	S	Dry Sandy Woods
Vascular Plant	Spiranthes lucida	Shining Ladies'-tresses	G4	S1S2	--	T	Alluvial Woods And Moist Slopes
Invertebrate Animal	Cambarus deweesae	Valley Flame Crayfish	G4	S1	--	E	Primary burrower; open areas with high water tables; northern Ridge & Valley.
Invertebrate Animal	Cyprogenia stegaria	Fanshell	G1	S1	LE, XN	E	Medium to large streams and rivers with coarse sand and gravel substrates; Cumberland and Tennessee river systems.
Invertebrate Animal	Fusconaia cor	Shiny Pigtoe	G1	S1	LE, XN	E	Shoals and riffles of small-medium sized rivers with mod-fast current over sand-cobble substrates; upper Tennessee River watershed.

Invertebrate Animal	Fusconaia cuneolus	Finerayed Pigtoe	G1	S1	LE, XN	E	Riffles of fords and shoals of mod gradient streams in firm cobble and gravel substrates; middle & upper Tennessee River watershed.
Invertebrate Animal	Io fluvialis	Spiny Riversnail	G1G2	S2	--	Rare, Not State Listed	Shallow waters of shoals that are rapid to moderate and well-oxygenated; Tennessee River & main tributaries; E Tennessee.
Invertebrate Animal	Lampsilis abrupta	Pink Mucket	G1G2	S2	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.

Invertebrate Animal	Margaritifera monodonta	Spectaclecase	G2	S2S3	LE	E	Medium to large rivers; in substrates from mud and sand to gravel, cobble, and boulders; Cumberland and Tennessee river systems.
Invertebrate Animal	Obovaria retusa	Ring Pink	G1	S1	LE,XN	E	Large rivers in gravel and sand bars; Tennessee & Cumberland river watersheds; many historic locations currently inundated.
Invertebrate Animal	Plethobasus cooperianus	Orangefoot Pimpleback	G1	S1	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.
Invertebrate Animal	Plethobasus cyphyus	Sheepnose	G2G3	S2S3	LE	E	Large to medium-sized rivers, in riffles and coarse sand/gravel subst; TN & Cumb river systems incl KY Reservoir; W Uplands & Rim.

Invertebrate Animal	Pleurobema rubrum	Pyramid Pigtoe	G2	S1S2	PT	Rare, Not State Listed	Rivers with strong current and firm sand/gravel substrates; TN & Cumb river systems incl KY Reservoir; W Uplands & W Highland Rim.
Invertebrate Animal	Theliderma cylindrica strigillata	Rough Rabbitsfoot	G3T2	S2	LE	E	Small-medium sized rivers, in clear, shallow riffles with sand-gravel substrates; Tenn. & Cumb. river systems; upland form.
Vertebrate Animal	Aneides aeneus	Green Salamander	G3G4	S3S4	--	Rare, Not State Listed	Damp crevices in shaded rock outcrops and ledges; beneath loose bark and cracks of trees and sometimes in/or under logs.
Vertebrate Animal	Chrosomus tennesseensis	Tennessee Dace	G3	S3	--	D	First order spring-fed streams of woodlands in Ridge and Valley limestone region; Tennessee River watershed.

Vertebrate Animal	Cryptobranchus alleganiensis	Hellbender	G3	S3	--	E	Rocky, clear creeks and rivers with large shelter rocks.
Vertebrate Animal	Hemidactylium scutatum	Four-toed Salamander	G5	S3	--	D	Woodland swamps, shallow depressions, & sphagnum mats on acidic soils; middle & east Tennessee.
Vertebrate Animal	Hemitremia flammea	Flame Chub	G3	S3	--	D	Springs and spring-fed streams with lush aquatic vegetation; Tennessee & middle Cumberland river watersheds.
Vertebrate Animal	Limnothlypis swainsonii	Swainson's Warbler	G4	S3	--	D	Mature, rich, damp, deciduous floodplain and swamp forests.
Vertebrate Animal	Myotis grisescens	Gray Myotis	G3G4	S2	LE	E	Cave obligate year-round; frequents forested areas; migratory.
Vertebrate Animal	Ophisaurus attenuatus longicaudus	Eastern Slender Glass Lizard	G5T5	S3	--	D	Dry upland areas including brushy, cut-over woodlands and grassy fields; nearly statewide but obscure; fossorial.

Vertebrate Animal	Peucaea aestivalis	Bachman's Sparrow	G3	S1B	--	E	Dry open pine or oak woods; nests on the ground in dense cover.
Vertebrate Animal	Pituophis melanoleucus melanoleucus	Northern Pinesnake	G4T4	S3	--	T	Well-drained sandy soils in pine/pine-oak woods; dry mountain ridges; E portions of west TN, E to lower elev of the Appalachians.
Vertebrate Animal	Setophaga cerulea	Cerulean Warbler	G4	S3B	--	D	Mature deciduous forest, particularly in floodplains or mesic conditions.
Vertebrate Animal	Sorex dispar	Long-tailed Shrew	G4	S2	--	D	Mountainous, forested areas with loose talus; east Tennessee.
Vertebrate Animal	Synaptomys cooperi	Southern Bog Lemming	G5	S4	--	D	Marshy meadows, wet balds, & rich upland forests.
Animal Assemblage	Rookery	Heron Rookery	G5	SNR	--	Rare, Not State Listed	

You can consult the TN Rare Plant List and the TN Rare Animal List at the Natural Heritage Inventory Program web page: https://www.tn.gov/environment/program-areas/na-natural-areas/na-natural-heritage-inventory-program.html

Additional information regarding rare species can be found in NatureServe Explorer: https://explorer.natureserve.org

Additional information regarding federally listed species can be found at USFWS ECOS:

https://ecos.fws.gov/ecp

Full details regarding global/state ranks and fed/state protection can be found here: https://www.tn.gov/content/dam/tn/environment/natural-areas/documents/na_status-ranks.pdf

User-Submitted Responses

Project Type:	Industrial Development
Will this project require damage to or destruction of native vegetation outside of a maintained right-of-way, manicured/mowed lawn, or garden?:	Uncertain
Will this project impact wetlands or jurisdictional streams as defined by TDEC Division of Water Resources?:	Uncertain
Is any portion of the project area on land owned by the State of Tennessee or the U.S. Federal Government?:	No
Will this review be used for certification in the Tennessee Department of Economic and Community Development's Select TN Certified Sites Program?:	No
Is this project publicly-funded or supported by a publicly-funded grant?:	No
Is this environmental review being requested to fulfill requirements of a TDEC permit application?:	Uncertain

COMMENTS REGARDING USER-SUBMITTED RESPONSES

TDEC-DNA does not have any comments regarding the User-Submitted Responses for this project. See comments regarding Managed Areas and Rare Plant Species in the sections below.

COMMENTS REGARDING NEARBY MANAGED AREAS

Our query indicates that a managed area is within 1 mile of the project area. Please note that there are frequently increased protections for rare species within publicly owned parks and properties and that jurisdictional considerations beyond those of a typical review are necessary. It is your responsibility to ensure any such areas in your project area are correctly identified and that appropriate coordination is conducted.

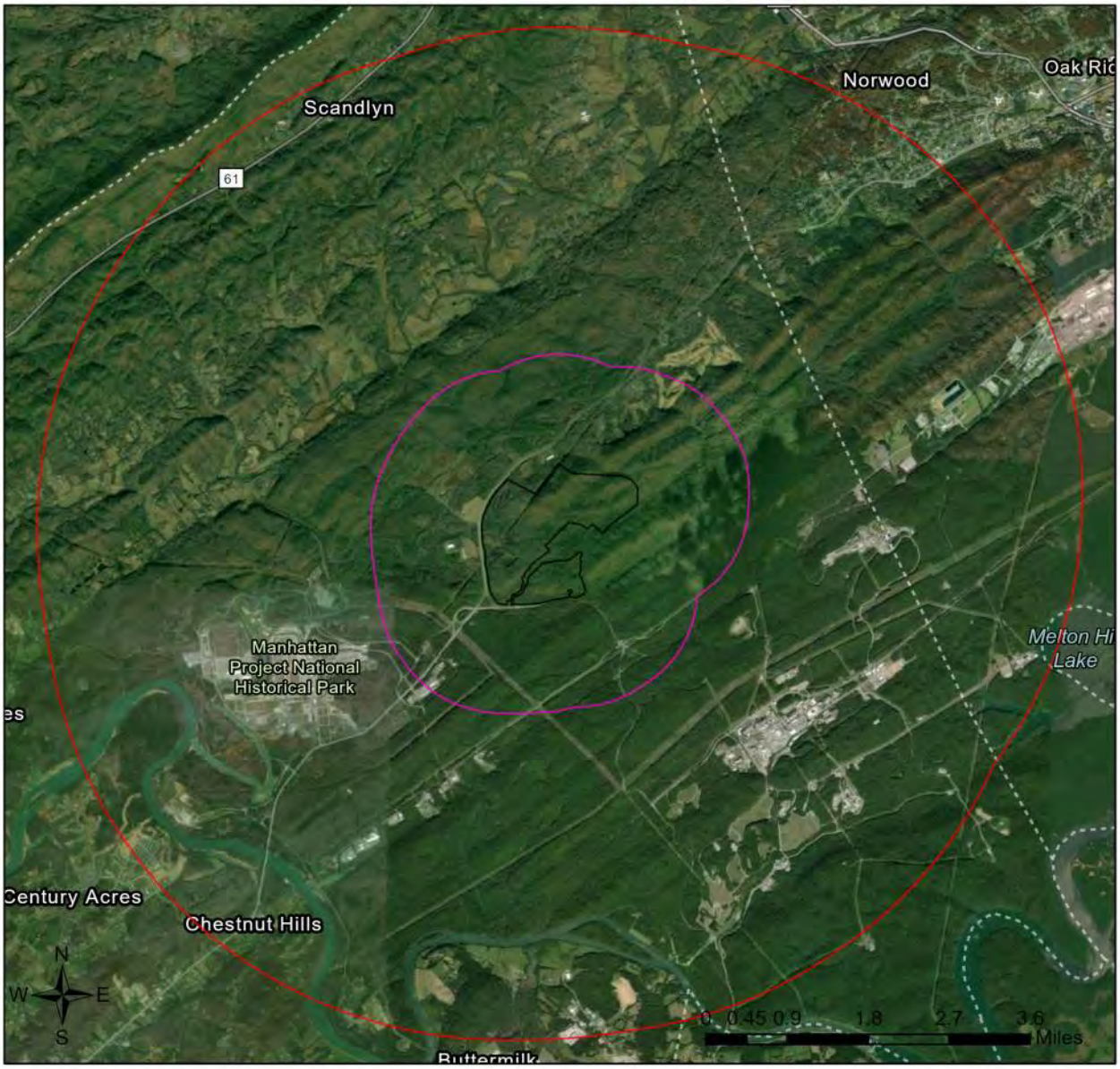
COMMENTS REGARDING POTENTIAL IMPACTS TO RARE PLANT SPECIES

Where suitable habitat is present any of the rare plant species known from within four miles of the project area may occur at the site. If suitable habitat is present, an appropriately timed survey by a qualified biologist would be necessary to identify and avoid impacting rare plant species at the site. Appendix A and Appendix B are provided at the end of this report to assist with addressing this comment.

IMPORTANT: One or more rare plant species or rare ecological communities have been documented within the immediate vicinity of the project boundary. So that our office may further assist you, please send a copy of this report as an attachment to the Environmental Review Coordinator at environmental.review@tn.gov, making sure to include the Project Tracking Number and Project Name in the subject line of your email. We will respond with additional information regarding the nearby records identified by the ERT.

Oak Ridge - SAM Project

Aerial Image Basemap With Locator Map



Project Boundary

Buffered Project Boundary 4 Mile

Buffered Project Boundary 1 Mile

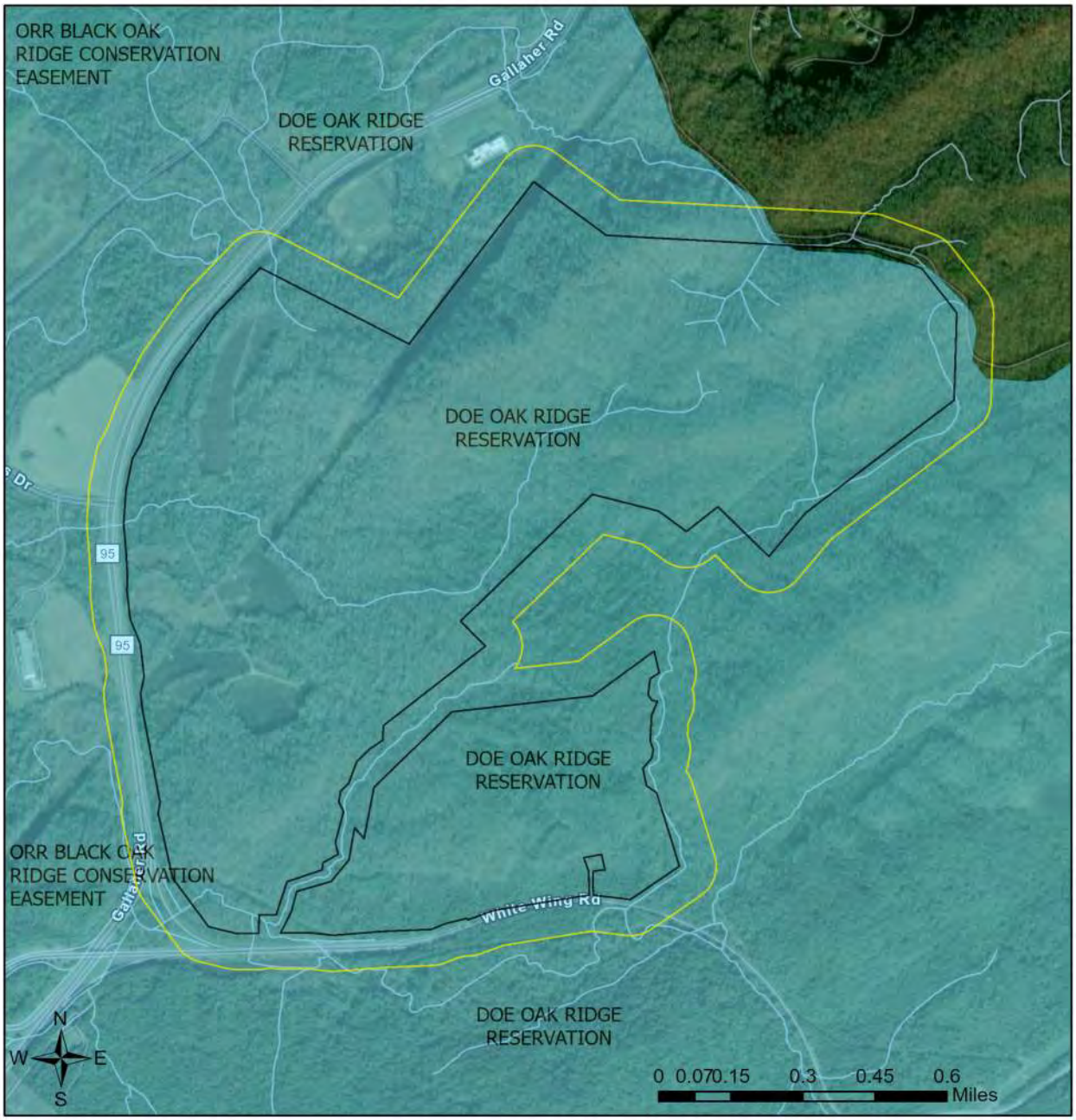


Project Size (acres): 668.28
Lat/Long (DD): 35.9538 / -84.3528
Lat/Long (DMS): 35° 57' 13.6303" N / 84° 21' 10.569" W
County(s): ROANE
Watershed (HUC12): 060102070302
USGS Quad(s): BETHEL-VALLEY

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Earthstar Geographics
Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Oak Ridge - SAM Project

Map Image with Special Areas



Contacts

USFWS

If your project review list includes federally listed plant or animal species, and you would like a review from the U.S. Fish and Wildlife Service, please follow the instructions for submitting a review request provided at https://www.fws.gov/media/tn-es-project-review-requests-guidance.

TWRA

Environmental reviews are coordinated by TWRA via regional habitat protection biologists. You can request an environmental review from TWRA by using the TWRA Environmental Review Request Form (arcgis.com). If you have additional questions or need to follow up on a request, the appropriate TWRA contact for this project is listed below. When project areas include two TWRA regions, both staff members are listed.

Bobby Brown

TWRA Region for this Project:	Region 3
TWRA Region Contact for this Project:	Bobby Brown
Address:	464 Industrial Boulevard, Crossville, TN 38555
Email Address:	Bobby.Brown@tn.gov

TDEC Environmental Field Office

The nearest Environmental Field Office (EFO) should be your starting point for any environmental question. Each EFO is staffed with technical staff who are available to assist with permitting needs, outreach functions, and general guidance. If water resources - including streams, wetlands, or riparian areas - are to be impacted by the project, you can also coordinate with TDEC Division of Water Resources via the appropriate Environmental Field Office or Permitting Unit.

KNOXVILLE

TDEC Environmental Field Office for this Project:	KNOXVILLE
Address:	3711 Middlebrook Pike, Knoxville, TN 37921
Phone number:	(888) 891-8332

Appendix A: TDEC-DNA ERT Self-Certification (Rare Plant Species)

For individuals or agencies that wish to document their use of the ERT, this self-certification can help with using the ERT Report to evaluate potential impacts to rare plant species. If the ERT Report section Comments Regarding Potential Impacts to Rare Plant Species indicates that “One or more rare plant species or rare ecological communities have been documented within the immediate vicinity of the project boundary…” we suggest contacting TDEC Division of Natural Areas for further consultation via the method described in the ERT Report prior to using this self-certification.

STEP 1

In consultation with TDEC-Division of Natural Areas via the ERT Report, I have reviewed the rare species documented within 1- and 4- miles of the project area and compared their habitat requirements to the habitat present at the project site.

Based on my survey of the project area or a survey by a qualified biologist (SELECT ONE):

____ Habitat for rare plant species known from within 4-miles of the project area IS present in the project area. (Go to STEP 2)

OR

____ Habitat for rare plant species known from within 4-miles of the project area IS NOT present in the project area. (Skip to STEP 4)

STEP 2

Where suitable habitat is present for rare plant species known from within 4 miles of the project area, appropriately timed surveys were conducted for the rare plant species known from those habitat types as informed by the ERT Report, the TN Rare Plant list, and/or other botanical resources – (see APPENDIX B for Example Rare Plant Survey Documentation). Following our appropriately timed surveys and documentation of those surveys, we determined (SELECT ONE):

____ Rare plant species **ARE** present in the project area. (GO TO STEP 3)

OR

____Rare plant species **ARE NOT** present in the project area. (SKIP TO STEP 4)

STEP 3

Following observation of rare plant species at the site, we began further consultation with TDEC Division of Natural Areas. [Send survey results and pictures of rare plant species to TDEC-DNA at environmental.review@tn.gov, making sure to include the ERT Project ID in the subject line]. I have attached correspondence with TDEC-DNA regarding additional consultation to this form. (GO TO STEP 4)

STEP 4

Following consultation with TDEC-Division of Natural Areas through the ERT and due diligence in the form of a habitat assessment and/or appropriately timed surveys for rare plant species, I have determined that this project is unlikely to impact rare plant species **OR** after identifying rare plant species at the site, I have notified TDEC-DNA that state or federally listed threatened or endangered species are present.

NAME: _____
COMPANY/ORGANIZATION:_____
SIGNATURE: _____
DATE: _____

Appendix B: Example Rare Plant Survey Documentation

All surveys...
Date of survey
Names of surveyors
Total effort (hours)
Map of total project area (with annotations identifying survey areas within project area)
Representative photos of areas surveyed (with latitude/longitude and direction for each)

When rare plant species are identified (repeat for each species)...
Photos of any rare species identified, along with the following information for each photo (or photo series):
Latitude and longitude of observation(s) (decimal degrees)
Multiple points or the centroid of a large population can be used if individuals are widely dispersed
Notes regarding extent of population
e.g. phenology, number of individuals, quality of habitat, extent of area where species is present

Survey Certification

One or more **appropriately timed** surveys were conducted in a study area where suitable habitat was present for rare plant species known from within four miles. Select the result of your survey(s) below.

____ **Result 1:** The survey results suggest that rare plant species ARE NOT present at the site.

Sign below and use this documentation to support your TDEC-DNA ERT Self-Certification for rare plant species.

NAME: _____
COMPANY/ORGANIZATION:_____
SIGNATURE: _____
DATE: _____

OR

____ **Result 2:** The surveys identified rare plant species at the site (continued on next page).

TDEC-DNA welcomes the opportunity to review the results of rare species surveys where rare species have been previously documented and/or new occurrences of rare species are identified. When a survey identifies rare plant species at a site, you may submit your survey documentation to TDEC Division of Natural Areas via email at environmental.review@tn.gov *making sure to include your ERT Project ID in the subject line.*

TENNESSEE WILDLIFE RESOURCES AGENCY
WWW.TNWILDLIFE.ORG
(615) 781-6500

STATE OF TENNESSEE
ELLINGTON AGRICULTURAL CENTER
5107 EDMONDSON PIKE
NASHVILLE, TN 37211

September 21, 2026

Leah Alexander
Department of Energy
865-839-8752
leah.alexander@orem.doe.gov

Re: TWRA Environmental Review- Proposed Deed Amendment for Self-Sufficiency Parcel 2 (SSP-2) Industrial Development Project, in Roane County, Tennessee.

Dear Ms. Alexander,

The Tennessee Wildlife Resources Agency has reviewed the information provided for the proposed project to amend the deed on SSP-2, located within the Oak Ridge Reservation, to allow for industrial and commercial uses across the property, including site preparation activities for a proposed nuclear facility. This project is located at coordinates: 35.95, -84.36, in Roane County, Tennessee.

Our records indicate the presence of the following listed species within a 1-mile vicinity of the proposed project locations.

SCIENTIFIC NAME	COMMON NAME	LAST OBSERVED	FED PROTECTION	STATE PROTECTION
Chrosomus tennesseensis	Tennessee Dace	2004-04-30	..	D
Hemitremia flammea	Flame Chub	1941	..	D
Synaptomys cooperi	Southern Bog Lemming	1995-PRE	..	D
Zapus hudsonius	Meadow Jumping Mouse	1995-PRE	..	D
Hemidactylium scutatum	Four-toed Salamander	1995-12-04	..	D
Aneides aeneus	Green Salamander	1995-PRE	..	Rare, Not Listed
Limnothlypis swainsonii	Swainson's Warbler	2004-06-27	..	D

Based on the scope of work being proposed and the historical data of known listed species, we do not anticipate any adverse impacts to these or other state listed species under our authority

due to the proposed construction; provided that best management practices to address erosion and sediment are implemented and maintained during construction activities.

Thank you for the opportunity to review and comment on this proposed project. If I may be of further assistance, please contact me at Bobby.Brown@tn.gov.

Sincerely,

Bobby Brown

Bobby Brown

Region III Aquatic Habitat Biologist

U.S. Department of Labor

Occupational Safety and Health Administration
Washington, D.C. 20210

June 29, 2026
Moriah Ferullo
Occupational Safety and Health Manager
Office of Worker Safety and Health Policy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ms. Ferullo:

The Occupational Safety and Health Administration (OSHA) completed its review of your e-mails and documentation packages that provided official notice of the Department of Energy's (DOE's) requests to transfer regulatory authority. Pursuant to the July 25, 2000, Memorandum of Understanding (MOU) on Safety and Health Enforcement at Privatized Facilities and Operations, DOE requested OSHA, or as appropriate, the Tennessee Occupational Safety and Health Administration (TOSHA), confirm occupational safety and health regulatory authority, as applicable, over the following transferred tracts of land located at the East Tennessee Technology Park (ETTP): (1) The Oak Ridge Office of Environmental Management transferred Tract ED-18 [ID 13738] in Oak Ridge, Tennessee, to the City of Oak Ridge, Tennessee; (2) the Oak Ridge Office of Environmental Management and Oak Ridge Office of Science transferred properties on the Oak Ridge Reservation, specifically titled Self-Sufficiency Parcel 2 (SSP-2) [ID 13835], to the Industrial Development Board of the City of Oak Ridge, Tennessee; (3) the General Services Administration transferred Airport Tract A [ID 13825] in Oak Ridge, Tennessee, which includes Parcel ED-13, and portions of Parcels ED-4 and ED-16, to the City of Oak Ridge; and (4) the Oak Ridge Office of Environmental Management transferred K-1251 Barge [ID 13625] to the Tennessee Valley Authority.

After reviewing DOE's requests, OSHA's Regional Office in Birmingham, Alabama, working with the OSHA Nashville Area Office and TOSHA, confirmed that TOSHA has authority and is assuming coverage over occupational safety and health for the first three of these tracts (IDs 13738, 13835, and 13825). Additionally, through this letter, OSHA confirms that it has authority and is assuming coverage over occupational safety and health for the K-1251 Barge (ID 13625), which was transferred to the Tennessee Valley Authority.

In accordance with the MOU's requirements for transfer of authority, TOSHA and OSHA are satisfied with DOE's assurances that (1) there is no likelihood that any employees located in the vicinity of these land parcels will be exposed to radiation levels that will equal or exceed 25 millirems per year, and (2) no DOE standards or regulations affecting occupational safety and health apply to the working conditions of employees at the privatized facilities or operations on the land parcels list above. OSHA is also satisfied that these transfers of authority are free from regulatory gaps and do not diminish the safety and health protection of the employees. Therefore, TOSHA and Federal OSHA confirm they will regulate occupational health and safety for the ETTP properties as described above.

OSHA will prepare the required *Federal Register* notice, which will provide public notice and serve as an addendum to the OSHA/DOE MOU on privatizing properties, facilities, and operations.

If you have any questions concerning this matter, please contact Ms. Lana Morrison, Director, Office of Federal Agency Programs at (202) 693-2128.

Sincerely,

Erin P. Gilmore, Acting Director
Directorate of Enforcement Programs

cc:

Dorinda Hughes, Regional Administrator
Birmingham, Alabama

Arlene L. Williams, Acting Director
Directorate of Cooperative and State Programs

APPENDIX B—BIRD SPECIES LIST

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Branta canadensis	Canada Goose	BMC, OA		S5	
Aix sponsa	Wood Duck	BMC		S5	
Mareca strepera	Gadwall	BMC		S4	
Mareca americana	American Wigeon	BMC		S4	
Anas rubripes	American Black Duck	BMC		S3	RC, CBSD, MA
Anas platyrhynchos	Mallard	BMC		S5	
Spatula discors	Blue-Winged Teal	BMC		S2	
Anas crecca	Green-Winged Teal	BMC		S4	
Spatula clypeata	Northern Shoveler	BMC		S4	
Anas acuta	Northern Pintail	BMC		S4	
Aythya valisineria	Canvasback	BMC		S3	
Aythya americana	Redhead	BMC		S4	
Aythya collaris	Ring-Necked Duck	BMC		S5	
Aythya affinis	Lesser Scaup	BMC		S4	
Bucephala albeola	Bufflehead			S5	
Lophodytes cucullatus	Hooded Merganser			S3	
Mergus serrator	Red-Breasted Merganser			S4	
Oxyura jamaicensis	Ruddy Duck			S5	

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Podiceps auritus	Horned Grebe	BMC		S4	MA, RC
Podilymbus podiceps	Pied-Billed Grebe	BMC		S4	MA
Podiceps grisegena	Red-Necked Grebe			S3	
Nannopterum auritum	Double-Crested Cormorant	BMC, OA		S2	
Ixobrychus exilis	Least Bittern	BMC	NM	S2	
Ardea alba	Great Egret			S2	
Ardea herodias	Great Blue Heron			S4	
Nyctanassa violacea	Yellow-Crowned Night Heron			S3	
Egretta caerulea	Little Blue Heron	BMC	NM	S2	
Nycticorax nycticorax	Black-Crowned Night Heron	BMC	NM	S2	
Butorides virescens	Green Heron			S4	MA, CBSD, RC
Mycteria americana	Wood Stork	T		S3	
Coragyps atratus	Black Vulture			S4	
Cathartes aura	Turkey Vulture			S5	
Pandion haliaetus	Osprey			S3	
Accipiter striatus	Sharp-Shinned Hawk			S3	
Astur cooperii	Cooper’s Hawk			S3	
Circus hudsonius	Northern Harrier			S4	
Haliaeetus leucocephalus	Bald Eagle	BMC		S3	

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Tyto furcata	American Barn Owl			S3	
Bubo virginianus	Great Horned Owl			S5	
Strix varia	Barred Owl			S3	
Megascops asio	Eastern Screech Owl			S5	MA, RC
Rallus limicola	Virginia Rail	BMC		S1	
Porzana carolina	Sora	BMC		S1	
Calidris pusilla (Eastern/Central)	Semipalmated Sandpiper	BCC		S4	
Tringa solitaria	Solitary Sandpiper	BMC, BCC		S5	
Actitis macularius	Spotted Sandpiper			S2	
Scolopax minor	American Woodcock	BMC		S4	MA, RC
Gallinago delicata	Wilson's Snipe			S4	
Porphyrio martinica	Purple Gallinule			S1	
Gallinula galeata	Common Gallinule			S1	
Antigone canadensis	Sandhill Crane			S3	
Charadrius vociferus	Killdeer			S5	
Colinus virginianus	Northern Bobwhite	BMC, BCC	E	S2	RC
Zenaida macroura	Mourning Dove	BMC		S5	
Coccyzus americanus	Yellow-Billed Cuckoo	BMC, BCC	T	S4	CBSD, PR
Coccyzus erythropthalmus	Black-Billed Cuckoo			S2	IM, CBSD, RC

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Antrostomus carolinensis	Chuck-Will's Widow	BMC, BCC		S3	IM, CBSD, RC
Antrostomus vociferus	Eastern Whip-poor-will	BMC, BCC		S3	MA, RC
Chordeiles minor	Common Nighthawk	BCC		S4	CBSD, PR
Chaetura pelagica	Chimney Swift	BCC		S5	IM, RC
Megaceryle alcyon	Belted Kingfisher	BCC		S5	MA, RC
Melanerpes erythrocephalus	Red-Headed woodpecker	BMC, BCC		S4	CBSD, PR
Melanerpes carolinus	Red-Bellied Woodpecker			S5	
Dryobates villosus	Hairy Woodpecker			S4	
Dryocopus pileatus	Pileated Woodpecker			S3	
Colaptes auratus	Northern Flicker	BMC		S5	CBSD, PR
Falco sparverius	American Kestrel	BMC		S5	
Falco peregrinus	Peregrine Falcon			S1	
Sayornis phoebe	Eastern Phoebe			S5	
Contopus virens	Eastern Wood-Pewee			S5	MA, RC
Empidonax virescens	Acadian Flycatcher			S5	RC, MA
Myiarchus crinitus	Great Crested Flycatcher			S5	
Empidonax alnorum	Alder Flycatcher			S1	
Contopus cooperi	Olive-Sided Flycatcher	BMC, BCC		S1	PR
Empidonax minimus	Least Flycatcher			S3	CBSD, PR

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Empidonax traillii	Willow Flycatcher	BMC, BCC	E	S2	
Tyrannus tyrannus	Eastern Kingbird			S5	
Vireo griseus	White-Eyed Vireo			S5	
Vireo flavifrons	Yellow-Throated Vireo			S4	
Vireo solitarius	Blue-Headed Vireo			S4	
Vireo olivaceus	Red-Eyed Vireo			S5	
Cyanocitta cristata	Blue Jay			S5	
Corvus brachyrhynchos	American Crow			S5	
Poecile carolinensis	Carolina Chickadee			S5	
Baeolophus bicolor	Tufted Titmouse			S5	
Tachycineta bicolor	Tree Swallow			S4	
Progne subis	Purple Martin			S5	MA
Stelgidopteryx serripennis	Northern Rough-Winged Swallow			S5	
Petrochelidon pyrrhonota	Cliff Swallow			S4	
Corthylio calendula	Ruby-Crowned Kinglet			S4	
Regulus satrapa	Golden-Crowned Kinglet			S3	CBSD, PR
Sitta carolinensis	White-Breasted Nuthatch			S5	
Sitta pusilla	Brown-Headed Nuthatch			S2	
Sitta canadensis	Red-Breasted Nuthatch			S2	

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Certhia americana	Brown Creeper			S2	
Polioptila caerulea	Blue-Gray Gnatcatcher			S5	
Troglodytes aedon	House Wren			S4	
Troglodytes hiemalis	Winter Wren			S3	
Thryothorus ludovicianus	Carolina Wren			S5	
Sturnus vulgaris	European Starling			Ex	
Dumetella carolinensis	Gray Catbird			S4	
Toxostoma rufum	Brown Thrasher			S5	
Mimus polyglottos	Northern Mockingbird			S5	
Sialia sialis	Eastern Bluebird			S5	
Catharus ustulatus	Swainson's Thrush			S5	
Catharus guttatus	Hermit Thrush			S2	
Hylocichla mustelina	Wood Thrush	BMC, BCC	NM	S4	RS, PR
Lanius ludovicianus	Loggerhead Shrike	BMC, BCC	E	S1	NM
Turdus migratorius	American Robin			S5	
Passer domesticus	House Sparrow			Ex	
Haemorhous mexicanus	House Finch			Ex	
Haemorhous purpureus	Purple Finch			S3	
Spinus tristis	American Goldfinch			S5	

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Spizella passerina	Chipping Sparrow			S5	
Spizella pusilla	Field Sparrow			S4	MA, RC
Spizelloides arborea	American Tree Sparrow			S3	CBSD, PR
Passerella iliaca	Fox Sparrow			S3	
Junco hyemalis	Dark-Eyed Junco			S5	
Zonotrichia leucophrys	White-Crowned Sparrow			S4	
Zonotrichia albicollis	White-Throated Sparrow			S5	
Pooecetes gramineus	Vesper Sparrow			S1	
Passerculus sandwichensis	Savannah Sparrow			S1	
Melospiza melodia	Song Sparrow			S4	
Pipilo erythrophthalmus	Eastern Towhee			S5	MA, RC, RS
Ammodramus savannarum	Grasshopper Sparrow	BMC, BCC		S4	IM, CBSD, RC
Ammodramus henslowii	Henslow's Sparrow	BMC, BCC	T	S1	IM, RC
Melospiza lincolnii	Lincoln's Sparrow			S3	
Melospiza georgiana	Swamp Sparrow			S4	
Dolichonyx oryzivorus	Bobolink			SH	MA, RC
Sturnella magna	Eastern Meadowlark	BCC		S5	IM, CBSD, RC
Icterus galbula	Baltimore Oriole			S4	
Agelaius phoeniceus	Red-winged Blackbird			S5	CBSD, PR

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Molothrus ater	Brown-headed Cowbird			S5	CBSD, PR
Euphagus carolinus	Rusty Blackbird	BCC		S4	MA, CBSD, RC
Quiscalus quiscula	Common Grackle			S5	CBSD, PR
Vermivora chrysoptera	Golden-winged Warbler	BMC, BCC	T	S3	IM, RC
Setophaga cerulea	Cerulean Warbler	BMC, BCC	NM	S3	MA, RC, RS
Setophaga discolor	Prairie Warbler	BMC, BCC		S3	MA
Mniotilta varia	Black-and-White Warbler			S4	MA, RC
Protonotaria citrea	Prothonotary Warbler	BMC, BCC		S4	MA
Geothlypis formosa	Kentucky Warbler	BMC, BCC		S4	MA
Cardellina canadensis	Canada Warbler	BMC, BCC		S3	MA, CBSD, RC
Icteria virens	Yellow-Breasted Chat	BCC		S4	MA, RC
Seiurus aurocapilla	Ovenbird			S4	
Helmitheros vermivorum	Worm-eating Warbler			S4	RS, PR
Parkesia motacilla	Louisiana Waterthrush			S4	RS, PR
Parkesia noveboracensis	Northern Waterthrush	BCC		S3	
Vermivora cyanoptera	Blue-winged Warbler			S4	MA, RC, RS
Limnothlypis swainsonii	Swainson's Warbler		NM	S3	MA, RC
Leiothlypis peregrina	Tennessee Warbler			S4	

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Leiothlypis celata	Orange-crowned Warbler			S3	
Leiothlypis ruficapilla	Nashville Warbler			S4	
Geothlypis trichas	Common Yellowthroat			S5	
Setophaga citrina	Hooded Warbler			S4	RC, PR
Setophaga ruticilla	American Redstart			S3	
Setophaga americana	Northern Parula			S5	
Setophaga magnolia	Magnolia Warbler			S1	
Setophaga castanea	Bay-breasted Warbler			S4	
Setophaga fusca	Blackburnian Warbler			S3	MA, RC
Setophaga petechia	Yellow Warbler			S5	CBSD, PR
Setophaga striata	Blackpoll Warbler			S4	CBSD, PR
Setophaga caerulescens	Black-throated Blue Warbler			S4	
Setophaga palmarum	Palm Warbler			S4	
Setophaga pinus	Pine Warbler			S5	
Setophaga coronata	Yellow-rumped Warbler			S5	
Setophaga dominica	Yellow-throated Warbler			S4	
Setophaga virens	Black-throated Green Warbler			S5	
Piranga rubra	Summer tanager	BMC		S4	CBSD, PR
Piranga olivacea	Scarlet Tanager			S4	MA, RC, RS

Table B1. Bird Species with Potential to Occur on SSP-2 (from Bear Creek Watershed)
(Partners in Flight [PIF], 2024; NatureServe, 2025; TDEC, 2025a; USFWS, 2021; TWRA, 2026)

Scientific Name	Common Name	Federal	State	NatureServe	PIF
Cardinalis cardinalis	Northern Cardinal			S5	
Pheucticus ludovicianus	Rose-breasted Grosbeak	BCC		S4	
Passerina caerulea	Blue Grosbeak			S4	
Passerina cyanea	Indigo Bunting			S5	CBSD, PR

BCC = Birds of conservation concern
BMC = Birds of management concern
CBSD = Common Bird in Steep Decline for BCR28
CR = critical recovery for Bird Conservation Region (BCR)28
E = endangered
Ex = Exotic
IM = immediate management for BCR28
MA = management attention for BCR28
NM = in need of management
OA = overly abundant
PR = planning and responsibility for BCR28
RC = Regional Concern for BCR28
RS = Regional Stewardship for BCR28
S1 = critically imperiled
S2 = imperiled
S3 = vulnerable
S4 = apparently secure
S5 = secure
SH = Possibly Extirpated
T = threatened

APPENDIX C—REFERENCE PHOTOGRAPHS OF WATER RESOURCES

Photo Summary: February 18, 2025, and February 24-26, 2025
Project Description: Oak Ridge - SAM Jurisdictional Waters Delineation
Oak Ridge, Roane County, Tennessee. CEC Project 347-046



Photo 171: WTL-I test pit general vegetation at coordinates 35.9544666, -84.3631945.

Figure C1. Photograph of Wetland I.

Photo Summary: February 18, 2025, and February 24-26, 2025
Project Description: Oak Ridge - SAM Jurisdictional Waters Delineation
Oak Ridge, Roane County, Tennessee. CEC Project 347-046



Photo 179: WTL-K test pit general vegetation at coordinates 35.9553332, -84.3566892.

Figure C2. Photograph of Wetland K.

Photo Summary: February 18, 2025, and February 24-26, 2025
Project Description: Oak Ridge - SAM Jurisdictional Waters Delineation
Oak Ridge, Roane County, Tennessee. CEC Project 347-046



Photo 175: WTL-J test pit general vegetation at coordinates 35.9547513, -84.3595335.

Figure C3. Photograph of Wetland J.

Photo Summary: February 18, 2025, and February 24-26, 2025
Project Description: Oak Ridge - SAM Jurisdictional Waters Delineation
Oak Ridge, Roane County, Tennessee. CEC Project 347-046



Photo 165: UPL-G test pit general vegetation at coordinates 35.9501797, -84.3580218.

Figure C4. Photograph of Wetland G.