
Proposed Categorical Exclusions Supporting Documentation

Amended TVA Procedures for Implementing the National Environmental Policy Act

Tennessee Valley Authority



February 2020

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Acronyms and Abbreviations

AR	Administrative Record
ARC	Appalachian Regional Commission
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMPs	Best Management Practices
BOR	Bureau of Reclamation
BTOP	Broadband Technology Opportunities Program
CC-CT	Combined-Cycle Combustion Turbine
CCP	Coal Combustion Product
CE	Categorical Exclusion
CEC	Categorical Exclusion Checklist
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CT	Combustion Turbine
CWI	Clean Water Initiative
DHS	Department of Homeland Security
DOC	Department of Commerce
DOE	Department of Energy
DOI	Department of the Interior
EA	Environmental Assessment
ED	Economic Development
EIS	Environmental Impact Statement
EMF	Electric and Magnetic Fields
ENTRAC	Environmental Tracking database
EP	Emergency Preparedness
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FR	Federal Register
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GSA	General Services Administration
HRSG	Heat Recovery Steam Generator
HUD	Department of Housing and Urban Development
HVAC	Heating, Ventilation, and Cooling
KIF	Kingston Fossil Plant

kV	kilovolt
LLRW	Low-Level Radioactive Wastes
MMS	Mathias Metal Systems
MW	Megawatt
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRP	Natural Resource Plan
PCBs	Polychlorinated Biphenyls
PP	Power Production
RCRA	Resources Conservation and Recovery Act
RD	Research and Development
RLMP	Reservoir Land Management Plan
RO	River System Operations
ROD	Record of Decision
ROS	Reservoir Operations Study
ROW	Right-of-way
RUS	Rural Utilities Service
SWMUs	Solid Waste Management Units
TL	Transmission Line
TSCA	Toxic Substances Control Act
TVA	Tennessee Valley Authority
USAF	United States Air Force
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

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1 INTRODUCTION

The Tennessee Valley Authority (TVA) proposes to amend its intra-agency procedures implementing the National Environmental Policy Act of 1969 (NEPA), including its list of 28 categorical exclusions (CEs). TVA established its procedures for implementing NEPA in 1980 (45 FR 54511, August 15, 1980), and amended the procedures in 1983 to incorporate requirements relating to floodplain management and protection of wetlands, among other things (48 CFR 19264). Its current NEPA procedures are established in TVA *Instruction IX - Environmental Review*, a section of TVA's administrative code of internal policies and procedures.

In 2016, TVA completed an internal review of its NEPA Program and identified a number of opportunities to improve its environmental review processes to support agency planning and decisionmaking. During this review, TVA determined that its NEPA procedures should be updated to establish new or revised CEs that more accurately reflect TVA's operations. TVA relied upon guidance issued by the White House Council on Environmental Quality (CEQ) in November 2010 ("Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act") to conduct its review.

In early 2017, prior to beginning the formal rulemaking process to change the procedures, TVA consulted with CEQ regarding its review, the changes proposed to its list of CEs, and proposed revisions to other portions of TVA's NEPA procedures. This coordination is required under 40 CFR 1507.3. TVA formally initiated the rulemaking process by publishing a Notice of Proposed Rule in the *Federal Register* on June 8, 2017 (82 FR 26620). In the notice, TVA invited public review and comment on its proposal to revise 15 of its CEs, eliminate 9 CEs, retain 4 CEs unchanged, and establish 31 new CEs. To support the public's review of these proposed changes, TVA released a draft of this Supporting Documentation (dated June 2017). The public review period was extended on July 28, 2017, for an additional 30 days (82 FR 35133). During the comment period, TVA received more than 1,550 comment submissions from the public. Most comments pertained to TVA's proposed CEs and many comments addressed this Supporting Documentation.

Prior to completing the rulemaking process, CEQ must review TVA's final revised procedures to determine if the changes conform to CEQ's regulations and NEPA (40 CFR 1507.3). TVA must also inform CEQ about the public input that was received and how it was considered. Once this is done, TVA completes the rulemaking process by publishing its procedures as a Final Rule in the *Federal Register*. When the Final Rule is published, TVA's NEPA procedures would be moved from *Instruction IX - Environmental Review* to Chapter XIII (Tennessee Valley Authority) in the Code of Federal Regulations (18 CFR 1318). CEQ reviewed TVA's final revised procedures in early 2019 and recommended that TVA clarify several CE definitions. In November 2019, TVA submitted the final revised procedures to CEQ for their final review.

After considering public input, feedback from CEQ, and further TVA deliberation, TVA made changes to 20 of the 50 proposed CEs: #6, #13, #15, #17, #21, #22, #25, #27, #29, #34, #35, #36, #37, #38, #42, #43, #45, #46, #47 and #49. As described in greater detail in Sections 2 and 3 of this document, TVA removed several actions from the list of CEs, revised several CEs in

substantive ways, made minor edits to numerous CEs to improve clarity, and, in one case, withdrew its proposal to revise a previously established CE. TVA updated this document to reflect the changes to proposed CEs.

1.1 PURPOSE OF SUPPORTING DOCUMENT

Because TVA has proposed numerous revisions to its existing CEs, TVA has prepared this document to support the changes and provide a summary of information used to formulate these changes. The document is intended to substantiate TVA's conclusion that activities encompassed by the new and revised CEs would not cause significant environmental effects. This document also includes a brief description of the common impacts of actions proposed for coverage under new or expanded CEs, and explains TVA's rationale for retaining, revising or eliminating existing CEs. This document is not meant to provide a comprehensive record of factors relied upon during the development of the proposed CEs, but rather, to describe the basis upon which each proposed CE was established.

This document was prepared based on CEQ's 2010 guidance for establishing and supporting changes to agency CEs. TVA carefully reviewed this guidance in preparing substantiating information for each of the new or revised CEs.

This document contains the following six sections:

- Section 1 – Introduction
- Section 2 – Summary of Proposed Changes to TVA Categorical Exclusions
- Section 3 – Substantiation of New & Revised Categorical Exclusions
- Section 4 – Rationale for Elimination of Existing Categorical Exclusions
- Section 5 – References
- Section 6 – Qualifications of Preparers

1.2 TVA'S REVIEW OF CATEGORICAL EXCLUSIONS

The proposed changes to TVA's list of categorically excluded activities (see Table 1-1) are the result of a lengthy review and internal deliberations led by TVA NEPA staff that concluded in 2016.

In 2013, TVA met with the CEQ to discuss modernizing its NEPA procedures and sought guidance on the process. Subsequently, a team of TVA environmental and legal professionals reviewed existing NEPA procedures and CEs and developed these revised and proposed CEs. This team of internal TVA experts and external contributors (Team) is comprised of NEPA and planning specialists with extensive experience in NEPA compliance, as well as TVA attorneys with advanced experience advising federal agency managers on environmental planning and compliance responsibilities. These professionals have significant experience developing and executing NEPA strategies for TVA and other federal agencies. TVA also received assistance from a consulting firm in compiling the documentation to substantiate new or revised CEs and completing this document. (Biographical information about Team members can be found in Section 6).

Table 1-1 Current TVA CEs

<p>5.2.1. Routine operation, maintenance, and minor upgrading of existing TVA facilities.</p> <p>5.2.2. Technical and planning assistance to State and local organizations.</p> <p>5.2.3. Personnel action.</p> <p>5.2.4. Procurement activities.</p> <p>5.2.5. Accounting, auditing, financial reports, and disbursement of funds.</p> <p>5.2.6. Contracts or agreements for the sale, purchase, or interchange of electricity.</p> <p>5.2.7. Activities related to the promotion and maintenance of employee health.</p> <p>5.2.8. Activities of TVA's Equal Employment Opportunity staff.</p> <p>5.2.9. Administrative actions consisting solely of paperwork.</p> <p>5.2.10. Communication, transportation, computer service, and other office services.</p> <p>5.2.11. Property protection, law enforcement, and other legal activities.</p> <p>5.2.12. Emergency preparedness.</p> <p>5.2.13. Preliminary planning, studies, or reviews consisting of only paperwork.</p> <p>5.2.14. Exploration for uranium, including hydrologic investigations.</p> <p>5.2.15. Preliminary onsite engineering and environmental studies for future power generating plants and other energy-related facilities.</p> <p>5.2.16. Establishment of environmental quality monitoring programs and field monitoring stations.</p> <p>5.2.17. Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line right-of-way easements.</p> <p>5.2.18. Construction and operation of communication facilities (i.e., powerline carrier, insulated overhead ground wire, VHF radio, and microwave).</p> <p>5.2.19. Backslope agreements involving properties on which TVA holds an interest between operators and other adjacent mining companies.</p> <p>5.2.20. Purchase, exchange, lease or sale, or lease purchase of stepdown facilities, transmission lines, and transmission line rights of way by distributors or customers directly served by TVA.</p> <p>5.2.21. Minor research, development, and joint demonstration projects.</p> <p>5.2.22. Construction of visitor reception centers.</p> <p>5.2.23. Development of minor TVA public use areas and stream access points.</p> <p>5.2.24. Minor non-TVA activities on TVA property authorized under contract or license, permit and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land.</p> <p>5.2.25. Purchase, sale, abandonment or exchange of minor tracts of land, mineral rights, or landrights.</p> <p>5.2.26. Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities.</p> <p>5.2.27. Any action which does not have a primary impact on the physical environment.</p> <p>5.2.28. Actions which were the subject of an EA which concluded that the category of such actions should be treated as a categorical exclusion.</p>

For each proposed CE, the Team considered whether the concept, coverage, applicability, and definition of the action were appropriate. The Team carefully constructed each CE with the goal of achieving compliance with NEPA requirements (in particular, ensuring that no activities that could have significant effects on the environment were categorically excluded) and increasing administrative efficiency in NEPA compliance. Consistent with CEQ's 2010 guidance, TVA also considered whether it would be appropriate to limit the applicability of a CE for actions that may be variable in their environmental effects. For many proposed or revised CEs, TVA identified limits that restrict the extent of the proposed action by area or distance based on TVA's experience as supported by project records. The Team determined that all revised and proposed CEs meet both objectives and took great care to ensure that the administrative record supports the proposed CEs.

In 2016, TVA NEPA staff met with TVA business units to discuss the rationale for updating the NEPA procedures and the proposed changes to the list of CEs. Input was gathered and additional deliberations occurred to resolve internal concerns regarding the proposed CEs. After considering this input, the Team conducted final revisions to the text of each CE.

Once the definition of each CE was finalized, the Team reviewed previous TVA NEPA environmental assessments (EA) and Environmental Impact Statements (EIS) for information to substantiate that the categories of actions that do not individually or cumulatively have significant environmental effect. The Team also consulted subject matter experts who have extensive experience and knowledge of a wide array of natural, social and environmental sciences, as well as an extensive understanding of TVA operations and programs. These experts reviewed the proposed CEs and confirmed that the covered actions do not individually or cumulatively have significant environmental effects.

TVA also conducted an extensive review of other federal agencies' CEs and found numerous CEs that are the same or similar as those TVA proposes to establish or revise. In these cases, TVA used other agencies' CEs to define its proposed CE. Such benchmarking to "comparable" CEs of other agencies is recommended in the CEQ 2010 guidance and provides further substantiation that the categories of actions do not result in significant environmental effects. The relevant CEs of other agencies are identified and discussed in Section 3, in the discussion of each new or revised CE.

Based on its review of previous analyses, TVA expertise and experience, and experiences of other agencies, TVA finalized its list of proposed CEs and prepared this Supporting Documentation as a record of its findings and to support its determination that the activities would not individually or cumulatively create a significant impact on the environment. TVA prepared this document to comply with CEQ's 2010 guidance on substantiating changes to agency CEs.

During the review of its NEPA procedures, the Team also identified the need to expand the list of extraordinary circumstances in which a normally excluded action may have a significant environmental effect (40 CFR 1508.4). Establishing CEs in TVA's NEPA procedures does not constitute a conclusive determination regarding the appropriate level of NEPA review for a specific individual proposed action. Rather, the listing creates an initial presumption that the

defined level of review (a categorical exclusion rather than an EA or an EIS) is appropriate for the listed actions. Actions would not normally qualify as a CE if an extraordinary circumstance related to the proposed action exists that indicates the potential for significant environmental effects. This also is consistent with TVA's long standing practice for its existing CEs.

The Team also carefully considered whether to identify those CEs for which documentation must be prepared and those CEs for which no documentation is necessary in its updated NEPA procedures, as is done by some Federal agencies and recommended in the CEQ 2010 guidance. TVA's current NEPA procedures do not include documentation requirements for CEs. TVA has provided internal guidance to staff identifying those CEs requiring documentation. TVA determined that documentation requirements should continue to be provided through implementation guidance rather than the new regulations because such an approach allows TVA flexibility to change guidance as the agency acquires experience with implementing the new CEs.

Although TVA is not promulgating specific documentation requirements, TVA would continue to direct staff to prepare documentation of the determination of the eligibility of many proposed actions for CEs using a "Categorical Exclusion Checklist" (CEC) in TVA's Environmental Tracking database, known internally as ENTRAC. Generally, TVA requires that a CEC be completed when the categorically excluded action involves new ground disturbance, a change in operations, or other actions that may result in greater than nominal effects. TVA specialists with training in environmental compliance currently complete a CEC in the ENTRAC system. A sample CEC is provided in Attachment 1.

Using the CEC as a vehicle, TVA conducts a site-specific review of each proposed action to verify that it falls within the definition of the CE. Use of the checklist also allows TVA to verify that no extraordinary circumstances exist that would require further analysis. TVA specialists are prompted in the CEC to consider whether the project has unusual characteristics, whether natural, socioeconomic, or cultural resources are present and potential impacts to them from the proposed action, and whether pollutants may be generated. An interdisciplinary team of subject matter experts is consulted during the review of most ground-disturbing actions. The level of detail included in the CECs is generally proportional to its potential to cause environmental impacts. This review for extraordinary circumstances ensures that the CEs will not be applied to actions that could have significant effects on the environment. Even when applying a CE, TVA must complete required coordination and consultation requirements (e.g., under the National Historic Preservation Act and the Endangered Species Act) when these consultation requirements are triggered under the provisions of those parallel statutes applicable to federal agencies.

TVA created ENTRAC in 2001 to document and track CEs. The ENTRAC system's importance to TVA as a means to document its NEPA compliance is highlighted in that more than 95% of TVA actions are categorically excluded. To date (February 2020), TVA has recorded almost 42,000 CECs in the searchable database since 2002, or about 2,500 annually over the 17 years. ENTRAC also assists the TVA business units proposing the actions with communicating and coordinating with the TVA Environmental Compliance and NEPA staff.

In Section 3 of this document, TVA addresses whether documentation would be completed for each of the proposed CEs. Generally, TVA proposes to continue to require that CECs be completed for actions that could result in new ground disturbance or a change in operations.

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2 SUMMARY OF PROPOSED CHANGES TO TVA CATEGORICAL EXCLUSIONS

As noted above, TVA proposed in its June 2017 Notice of Proposed Rule to revise 15 of its CEs, eliminate 9, retain 4 unchanged, and establish 31 new CEs. After review of public input and further consideration, TVA made numerous revisions to its proposed CEs. However, these revisions do not significantly alter the scope of CE changes TVA proposes to make. The changes made after the public review were primarily revisions to the definition of CEs that would be established. Two of the new CEs proposed by TVA are withdrawn: TVA reserves one of these CEs (CE #15) in the procedures and the other withdrawn proposed CE (#46) would be replaced by one of the listed actions under the proposed CE #45, which TVA has determined should be a stand-alone category. In addition, TVA is no longer proposing to revise current CE 5.2.6, proposed as CE #6. With these changes, TVA proposes to revise 14 of its CEs, eliminate 9 CEs, leave 5 CEs unchanged, and establish 31 new CEs.

Proposed changes in CEs are contrasted with existing CEs in Table 2-1 below. CEs are listed in the order which TVA proposes to number them in its updated NEPA procedures. Modifications to CEs are indicated using the following formatting conventions:

- **Red** font indicates new text and
- ~~Strikethrough~~-formatting indicates text has been deleted from the existing CE.

Changes indicated in Table 2-1 include all changes made by TVA to CEs after it published its Proposed Rule (in June 2017) that were incorporated in the Final Rule based on public review and further CEQ coordination.

2.1 NEW CATEGORICAL EXCLUSIONS

TVA proposes to expand its list of CEs to include 31 categories of activities that are some of the most commonly performed by TVA and have been shown not to have significant environmental impacts. Expansion of the CEs is required to address common activities essential to TVA's mission. For instance, the current list of CEs does not include routine natural resources stewardship, economic development, or certain transmission system management activities having little impact to the environment.

TVA NEPA staff met with internal TVA business units to determine whether additional CEs were necessary for actions commonly performed by the unit. TVA's proposal to establish the additional CEs is based on these discussions, as well as an extensive examination of whether such actions have been shown not to result in significant environmental impacts. TVA program areas for which new CEs are proposed include the following:

- Education and Information Sharing
- Public Health and Safety
- Transmission Projects
- Existing Plant Acquisition
- Recreation Management
- Natural Resource Stewardship
- Land Use Planning
- Facilities Management
- Road Maintenance
- Property Access

- Waste
- Renewable Energy
- Economic Development
- Rate Structure

2.2 NEW SPATIAL LIMITS

Consistent with CEQ's guidance on establishing CEs, TVA determined that spatial limits are necessary for some of the new CEs which may have variable environmental effects, so that the proposed action may only be excluded if the area of disturbance is smaller than the spatial limit. Other size limits of certain projects are also proposed. For these CEs, TVA has quantified these limits because the size is more directly linked to impacts. Such constraints ensure that CEs are not applied too broadly; several are consistent with those applied by other federal agencies for similar actions.

The following limits are proposed for numerous CEs¹:

- 10 acres of disturbance to land not previously disturbed by human activity
- 25 acres of disturbance to land so disturbed

For transmission or utility line actions, spatial limits would be applied based on TVA's experiences conducting reviews of more than 150 separate transmission projects:

- 125 acres of disturbance and 10 miles of new transmission/utility lines
- 25 miles of transmission line rebuilding
- 1 mile of new access road construction outside of a right-of-way

For certain natural resource stewardship actions, the following spatial limits would be applied:

- 250 acres of disturbances for salvaging of dead and/or dying trees
- 125 acres for actions to regenerate forest stands
- 1/2 mile of shoreline or streambank stabilization (approximately 2,640 linear feet)
- 1/2 mile of temporary or seasonal permanent road construction

These limits would be considered as a general rule rather than a strict limit. If a project area would slightly exceed the spatial limit of the CE, project staff in consultation with TVA NEPA staff would determine whether the CE may still apply based on consideration of potential impacts. For that reason, the definition of each CE denotes that the limits "generally" apply.

TVA NEPA staff would be responsible for ensuring that the projects are not segmented into smaller components in order to avoid finding no significant impact of a project considered as a whole or to avoid spatial limitations. Projects affecting large areas may not be segmented into smaller parts. TVA Environmental staff is responsible for ensuring that larger projects are reviewed in their entirety. The CE would be used for discrete actions within the same area or immediate vicinity. For example, TVA would not consider a forest management action under a single CE if the activities do not occur in one area or within the immediate vicinity.

¹ The terms regarding disturbances were revised between release of the proposed rule and final rule for clarity.

2.3 OTHER LIMITATIONS

TVA also uses “minor,” “limited,” “small,” “routine,” and “small-scale” as limitations in some sections of its existing and proposed CEs. Such terms are common in the CEs of other federal agencies. For some categorically excluded actions, TVA determined that the sizes, distances or other numeric metrics associated with actions may not be directly linked to impacts. TVA would consider the context and intensity of a proposed action when interpreting descriptors in making CE determinations for proposals.

In one CE, TVA limits actions to an “area previously developed or disturbed by human activity.” An area previously developed refers to land that has been significantly altered for use or activities; most commonly, these are lands that have been graded and/or where construction has occurred. An area previously disturbed by human activity refers to land that has been changed such that its functioning ecological processes have been and remain altered by human activity. The phrase encompasses areas that have been transformed from natural cover to non-native species or a managed state, including, but not limited to, power transmission corridors and rights-of-way, and other areas where active utilities and currently used roads are readily available. Note, previously developed lands are considered previously disturbed lands.

2.4 MODIFICATIONS TO EXISTING CATEGORICAL EXCLUSIONS

TVA is proposing to revise the language of 14 existing CEs to clarify CE definitions, reflect current agency programs, apply new spatial limits, and/or change the scope of categorically excluded activities. Some revisions expand or limit the applicability of the CEs and/or make the scope and quantitative aspects of the CEs more consistent with those adopted by other federal agencies engaged in similar or identical actions. Changes to the definition of each existing CE are summarized in Table 2-1 and discussed in greater detail in Section 3.

2.5 EXISTING CATEGORICAL EXCLUSIONS TO BE ELIMINATED

TVA is proposing to eliminate nine of the existing CEs from its procedures. These changes are discussed in greater detail in Section 4 of this document.

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Table 2-1 Crosswalk of TVA CEs (Updated February 2020)

Red text indicates new text, including new CEs; ~~strikethrough~~ formatted text indicates deleted text or CEs.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
5.2.1	-	Eliminated. Replaced by multiple new CEs	Routine operation, maintenance, and minor upgrading of existing TVA facilities.
	1	New CE	Educational or informational activities undertaken by TVA alone or in conjunction with other agencies, public and private entities, or the general public.
5.2.2	2	Minor Clarification	Technical and planning assistance to State, and local and private organizations and entities.
5.2.3	3	No change	Personnel Actions.
5.2.4	4	No change	Procurement activities.
5.2.5	5	No change	Accounting, auditing, financial reports and disbursement of funds.
5.2.6	6	No change	Contracts or agreements for the sale, purchase, or interchange of electricity.
5.2.7	-	Eliminated	Activities related to the promotion and maintenance of employee health.
5.2.8	-	Eliminated	Activities of TVA's Equal Employment Opportunity staff.
5.2.9	7	No change	Administrative actions consisting solely of paperwork.
5.2.10	8	Minor Clarification	Communication, transportation, computer service and other office services.
5.2.11	9	Minor Clarification	Property protection activities that do not physically alter facilities or grounds, law enforcement and other legal activities.
5.2.12	10	Minor Clarification	Emergency preparedness actions not involving the modification of existing facilities or grounds.
	11	New CE	Minor actions to address threats to public health and safety, including, but not limited to, temporary prohibition of existing uses of TVA land or property, short-term closures of sites, and selective removal of trees that pose a hazard.
5.2.13	12	Clarification	Site characterization, data collection, inventory preparation, Preliminary planning, studies, or reviews consisting of only paperwork monitoring, and other similar activities that have little to no physical impacts.
5.2.14	-	Eliminated	Exploration for Uranium, including hydrologic investigations.
5.2.15	13	Minor Clarification	Preliminary on-site Engineering and environmental studies for future power generating plants and other energy-related facilities that involve minor physical impacts, including but not limited to, geotechnical borings, dye-testing, installation of monitoring stations and groundwater test wells, and minor actions to facilitate access to a site.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
5.2.21	14	Minor Clarification	Conducting or funding minor research, development and demonstration projects and programs.
	15	Reserved for new CE	Reserved.
5.2.16	-	Eliminated. Replaced by new CE #12	Establishment of environmental quality monitoring programs and field monitoring stations.
	16	New CE	Construction of new transmission line infrastructure, including electric transmission lines generally no more than 10 miles in length and that require no more than 125 acres of new developed rights-of-way and no more than 1 mile of new access road construction outside the right-of-way; and/or construction of electric power substations or interconnection facilities, including switching stations, phase or voltage conversions, and support facilities that generally require the physical disturbance of no more than 10 acres.
5.2.17	17	Major Modification	Routine modification, repair, and maintenance of, and minor upgrade of and addition to, existing transmission infrastructure, including the addition, retirement, and/or replacement of breakers, transformers, bushings, and relays; transmission line uprate, modification, reconductoring, and clearance resolution; and limited pole replacement. This exclusion also applies to improvements of existing access roads and construction of new access roads outside of the right-of-way that are generally no more than 1 mile in length. Transmission line relocation, tap ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line right of way easements.
5.2.18	18	Minor Clarification	Construction, modification and operation of communication facilities and/or equipment, including, but not limited to, (i.e., power line carriers, insulated overhead ground wires/fiber optic cables, devices for electricity transmission control and monitoring devices, VHF radios, and microwaves and support towers).
5.2.19	-	Eliminated	Backslope agreements involving properties on which TVA holds an interest between operators and other adjacent mining companies.
	19	New CE	Removal of conductors and structures, and/or the cessation of right-of-way vegetation management, when existing transmissions lines are retired; or the rebuilding of transmission lines within or contiguous to existing rights-of-way involving generally no more than 25 miles in length and no more than 125 acres of expansion of the existing right-of-way.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
5.2.20	20	Minor Clarification	Purchase, conveyance , exchange, lease, or sale, or lease purchase of stepdown facilities, transmission lines, and/or disposal of existing substations, substation equipment, switchyards, and/or transmission lines and rights-of-way and associated equipment by distributors or customers directly served by TVA-between TVA and other utilities and/or customers.
	21	New CE	Purchase or lease, and subsequent operation of existing combustion turbine or combined-cycle plants for which there is existing adequate transmission and interconnection to the TVA transmission system and whose planned operation by TVA is within the normal operating levels of the purchased or leased facility.
5.2.22		Eliminated; Replaced by multiple new CEs	Construction of visitor reception centers.
	22	New CE	Development of dispersed recreation sites (generally not to exceed 10 acres in size) to support activities such as hunting, fishing, primitive camping, wildlife observation, hiking, and mountain biking. Actions include, but are not limited to, installation of guardrails, gates and signage, hardening and stabilization of sites, trail construction, and access improvements/controls.
5.2.23	23	Minor Clarification	Development of minor TVA public use areas and that generally result in the physical disturbance of no more than 10 acres, including, but not limited to, construction of parking areas, campgrounds, stream access points, and day use areas.
5.2.24	24	Minor Clarification	Minor non-TVA activities conducted by non-TVA entities on TVA property to be authorized under contract or, license, permit, or covenant agreements, including those for utility crossings, encroachments, agricultural uses, recreational uses, rental of structures, and sales of miscellaneous structures and materials from TVA land.
5.2.25	25	Minor Clarification	Purchase, Transfer, lease, or disposal (sale, abandonment or exchange) of (a) minor tracts of land, mineral rights, or and land rights, and (b) minor rights in ownership of permanent structures.
5.2.26	26	Minor Clarification	Approvals under Section 26a of the TVA Act of minor structures, boat docks and ramps, and shoreline facilities.
5.2.27	-	Eliminated	Any action which does not have a primary impact upon the physical environment.
5.2.28	-	Eliminated	Actions which were the subject of an EA which concluded that the category of such action should be treated as a categorical exclusion.
	27	New CE	Installation of minor shoreline structures or facilities, boat docks and ramps, and actions to stabilize shoreline (generally up to 1/2 mile in length) by TVA.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
	28	New CE	Minor modifications to land use allocations outside of a normal land planning cycle to: rectify administrative errors; incorporate new information that is consistent with a previously approved decision included in the land use plan; or implement TVA's shoreline or land management policies generally affecting no more than 10 acres.
	29	New CE	Actions to restore and enhance wetlands, riparian, and aquatic ecosystems that generally involve physical disturbance of no more than 10 acres, including, but not limited to, construction of small water control structures; revegetation actions using native materials; construction of small berms, dikes, and fish attractors; removal of debris and sediment following natural or human-caused disturbance events; installation of silt fences; construction of limited access routes for purposes of routine maintenance and management; and reintroduction or supplementation of native, formerly native, or established species into suitable habitat within their historic or established range.
	30	New CE	Actions to maintain, restore, or enhance terrestrial ecosystems that generally involve physical disturbance of no more than 125 acres, including, but not limited to, establishment and maintenance of non-invasive vegetation; bush hogging; prescribed fires; installation of nesting and roosting structures, fencing, and cave gates; and reintroduction or supplementation of native, formerly native, or established species into suitable habitat within their historic or established range.
	31	New CE	<p>The following forest management activities:</p> <ul style="list-style-type: none"> a. Actions to manipulate species composition and age class, including, but not limited to, harvesting or thinning of live trees and other timber stand improvement actions (e.g., prescribed burns, non-commercial removal, chemical control), generally covering up to 125 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction; b. Actions to salvage dead and/or dying trees including, but not limited to, harvesting of trees to control insects or disease or address storm damage (including removal of affected trees and adjacent live, unaffected trees as determined necessary to control the spread of insects or disease), generally covering up to 250 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction; and c. Actions to regenerate forest stands, including, but not limited to, planting of native tree species upon site preparation, generally covering up to 125 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction.
	32	New CE	Actions to manage invasive plants including, but not limited to, chemical applications, mechanical removal, and manual treatments that generally do not physically disturb more than 125 acres of land.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
	33	New CE	Actions to protect cultural resources including, but not limited to, fencing, gating, signing, and bank stabilization (generally up to 1/2 mile in length when along stream banks or reservoir shoreline).
	34	New CE	Reburial of human remains and funerary objects under the Native American Graves Protection and Repatriation Act that are inadvertently discovered or intentionally excavated on TVA land.
	35	New CE	Installation or modification (but not expansion) of low-volume groundwater withdrawal wells (provided that there would be no drawdown other than in the immediate vicinity of the pumping well and that there is no potential for long-term decline of the water table or degradation of the aquifer), or plugging of groundwater or other wells at the end of their operating life. Site characterization must verify a low potential for seismicity, subsidence, and contamination of freshwater aquifers.
	36	New CE	<p>Routine operation, repair or in-kind replacement, and maintenance actions for existing buildings, infrastructure systems, facility grounds, public use areas, recreation sites, and operating equipment at or within the immediate vicinity of TVA’s generation and other facilities. Covered actions are those that are required to maintain and preserve assets in their current location and in a condition suitable for use for its designated purpose. Such actions will not result in a change in the design capacity, function, or operation. (Routine actions that include replacement or changes to major components of buildings, facilities, infrastructure systems, or facility grounds, and actions requiring new permits or changes to an existing permit(s) are addressed in CE 37). Such actions may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Regular servicing of in-plant and on-site equipment (including during routine outages) such as gear boxes, generators, turbines and bearings, duct work, conveyers, and air preheaters; fuel supply systems; unloading and handling equipment for fuel; handling equipment for ash, gypsum or other by-products or waste; hydropower, navigation and flood control equipment; water quality and air emissions control or reduction equipment; and other operating system or ancillary components that do not increase emissions or discharges beyond current permitted levels; b. Regular servicing of power equipment and structures within existing transmission substations and switching stations; c. Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, weather stations, and flumes);

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
			<ul style="list-style-type: none"> d. Routine cleaning and decontamination, including to surfaces of equipment, rooms, and building systems (including HVAC, septic systems, and tanks); e. Repair or replacement of plumbing, electrical equipment, small HVAC systems, sewerage, pipelines, and telephone and other communication service; f. Repair or replacement of doors, windows, walls, ceilings, roofs, floors and lighting fixtures in structures less than 50 years old; g. Painting and paint removal at structures less than 50 years old, including actions taken to contain, remove, or dispose of lead-based paint when in accordance with applicable requirements; h. Recycling and/or removal of materials, debris, and solid waste from facilities, in accordance with applicable requirements; i. Grounds keeping actions, including mowing and landscaping, snow and ice removal, application of fertilizer, erosion control and soil stabilization measures (such as reseeding and revegetation), removal of dead or undesirable vegetation with a diameter of less than 3 inches (at breast height), and leaf and litter collection and removal; j. Repair or replacement of gates and fences; k. Maintenance of hazard buoys; l. Maintenance of groundwater wells, discharge structures, pipes and diffusers; m. Maintenance and repair of process, wastewater, and stormwater ponds and associated piping, pumping, and treatment systems; n. Maintenance and repair of subimpoundments and associated piping and water control structures; o. Debris removal and maintenance of intake structures and constructed intake channels including sediment removal to return them to the originally-constructed configuration; and p. Clean up of minor spills as part of routine operations.
	37	New CE	<p>Modifications, upgrades, uprates, and other actions that alter existing buildings, infrastructure systems, facility grounds, and plant equipment, or their function, performance, and operation. Such actions, which generally will not physically disturb more than 10 acres, include but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Replacement or changes to major components of existing buildings, facilities, infrastructure systems, facility grounds, and equipment that are like-kind in nature;

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
			<p>b. Modifications, improvements, or operational changes to in-plant and on-site equipment that do not substantially alter emissions or discharges beyond current permitted limits. Examples of equipment include, but are not limited to: gear boxes, generators, turbines and bearings, duct work, conveyers, superheaters, economizers, air preheaters, unloading and handling equipment for fuel; handling equipment for ash, gypsum or other by-products or waste; hydropower, navigation and flood control equipment; air and water quality control equipment; control, storage, and treatment systems (e.g. automation, alarms, fire suppression, ash ponds, gypsum storage, and ammonia storage and handling systems); and other operating system or ancillary components;</p> <p>c. Installation of new sidewalks, fencing, and parking areas at an existing facility;</p> <p>d. Installation or upgrades of large HVAC systems;</p> <p>e. Modifications to water intake and outflow structures provided that intake velocities and volumes and water effluent quality and volumes are consistent with existing permit limits;</p> <p>f. Repair or replacement of doors, windows, walls, ceilings, roofs, floors and lighting fixtures in structures greater than 50 years old; and</p> <p>g. Painting and paint removal at structures greater than 50 years old, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements.</p>
	38	New CE	Siting, construction, and use of buildings and associated infrastructure (e.g., utility lines serving the buildings) physically disturbing generally no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed.
	39	New CE	Siting and temporary placement and operation of trailers, prefabricated and modular buildings, or tanks on previously disturbed sites at an existing TVA facility.
	40	New CE	Demolition and disposal of structures, buildings, equipment and associated infrastructure and subsequent site reclamation, subject to applicable review for historical value, on sites generally less than 10 acres in size.
	41	New CE	Actions to maintain roads, trails, and parking areas (including resurfacing, cleaning, asphalt repairs, and placing gravel) that do not involve new ground disturbance (i.e., no grading).
	42	New CE	Improvements to existing roads, trails, and parking areas, including, but not limited to, scraping and regrading; regrading of embankments; installation or replacement of culverts; and other such minor expansions.

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
	43	New CE	Actions to enhance and control access to TVA Property including, but not limited to, construction of new access road and parking area (generally no greater than 1 mile in length and physically disturbing no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed) and installation of control measures such as gates, fences, or post and cable.
	44	New CE	Small-scale, non-emergency cleanup of solid waste or hazardous waste (other than high-level radioactive waste and spent nuclear fuel) to reduce risk to human health or the environment. Actions include collection and treatment (such as incineration, encapsulation, physical or chemical separation, and compaction), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action.
	45	New CE	Installation, modification, and operation of the following types of renewable or waste-heat recovery energy projects which increase generating capacity at an existing TVA facility, generally comprising of physical disturbance to no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed: <ul style="list-style-type: none"> a. Combined heat and power or cogeneration systems at existing buildings or sites; and b. Solar photovoltaic systems mounted on the ground, an existing building or other structure (such as a rooftop, parking lot or facility and mounted to signage lighting, gates or fences).
	46	New CE	Transactions (contracts or agreements) for purchase of electricity from new methane gas electric generating systems using commercially available technology and installed within an area previously developed or disturbed by human activity.
	47	New CE	Modifications to the TVA rate structure (i.e., rate change) that result in no predicted increase in overall TVA-system electricity consumption.
	48	New CE	Financial and technical assistance for programs conducted by non-TVA entities to promote energy efficiency or water conservation, including, but not limited to, assistance for installation or replacement of energy efficient appliances, insulation, HVAC systems, plumbing fixtures, and water heating systems.
	49	New CE	Financial assistance including, but not limited to, approving and administering grants, loans and rebates for the renovation or minor upgrading of existing facilities, established or developing industrial parks, or existing infrastructure; the extension of infrastructure; geotechnical boring; and construction of commercial and light industrial buildings. Generally, such assistance supports actions that physically disturb no more

Current CE	Proposed CE	Proposed Change	CE Definition (with Changes)
			than 10 acres of land not previously disturbed by human activity or no more than 25 acres of land so disturbed.
	50	New CE	Financial assistance for the following: approving and administering grants, loans and rebates for continued operations or purchase of existing facilities and infrastructure for uses substantially the same as the current use; purchasing, installing, and replacing equipment or machinery at existing facilities; and completing engineering designs, architectural drawings, surveys, and site assessments (except when tree clearing, geotechnical boring, or other land disturbance would occur).

3 SUBSTANTIATION OF NEW AND REVISED CATEGORICAL EXCLUSIONS

This section provides a substantiation of all new Categorical Exclusions, as well as proposed revisions to current TVA CEs. The information supports TVA's determination that its proposed CEs encompass activities that, absent of extraordinary circumstances, do not individually or cumulatively have significant environmental effects.

TVA proposes to establish a total of 50 CEs in its updated NEPA procedures. The CEs would be grouped in the list by the general type of activities or the applicable TVA program area (e.g., transmission actions and recreation management actions). The list of CEs is also arranged in a sequence that maintains some consistency with the order of its current list. For instance, 12 of the existing CEs would maintain their order on the list, including current CE 5.2.26 (TVA's most commonly applied CE), which will be CE #26 in the new procedures.

This section has been updated to reflect changes made by TVA after publication of the Proposed Rule in the *Federal Register* in June 2017. After considering public and CEQ input on the proposed CEs, TVA made changes to 20 of the 50 proposed CEs. These revisions are noted and explained in the discussions.

TVA also revised its discussion of proposed CEs in limited instances. Based on several public comments questioning TVA's inclusion of EAs with mitigation requirements, TVA conducted an additional review of each of the EAs and FONSI's cited in Section 3. TVA determined that the vast majority of EAs and FONSI's provide adequate support for the proposed CEs. However, TVA also found that it would not be appropriate to rely on some of the cited EAs and FONSI's to support the proposed CEs. Therefore, TVA updated Section 3 by removing 30 of the 215 EA/FONSI citations. Some EA/FONSI citations were removed from sections addressing proposed CEs #16, #17, #19, #27, #28, #33, #36, #37, #40, #42, and #44. TVA believes that the information provided in the updated Supporting Documentation complies with CEQ's 1983 and 2010 guidance on establishing CEs and adequately supports our determinations regarding the proposed CEs.

Proposed CEs will be addressed in the same order they will be listed in TVA's NEPA procedures, using the following conventions:

New Categorical Exclusions:

The discussion of new CEs includes the following sections:

- Proposed CE Text
- *If applicable*, a description of how TVA revised the Proposed CE after the 2017 public review period
- Background
- Substantiating Information for Proposed CE
 - TVA Experience with Relevant Existing CEs
 - TVA Experience with Relevant EAs or EISs
 - Potential Environmental Effects

- Benchmarking of Other Agencies' Experience
- CE Documentation Requirement
- Conclusion

Modifications to current Categorical Exclusions:

The discussion of each current CE that TVA proposes to modify includes the following sections:

- Existing CE text
- Proposed CE text
- *If applicable*, a description of how TVA revised the Proposed CE after the 2017 public review period
- Background Information
- Supporting Information for Proposed CE (including TVA experience and benchmarking)
- CE Documentation Requirements
- Conclusion

Categorical Exclusions carried forward unchanged:

Current CEs that TVA does not propose to revise will be noted in this section but will not be discussed at length.

Consistent with CEQ's 2010 guidance on establishing CEs, the discussions of revised or new CEs may vary. The amount of information provided by TVA to substantiate each revised or new CE depends on the type of activities included in the proposed category of actions and their potential to result in significant environmental effects. For instance, TVA's discussion of CEs for administrative actions are less detailed than the discussions of CEs that are more likely to result in ground disturbance. In addition, TVA's discussion of revisions to existing CEs are generally less detailed than the substantiating information provided for new CEs because the revisions are minor.

3.1 CE 1 - EDUCATIONAL & INFORMATIONAL ACTIVITIES

TVA proposes to establish a new CE for educational and information actions. TVA does not currently have a CE that addresses these routine activities.

3.1.1 Proposed Categorical Exclusion Text

Educational or informational activities undertaken by TVA alone or in conjunction with other agencies, public and private entities, or the general public.

3.1.2 Background

Congress established TVA in 1933 with the passage of the TVA Act, charging the agency with managing and serving as the steward of the Tennessee River and its watershed. Since its establishment, working closely with intergovernmental partners, utility providers, organizations, customers, and stakeholders across the region has been an integral part of fulfilling its mission. These relationships are critical to TVA's efforts to provide low-cost, reliable energy, economic development of the region, and stewardship of its natural resources.

TVA has a long history of community outreach and public engagement programs to increase public awareness and promote opportunities for community development, volunteer involvement, environmental education, financial/resource assistance and collaborative partnerships. (TVA, 2015a) For example, TVA contributes to public awareness and appreciation of the natural and cultural resources of the region through an integrated education and communication effort across all resource areas, aimed at fostering greater public understanding of the value and benefits of protecting natural resources, and promoting an increased sense of public ownership and pride in these resources. Many of TVA's education and outreach efforts are aimed at children around the Valley. (TVA, 2011a)

The proposed CE would expand TVA's CE list to reflect additional routine activities conducted by a variety of TVA programs to educate and inform the public. TVA has long played an important role in fostering the social and economic well-being of the people it serves and continues to be involved in many corporate philanthropy, public participation, and volunteer activities to help strengthen and serve the region's communities. These activities align with the objectives of TVA's [Environmental Policy](#), other TVA plans, policies, and procedures, and other federal regulations.

3.1.3 Substantiating Information for Proposed CE

TVA staff reviewed a variety of information to affirm whether such activities do not result in significant environmental effects. TVA reviewed its own relevant CEs and NEPA documents. TVA staff also benchmarked with CEs established by other agencies and reviewed professional judgment, expert opinion, or scientific analysis relating to whether such actions may have significant environmental effects.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.1.3.1 TVA Experience with Relevant NEPA Documents

As stated in Section 3.1.3, education and public outreach are integral parts of TVA's presence in the Valley. TVA NEPA staff reviewed previous environmental review documents (EAs and EISs) for analyses relevant to these activities and found that the TVA Natural Resource Plan EIS programmatically addresses these activities and notes that they have little or no potential for any environmental impacts (TVA, 2011a).

TVA also reviewed the ENTRAC database for documented uses of CEs since 2002 and found a few records relevant to the proposed CE (e.g. education and outreach activities). In those instances, TVA specialists documented these types of activities under existing CEs 5.2.21 (*Minor research, development, and joint demonstration project*), and CE 5.2.2 (*Technical and planning assistance to State and local organizations*). Examples include (with CEC number, project name, date of completion, and the applicable CE):

- *CEC 29038: Morgan County Visitor's Center, Emory River Watershed Association educational kiosk, (9/19/2013), CE 5.2.21*
- *CEC 5185: Outreach for Public Drinking Water Protection, (6/4/2004), CE 5.2.2*
- *CEC 225: TVA/Tennessee Cooperative Pollution Prevention Program, (3/4/2002), CE 5.2.21*

3.1.3.2 Potential Environmental Effects

Activities under the proposed CE that could have environmental effects include:

- Activities which are educational or informational to other agencies, public and private entities, visitors, individuals, or the general public.

These types of activities typically involve meeting with groups or individuals and providing information or educational presentations in an indoor setting or at a public use area. Such events are temporary or occasional and last only a few hours. TVA does not conduct surface disturbing activities in relation to education and information activities. These types of activities would generally not have direct environmental effects on the physical or social environment (water resources, soil, air quality, visual resources, biological resources, socioeconomics, or waste accumulation).

3.1.3.3 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated other federal CEs and found that CEs for educational and informational activities are common. The Department of Homeland Security's (DHS) and Department of the Interior's (DOI) incorporate CEs to approve educational and informational events for the public and local agencies.

Based on this review, TVA found that it would be conducting activities similar in size and scope and with similar environmental effects to the CEs of other federal agencies. The CEs from other federal agencies provide support for TVA’s conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE #1.

Department of Homeland Security (DHS) CE B5 (DHS, 2014)

Support for or participation in community projects that do not involve construction, significant physical alteration of the environment. Examples include, but are not limited to:

- (a) Earth Day activities,*
- (b) Adopting schools,*
- (c) Cleanup of rivers and parkways, and,*
- (d) Repair and alteration of housing.*

TVA reviewed DHS’s administrative record for this CE. According to DHS’s administrative record, “such actions are performed...without any harm to the quality of the human environment. For example...the U.S. Coast Guard has been participating in Earth Day and river cleanup events for several years with no harm to the quality of the human environment” (DHS, 2006). Additionally, the activities in CE B5 do not individually or cumulatively result in significant environmental effects. DHS supported CE B5 by benchmarking to other federal agencies, citing CEs from the Army (b)(10), Navy 775.6(f), and Air Force A2.3.37 (DHS, 2006).

Department of the Interior CE j (43 C.F.R. § 46, 2014)

Activities which are educational, informational, advisory, or consultative to other agencies, public and private entities, visitors, individuals, or the general public.

An administrative record documenting DOI’s substantiation of this CE was not readily available. However, DOI reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

TVA modeled its proposed CE on DOI’s CE j based on their similarity.

Comparability of CEs

TVA found that the DHS and DOI CEs are directly comparable to its proposed CE #1. The DHS and DOI CEs are very similar to proposed CE #1 in context, timing, intended use, and typical locations of such activities. DOI’s CEs are directly relevant to TVA activities because DOI, like TVA, manages public lands and serves the surrounding community; has a mission, mandates, and responsibilities to conduct public outreach and education activities; and has extensive history and experience with natural and cultural resource programs. TVA notes that all of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.1.4 CE Documentation Requirement

When updating its NEPA procedures, TVA does not propose to promulgate documentation requirements for its use of CEs, as some other agencies have done. However, as part of its review of existing CEs and its discussion about new CEs, TVA has made an initial determination that proposed CE #1 would not require documentation in TVA's ENTRAC database. Consistent with CEQ's 2010 guidance on categorical exclusions, TVA determined that the proposed activities carry little risk of significant environmental effects, and therefore "there is no practical need for, or benefit from, preparing additional documentation when applying a categorical exclusion to those activities." (CEQ, 2010)

3.1.5 Conclusion

The review of TVA's previous use of relevant CEs, and of other agencies' CEs, shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment.

3.2 CE 2 - TECHNICAL & PLANNING ASSISTANCE

TVA proposes to revise the current CE 5.2.2 to include assistance provided to non-governmental entities.

Existing CE text: *Technical and planning assistance to State and local organizations.*

Proposed CE text: *Technical and planning assistance provided to State, and local and private organizations and entities.*

3.2.1 Background and Substantiating Information for Revised CE:

Many TVA organizations routinely provide technical expertise and assistance to federal, state, and local stakeholders for a variety of purposes. TVA's workforce represents a broad spectrum of expertise and technical capabilities and historically, TVA has taken a leading role in many area throughout the region.

TVA proposes to modify the existing CE 5.2.2 to clarify that assistance to private entities falls within the scope of the category of actions. The revised CE would acknowledge the extensive experience TVA offers its stakeholders. The modification would capture all of TVA's partnerships in the Tennessee Valley region. TVA's experience indicates that the potential environmental effects of providing planning and technical assistance does not vary by the type of organization TVA is assisting. When contemplating the potential for environmental effects of these types of actions, the assistance provided by TVA to private groups is inherently the same as those provided to state and local organizations.

TVA reviewed whether other federal agencies have established CEs for similar actions and found that other agencies had established CEs relevant to providing assistance to private entities and the general public. TVA's activities would be similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. Numerous CEs from other federal agencies, listed below, support TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

U.S. Department of Agriculture (USDA) Agricultural Research Service CE (5) (7 C.F.R. § 520, 1986)

Activities which are advisory and consultative to other agencies and public and private entities, such as legal counseling and representation;

Department of Homeland Security CE B4 (DHS, 2014)

Provision of on-site technical assistance to non-DHS organizations to prepare plans, studies, or evaluations. Examples include, but are not limited to:
(a) General technical assistance to assist with development and enhancement of Weapons of Mass Destruction (WMD) response plans, exercise scenario development, and evaluation, facilitation of working groups, etc.

(b) State strategy technical assistance to assist states in completing needs and threat assessments and in developing their domestic preparedness strategy

Federal Aviation Administration (FAA) CE 307k (80 FR 44208, 2015)

Agreements with foreign governments, foreign civil aviation authorities, international organizations, or U.S. Government departments calling for cooperative activities or the provision of technical assistance, advice, equipment, or services to those parties, and the implementation of such agreements; negotiations and agreements to establish and define bilateral aviation safety relationships with foreign governments, and the implementation of such agreements; attendance at international conferences and the meetings of international organizations, including participation in votes and other similar actions

Federal Highway Administration (FHWA) CE 16 (23 C.F.R. § 771, 2014)

Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet routine changes in demand

U.S. Agency for International Development CE (c)(2)(i) (22 C.F.R. § 216, 1976)

Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)

Department of Labor CE (c)(2) (29 C.F.R. § 11.10, 2013)

Apprenticeship activities, related certification, and technical assistance actions

DOI, National Park Service (NPS) CE 12.5, B.(6) (DOI, 2004a)

Technical assistance to other federal, state, and local agencies or the general public

3.2.2 CE Documentation Requirement

Currently, TVA does not require that application of CE 5.2.2 be documented in its ENTRAC system. Since 2002, TVA specialists have completed 17 CECs in the ENTRAC system to document application of the existing CE. Under the new NEPA procedures, TVA specialists would not document the application of proposed CE #2 because such activities carry little risk of significant environmental effects.

3.2.3 Conclusion

Modifying the existing TVA CE is a minor change to the scope of the category of activities covered by the CE and would not increase the likelihood or risk that such activities may have significant environmental effects. Expanding the scope of the CE to include private entities would have the same environmental effects as the actions addressed in the existing CE. Other federal agencies have also found that assistance to private entities would not have significant effects. Therefore, the activities covered by the proposed CE, as modified, would not involve different environmental effects than the activities covered by the existing CE.

3.3 CE 3 - PERSONNEL ACTIONS

TVA does not propose to revise its current CE 5.2.3 covering administrative activities pertaining to “*Personnel actions.*” Based on its review of its current CEs, TVA found that the CE does not need to be revised at this time because it continues to be relevant, reflect current environmental circumstances, and align with TVA’s mission.

As discussed further in Section 4 of this document, TVA’s current NEPA procedures include CEs that address activities related to the promotion and maintenance of employee health (5.2.7) and activities of TVA’s Equal Employment Opportunity staff (5.2.8). TVA proposes to eliminate these two CEs because these types of activities apply generally to human resource management and personnel activities. In the future, such activities may be categorically excluded by TVA staff using the CE for “Personnel actions.”

TVA NEPA staff does not require staff to complete a CEC in TVA’s ENTRAC database when applying this CE. In the future, staff would not be instructed to complete a CEC because TVA has determined that the proposed activities carry little risk of significant environmental effects.

3.4 CE 4 - PROCUREMENT ACTIVITIES

TVA does not propose to revise its current CE 5.2.4, which covers administrative actions pertaining to “*Procurement activities*.” TVA found that the CE does not need to be revised at this time because it continues to be relevant, reflect current environmental circumstances, and align with TVA’s mission.

As is current practice, TVA staff would not be instructed to complete a CEC in TVA’s ENTRAC database when applying this CE because such activities carry little risk of significant environmental effects.

3.5 CE 5 - ACCOUNTING

TVA does not propose to revise its current CE 5.2.5, which covers accounting and other financial activities: *Accounting, auditing, financial reports and disbursement of funds*. The CE does not need to be revised at this time because it continues to be relevant, reflect current environmental circumstances, and align with TVA's mission.

As is current practice, TVA staff would not be instructed to complete a CEC in TVA's ENTRAC database when applying this CE because such activities carry little risk of significant environmental effects.

3.6 CE 6 - ELECTRICITY CONTRACTS

TVA does not propose to revise existing CE 5.2.6: *Contracts or agreements for the sale, purchase, or interchange of electricity.*

In the Proposed Rule published in June 2017, TVA proposed revising the existing CE in order to clarify that such transactions that spur expansion or development of facilities and transmission infrastructure would not be categorically excluded. Upon further internal deliberation, however, TVA determined that no clarification was needed, as staff shared that understanding of the existing CE.

TVA supplies reliable, affordable electricity to the Tennessee Valley region, strives to meet the changing needs of local power companies, and directly serves industrial customers for electricity and related products and services in a dynamic marketplace. The purchase, sale, and exchange of electricity with other utilities and suppliers are routine parts of electric utility operations. TVA completes many of these transactions daily, especially as electricity is continually interchanged with other regional distributors. Established in 1980, TVA's existing CE 5.2.6 applies only to minor actions that do not result in significant direct, indirect, or cumulative impacts.

Currently, TVA does not require that application of CE 5.2.6 be documented in ENTRAC because such activities carry little risk of significant environmental effects. Consistent with past practice, TVA would not require staff to document the use of CE #6 in the ENTRAC database in the future.

3.7 CE 7 - ADMINISTRATIVE ACTIVITIES

TVA does not propose to revise current CE 5.2.5: *Administrative actions consisting solely of paperwork*.

TVA found that the CE does not warrant revisions at this time because it continues to be relevant, reflect current environmental circumstances, and align with TVA's mission.

As is current practice, TVA staff would not be instructed to complete a CEC in TVA's ENTRAC database when applying this CE because such activities carry little risk of significant environmental effects.

3.8 CE 8 - OFFICE SERVICES

TVA proposes a minor revision to its current CE 5.2.10.

Existing CE text: *Communication, transportation, computer service and other office services.*

Proposed CE text: *Communication, transportation, computer service and ~~other~~ office services.*

The deletion of the word “other” from the definition of CE #8 is proposed because not all of the preceding services listed in this category of actions may be considered to be office-related; transportation services do not occur within an office setting.

Based on its review of its current CEs, TVA found that the CE continues to be appropriate, reflect current environmental circumstances, and align with TVA’s mission.

As is current practice, TVA staff would not be instructed to complete a CEC in TVA’s ENTRAC database when applying this CE because such activities carry little risk of significant environmental effects.

3.9 CE 9 - PROPERTY PROTECTION & LEGAL ACTIVITIES

TVA proposes a minor revision to the definition of the existing CE 5.2.11.

Existing CE text: *Property protection, law enforcement and other legal activities.*

Proposed CE text: *Property protection activities that do not physically alter facilities or grounds, law enforcement, and other legal activities.*

3.9.1 Background and Substantiating Information for Revised CE:

TVA proposes a minor revision to the definition of the existing CE 5.2.11 to limit its application to those activities which would not alter TVA facilities or grounds, which decreases the potential for significant environmental effects occurring as a result of the actions. The addition to the definition of the CE would make clearer to TVA staff that this category of action applies primarily to the activities of TVA law enforcement and security personnel. The addition is also helpful because actions that would physically alter facilities or grounds (including the installation of new fences, wiring and power for surveillance, as well as upgrades or expansion of security at sites) would more appropriately fall under the CEs #36 or #37, which pertain to maintenance, improvements, or modifications to existing facilities.

Note, certain law enforcement actions (i.e., bringing judicial or administrative civil or criminal enforcement actions) are not considered major federal actions subject to NEPA review (40 CFR 1508.18(a)).

3.9.2 CE Documentation Requirement

TVA staff would not complete a CEC in TVA's ENTRAC database when applying this CE because such activities carry little risk of significant environmental effects.

3.9.3 Conclusion

Adding the new text to the existing TVA CE is a minor change to the scope of the category of activities covered by the CE. By limiting the scope of the category of actions, the new text would decrease the likelihood or risk that such activities may have significant environmental effects. Based on these considerations, TVA has concluded that there would not be individual or cumulative significant effects from the covered activities.

3.10 CE 10 - EMERGENCY PREPAREDNESS

TVA proposes a minor revision to the definition of the existing CE 5.2.11 to limit its application to those activities which would not alter TVA facilities or grounds. Such a limit would ensure that the scope of the CE is limited to minor actions that do not result in significant direct, indirect or cumulative impacts.

Existing CE text: *Emergency preparedness actions.*

Proposed CE text: *Emergency preparedness actions not involving the modification of existing facilities or grounds.*

3.10.1 Background and Substantiating Information for Revised CE:

By restricting the CE to actions that do not include the modification of existing facilities, the revised CE would limit the potential for effects on the environment and clarify that the CE does not include major actions. In TVA's experience, the potential for certain types of activities to have significant effects on the human environment is generally avoided when they do not result in modification of existing facilities.

The proposed addition is similar to the proposed change noted in the discussion of CE #9 above. The additional text would indicate to TVA specialists that a different CE may be more applicable when initiating emergency preparedness activities that may involve such modifications (see CEs #36 and 37).

TVA reviewed whether other federal agencies have established CEs for similar actions; applicable CEs from these agencies are listed below. In this benchmarking exercise, TVA found that its activities would be similar in size and scope under similar resource conditions and with similar environmental effects as those actions other agencies have categorically excluded. TVA notes that the CEs of the other agencies do not apply a limit to actions as TVA proposes in its revised CE. The following CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CE A.12 and B1.2 (76 FR 63764, 2011)

A.12 Emergency preparedness planning

Emergency preparedness planning activities, including, but not limited to, the designation of onsite evacuation routes.

B1.2 Training exercises and simulations

Training exercises and simulations (including, but not limited to, firing-range training, small-scale and short-duration force-on-force exercises, emergency response training, fire fighter and rescue training, and decontamination and spill cleanup training) conducted under appropriately controlled conditions and in accordance with applicable requirements.

U.S. Environmental Protection Agency [CE 2\(v\)](#) (40 C.F.R. § 6, 2014)

Actions involving emergency preparedness planning and training activities.

3.10.2 CE Documentation Requirement

Currently, TVA does not require that application of CE 5.2.12 to be documented in its ENTRAC system because the actions carry little risk of significant environmental effects. TVA staff would not document the use of CE #10 in the ENTRAC database.

3.10.3 Conclusion

TVA's proposed change to the text of the existing CE is minor and would clarify the excluded activities while reducing the likelihood or risk of significant environmental effects resulting from the activity. In addition to TVA's experience in applying this CE since 1983, this determination is supported by the experiences of other agencies. Accordingly, TVA concluded that its activities under this CE would not result in significant effects to the human environment either individually or cumulatively.

3.11 CE 11 - HEALTH & SAFETY

TVA proposes to establish a new CE for minor actions associated with public health and safety.

3.11.1 Proposed Categorical Exclusion Text

Minor actions to address threats to public health and safety, including, but not limited to, temporary prohibition of uses, short-term closures of sites, and selective removal of trees that pose a hazard.

3.11.2 Background

As an administrator of public lands and manager of many buildings and facilities in multiple settings, TVA has responsibilities to ensure the health and safety of visitors to its properties, adjacent property owners, TVA employees, and communities. TVA is responsible for the management of 293,000 acres of public land and 11,000 miles of public shoreline in the region. TVA's reservoir properties attract more than 6 million visits annually for developed and dispersed recreation purposes, and these visits generate local and regional economic benefits. (TVA, 2015c). In addition, as of fiscal year 2013, TVA owned more than 2,500 buildings and leased an additional 35, with more than 30 million square feet of enclosed space to manage.

The proposed CE #11 would include minor actions (i.e., routine, temporary in nature, with limited effects) conducted by TVA to address public health and safety. Actions necessary to immediately secure the lives and safety of citizens or to protect valuable resources are considered to be emergencies and may be taken by TVA without observing normal NEPA procedures, as provided for under 40 CFR 1506.11 (for such actions, alternative arrangements to comply with NEPA must be considered after taking action when the agency proposal has the potential for significant environmental effects and would require an EIS). More common are circumstances routinely encountered by TVA in land and facility management where there is an increased risk to public safety or health. For example, circumstances often necessitate the temporary closure of TVA sites (e.g., the potential for forest fires during extreme drought or the potential for flooding) or prohibition of certain uses are necessary to address safety or health concerns.

The most common minor action pertaining to public health and safety is the removal of hazard trees or snags at TVA facilities, recreation sites, or on TVA property where it abuts private property. As a matter of policy, defined in TVA's Natural Resource Plan (NRP, 2011a) and by internal guidelines for stewardship efforts, TVA takes proactive measures to respond to and mitigate potentially hazardous situations such as trees that present hazards to public use areas, private residences, structures, and other improvements. For instance, TVA forestry staff perform annual assessments at developed areas (e.g., campgrounds, dam reservations, public use areas) to look for trees which may pose a hazard. TVA staff look for trees which show signs of disease, splits, failures, leaning, lightning strikes, etc. Conditions are documented and provided to the responsible facility manager to take action. In addition, TVA commonly is notified by property owners adjacent to TVA lands that trees on TVA property pose a threat to private structures on adjacent property. When notified by the public, TVA staff may conduct an onsite review to verify that a tree(s) poses a risk and TVA may either remove the tree or issue a permit to the

backlying property owner to remove the tree. TVA staff estimates that about 700 such permits are issued annually.

Removal of undesired vegetation for other purposes, such as routine landscape management, may be conducted under the scope of proposed CE #36 or #37. This proposed CE would not be used for routine transmission right-of-way vegetation management activities.

3.11.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff reviewed TVA policies, experiences based on actions and practices, and reviewed the experiences of other federal agencies and whether similar CEs have been established that may serve to benchmark TVA's proposal.

3.11.3.1 TVA Experience with Relevant NEPA Documents

In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts. The NRP addresses TVA's management of biological, cultural, and water resources; recreation; reservoir lands planning; and associated public engagement over the next 20 years. The NRP includes a variety of proposed management objectives that are relevant to proposed CE #11, including the proactive management of tree hazards and correcting potential safety hazards to the public on its existing recreation trails. (TVA, 2011b) The EIS found that these activities would not result in significant impacts and were beneficial to the public and visitors. (TVA, 2011a) TVA staff and management have relied primarily on this programmatic NEPA document when implementing hazard tree management. Staff have not used the ENTRAC database to complete CECs for such activities.

3.11.3.2 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE are generally beneficial for public health and safety but may have minor adverse environmental effects.

Vegetation: Trees identified as hazards commonly show signs of disease, failures, splits, or lightning strikes, and thus, are distressed. Tree removal actions are limited under the CE to only those posing a hazard, reducing the potential scale of the excluded action and ensuring that little potential exists for significant impacts. Cumulatively, TVA Natural Resources staff estimates that as many as 19 acres of TVA lands may be affected each year through hazard tree removal actions conducted by TVA Natural Resources staff alone.

Wildlife: Some hazard trees are suitable habitat for many wildlife species, including some of conservation concern such as listed bats. TVA would consider the presence of listed bat species in trees identified as hazards or the potential that the tree is suitable habitat for listed bats to be a potential extraordinary circumstance; TVA NEPA staff would determine the appropriate level of NEPA review if such a potential impact could not be resolved through mitigation or consultation with the U.S. Fish and Wildlife Service.

Recreation: Temporary closures or use restrictions to address health and safety concerns would impact the public's ability to access TVA-managed public lands, which would adversely affect

some recreation opportunities; the temporary nature of the closure would limit adverse effects, however.

Summary: TVA staff would be permitted to implement only minor actions under the proposed CE. While actions would benefit safety and health, minor effects may occur to vegetation and wildlife that may temporarily restrict recreation opportunities on public lands. Such impacts would not be significant on an individual or cumulative basis.

3.11.3.3 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed CE and would generally be conducted under similar resource conditions and with similar environmental effects. These CEs provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

U.S. Forest Service (USFS) CE (32.12)(1) (36 C.F.R. § 220, 2014)

Prohibitions to provide short-term resource protection or to protect public health and safety. Examples include but are not limited to:

- (i) Closing a road to protect bighorn sheep during lambing season and*
- (ii) Closing an area during a period of extreme fire danger.*

An administrative record documenting USFS' substantiation of these CEs was not readily available for TVA to review. However, USFS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Bureau of Land Management (BLM) CEs C(2), G(3), G(4), and J(8) (DOI, 2008b)

C(2) Sale and removal of individual trees or small groups of trees which are dead, diseased, injured, or which constitute a safety hazard, and where access for the removal requires no more than maintenance to existing roads.

G(3) Temporary closure of roads and trails.

G(4) Placement of recreational, special designation, or information signs, visitor registers, kiosks, and portable sanitation devices.

J(8) Installation of minor devices to protect human life (e.g., grates across mines).

An administrative record documenting BLM's substantiation of these CEs was not readily available for TVA to review. However, BLM reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Rural Utility Service (RUS) Department of Agriculture CE (e) (7 C.F.R. Part 25 , 2016)

(e) Emergency situations. Repairs made because of an emergency situation to return to service damaged facilities of an applicant’s utility system or other actions necessary to preserve life and control the immediate impacts of the emergency.

An administrative record documenting the Department of Agriculture’s substantiation of this CE was not readily available for TVA to review. In the Final Rule notice in March 2016, no supporting statement for the proposed CE was provided (it was noted that the same CE was included in the previous version of the RUS’ NEPA procedures). ([81 FR 11000](#), March 2, 2016)

Comparability of CEs

The table below provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.11-1 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #11	FS	BLM	RUS
Minor actions to address threats to public health and safety.	X	X	X
Temporary prohibition of uses or short-term closures of sites	X	X	X
Selective removal of trees that pose a hazard.		X	

These agency CEs are comparable because each pertain to actions that may address minor safety or health issues and are similar in scope to the actions included under TVA’s proposed CE. The USFS and BLM CEs are important benchmarks because these agencies are also administrators of public lands with responsibilities to address risks to the public. The USFS and BLM CEs address the temporary closure of areas to ensure safety to the public or resources. The BLM CE C(2) addresses hazard tree removal, which is the most common type of action TVA staff completes to address risk to the public at many of its facilities. The RUS CE may be more limited in scope, given that it applies to emergencies rather than to risks or potential risks to health and safety.

Each of these CEs further supports the proposed CE and substantiates TVA’s proposed inclusion of this category of actions to its updated NEPA procedures. TVA notes that all of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.11.4 CE Documentation Requirement

Although TVA does not propose to promulgate documentation requirements to record CEs, TVA has determined that staff would not complete a CEC in TVA’s ENTRAC database to document when CE #11 is applied. TVA believes that because such actions are minor and carry little risk of significant effects, documentation when the CE applies is unnecessary.

3.11.5 Conclusion

The review of TVA's experiences in addressing risks to public health and safety, as well as reviewing experiences of other federal agencies (and their CEs), TVA has determined that under normal circumstances no individually or cumulatively significant effects would be attributable to the types of activities included in the proposed CE.

3.12 CE 12 - DATA COLLECTION, INVENTORY & MONITORING

TVA proposes to revise its current CEs 5.2.13 and 5.2.16 by combining the similar types of information gathering actions into one new CE.

Existing CE text: *Preliminary planning, studies, or reviews consisting of only paperwork* (CE 5.2.13).

Establishment of environmental quality monitoring programs and field monitoring stations (CE 5.2.16).

Proposed CE text: *Site characterization, data collection, inventory preparation, planning, monitoring and other similar activities that have little to no physical impacts.*

3.12.1 Background and Substantiating Information for Revised CE:

TVA proposes to combine two existing CEs because they address similar types of information-gathering activities (e.g., study, data collection, and inventories). Combining the actions into the one CE would not change the current scope of actions that are categorically excluded.

TVA NEPA staff reviewed the ENTRAC database for previous uses of CE 5.2.13 since February 2002, and found that it had been documented 107 times, even though TVA does not require that its staff complete a CEC for this CE. CE 5.2.16 was used only 18 times. The activities included in the modified CE are very common and are conducted almost daily. Applicable actions would be limited to those that would generally have little to no physical impacts. Nondestructive data collection, for example, is an everyday task for many TVA specialists that has no effects on the physical environment.

TVA NEPA staff also found that a small number of the more than 800 CECs recorded in ENTRAC for which CE 5.2.21 (*Minor research, development, and joint demonstration project.*) was applied were actually completed for survey work or data collection activities, actions which do not clearly fall under the CE 5.2.21. These CECs may indicate that for some TVA staff members it is unclear which of the current CEs are appropriately applied for such actions. Establishing the proposed CE #12, discussed above, should provide clarity.

TVA also reviewed whether other federal agencies have established CEs for similar actions. The applicable CEs from these agencies are listed below. In its benchmarking exercise, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the activities other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Note, the actions addressed under the proposed CE #12 are similar in nature to those addressed under the proposed CE #13 below; both address conducting activities to collect information and conduct studies. However, actions under proposed CE #12 are minor and carry little risk of result

in significant environmental effects because they would be limited to actions with little to no physical impacts.

TVA's proposed CE would be most similar to CEs established by the Department of the Interior and the Department of Energy:

Department of the Interior CE e (43 C.F.R. § 46, 2014)

Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities.

Department of Energy CE 3.16 (76 FR 63764, 2011)

Research activities in aquatic environments

Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to:

- (a) Acquisition of rights-of-way, easements, and temporary use permits;*
- (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices;*
- (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and*
- (d) Surveying and mapping.*

These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

TVA reviewed DOE's administrative record filed in support of CE B3.16 in 2011. The administrative record listed the types of activities that could occur under DOE CE B3.16, and how the agency anticipated conducting the activities. Based on DOE's experience, these

activities would not have significant effects. The following are a few examples of DOE's evaluation of activities that are similar to activities encompassed by TVA's proposed CE (DOE, 2011b):

Acquisition of rights-of-way, easements, and temporary use permits involve paperwork, and in some cases site visits involving minor activities to measure and record information, and would not have the potential to cause significant impacts.

Installation and operation of passive scientific measurement devices would have negligible impacts in all but the most extraordinary cases, as these instruments would be handheld or connected to a transiting research vessel, towed or deployed from a research vessel for short periods, or installed on-site with only minor infrastructure and without major construction.

Natural resource inventories, data collection, environmental monitoring, and basic and applied research could involve on-site observations, the use of measuring and recording devices, or sample collection. Where sample collection (such as fish, invertebrates, air, water, sediment, geological samples) is involved, a typical research or site evaluation project would not in and of itself trigger significant impacts, unless extraordinary circumstances existed due to the scale of the sampling effort, the sample species is sensitive or protected, or where the collection techniques may directly or indirectly affect other species, habitat, or other elements of the human environment (such as due to noise or suspension and settling of sediments).

Flow testing an existing well could involve tests with or without flow to surface. Tests that would not involve flow to surface would be a controlled, very small scale test using a modular tester (or similar tool) connected to a wireline and sent down a hole to a target interval and isolated. Tests involving flow to the surface would be short term, controlled at the surface with a set of valves and chokes, and fluids would be collected in tanks at the surface. Natural gas would be flared. The scope and scale of these activities would not result in significant impacts in the absence of extraordinary circumstances, and would be conducted with the implementation of an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices.

Surveying and mapping would typically involve on-site activities to measure and record site feature dimensions and descriptions and would not result in significant impacts in all but extraordinary circumstances. Surveying would not involve seismic operations per limitations included in the language of the categorical exclusion.

DOE determined that, subject to the limitations, the activities would not have the potential to cause significant effects. (DOE, 2011b)

Other relevant agency CEs include:

DOI, Bureau of Reclamation CE A(3) (DOI, 2008b)

Research activities, such as nondestructive data collection and analysis, monitoring, modeling, laboratory testing, calibration, and testing of instruments or procedures and non-manipulative field studies.

Department of Homeland Security CE L42 (DHS, 2014)

Environmental site characterization studies and environmental monitoring including: Siting, constructing, operating, and dismantling or closing of characterization and monitoring devices. Such activities include but are not limited to the following:

- (a) Conducting geological, geophysical, geochemical, and engineering surveys and mapping, including the establishment of survey marks.*
- (b) Installing and operating field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools.*
- (c) Drilling wells for sampling or monitoring of groundwater, well logging, and installation of water-level recording devices in wells.*
- (d) Conducting aquifer response testing.*
- (e) Installing and operating ambient air monitoring equipment.*
- (f) Sampling and characterizing water, soil, rock, or contaminants.*
- (g) Sampling and characterizing water effluents, air emissions, or solid waste streams.*
- (h) Sampling flora or fauna.*
- (i) Conducting archeological, historic, and cultural resource identification and evaluation studies in compliance with 36 CFR part 800 and 43 CFR part 7.*
- (j) Gathering data and information and conducting studies that involve no physical change to the environment. Examples include topographic surveys, bird counts, wetland mapping, and other inventories.*

Bureau of Land Management CE J(3) (DOI, 2008b)

Conducting preliminary hazardous materials assessments and site investigations, site characterization studies and environmental monitoring. Included are siting, construction, installation and/or operation of small monitoring devices such as wells, particulate dust counters and automatic air or water samples.

The DHS, Department of the Interior, Bureau of Reclamation, and BLM reviewed the environmental effects of the activities under their respective CEs and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

3.12.2 CE Documentation Requirement

Currently, TVA does not require application of CE 5.2.13 to be documented in its ENTRAC system, but does require documentation of use of CE 5.2.16. TVA staff would not be required to complete documentation when applying the new CE because the activities carry little risk of significant effects.

3.12.3 Conclusion

The activities included in the modified CE are very common and are conducted almost daily by TVA staff. Nondestructive data collection, for example, is an everyday task for many TVA specialists that has no effects on the physical environment. By limiting covered activities to nondestructive ones, the revised CE ensures that the activities would not individually or cumulatively cause significant effects.

3.13 CE 13 - PRELIMINARY SITE STUDIES

TVA proposes to revise the definition of the existing CE 5.2.15.

Existing CE 5.2.15 text: *Preliminary onsite engineering and environmental studies for future power generating plants and other energy-related facilities.*

Proposed CE text: ~~*Preliminary on-site e*~~*Engineering and environmental studies for power generating plants, and other energy-related facilities that involve minor physical impacts, including but not limited to, geotechnical borings, dye-testing, installation of monitoring stations and groundwater test wells, and minor actions to facilitate access to the site.*

After the Proposed Rule was published in the *Federal Register* (June 2017), TVA made a minor revision to the definition of the Proposed CE, replacing “soil borings” with “geotechnical borings.” The revision was made after further internal deliberation. TVA found that the term “soil borings” is not consistent with references to the same actions elsewhere in the list of proposed CEs. This edit to CE 13 makes it consistent with proposed CEs 49 and 50.

3.13.1 Background

In the revised CE, the terms “power generation” and “other energy related” would be deleted because the potential environmental effects of such preliminary engineering and environmental actions would not typically vary based on the proposed use of the proposed facility. Thus, the proposed revision would expand the scope of covered activities because the CE would no longer be restricted to only activities associated with future power and energy facilities. TVA often undertakes the same or similar studies at sites proposed for other uses and its experience verifies that such studies are substantially similar regardless of the future use of the site. In addition, TVA experience verifies that such actions would be similar if studies were undertaken at the sites of existing facilities. Thus, covered actions under the revised CE would include engineering or environmental studies undertaken to investigate conditions at existing and future TVA facilities.

In addition, the CE would be revised to provide examples of the general types of actions included in related studies. Such ground disturbing actions may involve soil testing or boring, dye-testing, installation and use of monitoring or groundwater testing wells, and taking action to clear access to a site (e.g., vegetation clearing, temporary road installation). The text “that involve, but are not limited to” would be added because the use of examples in this CE would be helpful to future users in clarifying the types of activities included under the CE. By providing examples, TVA does not intend to limit the CE to those activities, or to extend the CE to actions involving extraordinary circumstances that might result in significant environmental effects.

Actions under this proposed CE are similar in nature to actions under proposed CE #12, with both addressing the collection of data and conducting studies. However, actions under proposed CE #13 are more likely to result in physical impacts on the environment, although such impacts would be limited to only minor impacts and thus, would not result in significant effects on the environment. TVA’s objective in establishing CEs #12 and #13 is to separate data collection and

study activities for which TVA has determined documentation is no longer necessary (those under proposed CE #12) from those which TVA has determined still should be reviewed through the CEC process in ENTRAC (those under proposed CE #13).

3.13.2 Substantiating Information for Revised CE

In considering whether the activities covered by the proposed CE may be appropriate for categorical exclusion, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that under normal circumstances the activities covered by the proposed CEs do not individually, or cumulatively, have a significant effect on the quality of the human environment.

3.13.2.1 TVA Experience with Related CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in many actions involving soil testing or boring, dye-testing, installation of monitoring or groundwater test wells, and actions for access. TVA NEPA staff found that CE 5.2.15 had been documented 32 times since 2002 and found that in many instances, TVA staff had reviewed proposed actions that involved engineering and environmental studies by citing to existing CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); typically in these cases, CE 5.2.1 was applied when studies were occurring at existing sites, rather than future sites. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Examples of relevant CECs documented by TVA in its ENTRAC database since 2002 include (with CEC number, project name, date of completion, and applicable CE):

- *CEC 33691: Allen Combined Cycle Project Water Monitoring Test Well, (11/20/2015), CE 5.2.15*
- *CEC 25041: Widows Creek Landfill Investigative Well Installations, (1/09/2012), CE 5.2.1*
- *CEC 17290: Caledonia CC Groundwater Test Well Installation, (12/13/2007), CE 5.2.1*
- *CEC 14545: Normandy Dam Observation Wells and Piezometer Installation, (12/01/2006), CE 5.2.1*
- *CEC 14542: Tellico Dam Observation Wells and Piezometer Installation, (12/01/2006), CE 5.2.1*
- *CEC 32764: Plateau, TN 500kV Substation - Exploratory Soil Borings for Potential Borrow Pit, (6/8/2015), CE 5.2.15*
- *CEC 29478: CPSC Soil Borings, (11/22/2013), CE 5.2.1*
- *CEC 28831: Bethel Road 161k V Capacitor Banks - Soil Borings, (8/1/2013), CE 5.2.15*
- *CEC 28014: Soil Borings for Gallatin Lebanon #1 161 kV Lighting Pedestal, (3/4/2013), CE 5.2.15*

- *CEC 25991: Soil Borings To Support Site Flex Equipment Storage Building (FESB) and Equipment Deployment Pathways, (5/29/2014), CE 5.2.15*
- *CEC 25627: Soil Boring to Support Site Bunker Bldg. and Dry Cask Storage, (8/1/2012), CE 5.2.15*
- *CEC 25430: Fabius Mine Freshwater Lake - Soil Borings & Sediment Sampling, (1/4/2012), CE 5.2.1*
- *CEC 35452: Road Construction for CCR Wells Project # 418293, (9/20/2016), CE 5.2.1*
- *CEC 34392: Groundwater Wells Road Installation Project #418302, (3/22/2016), CE 5.2.1*
- *CEC 27342: GDA/Peninsula Well Monitoring Access Road, (12/3/2012), CE 5.2.1*
- *CEC 13267: Generic Dye Injection Testing, (2/7/2011), CE 5.2.1*

Note that the last CEC of the list was a ‘generic’ categorical exclusion review completed to consider potential effects of dye injection testing. The CEC 13267 reviewed the injection of dye into the water on the high-pressure side of a location or structure and the observation from the low-pressure side to identify where the dye appears. Dye testing has been a common way to identify seepage or leaks through structures or locations in reservoirs and streams.

3.13.2.2 TVA Experience with Relevant TVA EAs or EISs

TVA staff reviewed its records for additional actions completed by TVA relating to preliminary site studies. Several EAs and Findings of No Significant Impact (FONSI) and one EIS were identified which analyze projects that included the preliminary site studies that would be included in the proposed CE #13.

Title	Location	Date FONSI/ROD Issued
Pickwick Landing Dam South Embankment Seismic Upgrade EA	Hardin County, TN	9/30/2016
Boone Dam Seepage Remediation EA	Sullivan and Washington Counties, TN	1/7/2016
Economic Development Grant Proposal for Site Preparation at Grenada Interstate Business and Technology Park EA	Grenada County, MS	7/16/2014
Dam Safety Modifications at Cherokee, Fort Loudoun, Tellico and Watts Bar Dams EIS	Grainger, Jefferson, Loudon, Rhea, and Meigs Counties, TN	7/7/2014
Widows Creek Fossil Plant Soil Excavation and Gypsum Stack Closure EA	Jackson, AL	2/28/2014
Knoxville Downtown Parking Garage EA	Knoxville, TN	9/10/2012

3.13.2.3 Potential Environmental Effects

TVA recognizes that some engineering and environmental studies that do not involve destructive sampling or other physical disturbances have little potential to result in environmental effects. These activities are the subject of the new proposed CE #13. TVA's revision to the CE adds several examples of the types of study activities, including but not limited to, soil borings, dye-testing, installing monitoring stations or test wells, and other minor actions, including those to facilitate site access.

Based on previous NEPA reviews, TVA has found that several environmental resources may be adversely affected by such activities, as summarized below, although such effects would not be significant.

Vegetation and Soils: Minor, short term effects to vegetation and soils could occur from surface disturbing activities. Soil borings or drilling wells and disturbing areas to establish access routes into a site may result in removal of vegetation, driving on previously undisturbed areas, or primitive road construction. (TVA, 2000a; TVA, 2005; TVA, 2009)

Water Resources: Minor, short term effects to water resources could occur if surface disturbing activities were to occur within or adjacent to water sources. Soil stabilization and erosion control activities could provide long-term minor beneficial effects on water quality. TVA would continue to comply with the Clean Water Act through its environmental review process. Groundwater would be impacted by installation of test wells and injecting dye for testing would have a direct impact on groundwater and surface water quality. As noted above, dye testing is a common way to determine groundwater flow through structures or locations in reservoirs and streams. (TVA, 2000a; TVA, 2005; TVA, 2009)

Air Quality: Short-term, minor fugitive air emissions from vehicles or mechanical equipment needed to complete a specific construction activity could occur. (TVA, 2011a)

Solid Waste: Solid waste could be generated from some of the activities under the proposed CE, particularly equipment use for soil boring or well installation. Such waste generation, however, would typically be limited in scope and time. Solid wastes would be handled in accordance with applicable TVA, state, and federal regulations and would have minor, if any effects. (TVA, 2000a; TVA, 2005; TVA, 2009; TVA, 2011a)

Fish and Wildlife: Engineering and environmental studies could result in minor, short-term, localized adverse effects to wildlife from alterations of wildlife habitat, destructive sampling, and increased levels of human disturbance. (TVA, 2015d; TVA, 2011a)

Wetlands: Impacts to wetlands from such studies are uncommon. However, depending on the type of activity and the location where the activity would be conducted, studies could result in minor, short-term, localized adverse effects to wetlands and increased levels of human disturbance to wildlife. Short-term, adverse effects from vegetation loss, soil loss, or erosion could occur from disturbing activities associated with the proposed CE; however, TVA would continue to comply with applicable laws and policies, including use of established Best Management Practices, through its environmental review process. (TVA, 2015d; TVA, 2011a)

Summary: TVA CECs and EAs have shown that activities contemplated under the CE could have minor, localized short-term adverse effects, but would not result in significant environmental effects.

3.13.2.4 Benchmarking of Other Agencies' Experience

TVA NEPA staff reviewed other agencies' categorical exclusions for similar actions to support adding soil boring, monitoring wells and other actions as examples to the proposed CE #13. TVA found multiple CEs of other agencies that include soil borings and monitoring devices and wells. TVA also identified numerous CEs pertaining to establishing access to sites (e.g., road construction); see the discussions of these benchmarked CEs in the discussion of proposed CEs #41 and 42 below.

The applicable CEs from these agencies are listed below. In its benchmarking exercise, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the activities other agencies have categorically excluded. The CEs from other federal agencies support TVA's conclusion that activities under the revised CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CE B3.1 (76 FR 63764, 2011)

B3.1: Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources);

(i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

In DOE's administrative record for CE B3.1, DOE supported the establishment of this CE by referencing several CEs established by the U.S. Geological Survey and U.S. Forest Service regarding geophysical investigation and exploration activities. DOE's CE is relevant because it provides numerous examples of the types of devices, methods, and tools that could be utilized during an engineering or environmental study.

The following three CEs established by BLM, the U.S. Air Force and the Federal Aviation Administration pertain to site characterization, particularly as such actions pertain to assessing hazardous materials corrective actions:

Bureau of Land Management CE J(3) (DOI, 2008b)

Conducting preliminary hazardous materials assessments and site investigations, site characterization studies, and environmental monitoring. Included are siting, construction, installation and/or operation of small monitoring devices such as wells, particulate dust counters and automatic air or water samples.

U.S. Air Force (USAF) CE A2.3.26 (32 C.F.R. § 989, 2001)

Undertaking specific investigatory activities to support remedial action activities for purposes of cleanup of Environmental Restoration Account - Air Force and RCRA corrective action sites. These activities include soil borings and sampling, installation, and operation of test or monitoring wells. This CATEX applies to studies that assist in determining final cleanup activities when they are conducted in accordance with legal agreements, administrative orders, or work plans previously agreed to by Environmental Protection Agency or state regulators.

Federal Aviation Administration CE 5-6.4ff (80 FR 44208, 2015)

Remediation of hazardous wastes or hazardous substances impacting approximately one acre or less in aggregate surface area, including siting, site preparation, construction, equipment repair or replacement, operation and maintenance, monitoring, and removal of remediation-related equipment and facilities, on previously developed FAA-owned, leased, or operated sites. Remedial or corrective activities must be performed in accordance with an approved work plan (i.e., remedial action plan, corrective action plan, or similar document) that documents applicable current industry best practices and addresses, as applicable, permitting requirements, surface restoration, well and soil boring decommissioning, and the minimization, collection, storage, handling, transportation, and disposal of Federal or state regulated wastes. The work plan must be coordinated with, and if required, approved by, the appropriate governmental agency or agencies prior to the commencement of work. Examples of covered activities include:

- *Minor excavation for removal of contaminated soil or containers (drums, boxes, or other articles); and*

- *Installation, operation and maintenance, and removal of in-situ remediation systems and appurtenances, including groundwater wells for treatment and monitoring of soil and water contamination.*

Although FAA's CE pertains primarily to cleanup and remediation of hazardous substances, covered actions (listed in the second bullet of the CE) include the installation, operation and maintenance of groundwater wells for treatment and monitoring of soil and water contamination, which are actions covered under TVA's proposed CE. According to FAA's justification package, FAA reviewed seven FAA-led actions, varying in size, from undefined, to 56 acres, and two DOE CEs (B6.2 and B6.3). The previously implemented actions involved coordination with appropriate federal or state agencies to ensure and confirm lack of environmental impact from the proposed activities. FAA also relied on professional opinion and judgment to conclude that the activities would not individually or cumulatively have a significant effect on the environment. (FAA, 2013)

U.S. Coast Guard, Department of Homeland Security CE L42 (DHS, 2006)

Environmental site characterization studies and environmental monitoring including: Siting, constructing, operating, and dismantling or closing of characterization and monitoring devices. Such activities include but are not limited to the following:

- (a) Conducting geological, geophysical, geochemical, and engineering surveys and mapping, including the establishment of survey marks.*
- (b) Installing and operating field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools.*
- (c) Drilling wells for sampling or monitoring of groundwater, well logging, and installation of water-level recording devices in wells.*
- (d) Conducting aquifer response testing.*
- (e) Installing and operating ambient air monitoring equipment.*
- (f) Sampling and characterizing water, soil, rock, or contaminants.*
- (g) Sampling and characterizing water effluents, air emissions, or solid waste streams.*
- (h) Sampling flora or fauna.*
- (i) Conducting archeological, historic, and cultural resource identification and evaluation studies in compliance with 36 CFR part 800 and 43 CFR part 7.*
- (j) Gathering data and information and conducting studies that involve no physical change to the environment. Examples include topographic surveys, bird counts, wetland mapping, and other inventories.*

The DHS's CE is relevant because it provides numerous examples of the types of devices, methods, and tools that could be utilized during an engineering or environmental study, including a number of actions pertaining to water.

Comparability of CEs

The table below provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CEs.

Table 3.13-1 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #15	DOE	BLM	USAF	FAA	DHS
Studies involving soil borings			X		X
Studies involving installation of monitoring stations and groundwater test wells	X	X		X	X

These CEs of other agencies generally provide additional support for TVA’s revision of the existing CE 5.2.15. The CEs, of course, have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

As noted above, three of the CEs address hazardous waste clean-up actions and the assessment of site contamination. However, the included activities include the same or similar actions that would be conducted in engineering and environmental studies, regardless of the need or objectives of those studies. Impacts, then, would be of similar nature and the CEs provide reasonable support that such actions would not result in significant environmental effects to the environment.

Of the five CEs listed above, the DOE CE B3.1 and Coast Guard CE are the most comprehensive and broadly defined. Because DOE has a similar agency mission and conducts many similar operations, operations, its CE serves as a particularly relevant benchmark. It is anticipated that TVA engineering and environmental studies would have similar environmental effects as those described in the DOE and DHS CE. TVA’s determination that such actions would not result in significant environmental impacts is supported by these agencies’ determinations that such actions would not have any major effects on the natural environment in the area of the projects.

3.13.3 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.15 be documented in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment. TVA NEPA staff reviewed the ENTRAC database and found that CE 5.2.15 had been documented 32 times since 2002. (As noted above, CE 5.2.15 would be numbered CE #13). TVA staff would continue to review and document the use of CE #13 in the ENTRAC database.

3.13.4 Conclusion

TVA determined the activities contemplated by this CE have no potential for significant environmental effects. Activities commonly undertaken when conducting a site survey prior to selecting a parcel for constructing a facility (e.g., surveying, determining depth to groundwater, identifying soil characteristics, establishing baseline site conditions, etc.) do not disturb much if any land and therefore would not lead to any changes or effects to the environment. Many of the proposed activities would be of short duration, not lasting more than a few days or a week and rarely repeated at the same location. Additionally, modifying the CE text to include preliminary studies for all facilities would not result in additional environmental effects.

3.14 CE 14 - RESEARCH & DEVELOPMENT

TVA proposes to revise the current CE 5.2.21 to clarify that providing financial support of such actions are included in the category.

Existing CE 5.2.21 text: *Minor research, development, and joint demonstration projects.*

Proposed CE text: *Conducting or funding ~~M~~minor research, development and ~~joint~~ demonstration projects and programs.*

3.14.1 Background and Substantiating Information for Revised CE:

In the revised CE, TVA proposes to add funding of minor research, development and demonstration projects and programs to the current scope of CE 5.2.21. TVA regularly supports research, development and demonstration efforts of other entities through funding assistance and has applied current CE 5.2.21 for actions undertaken by TVA or supported by TVA. Thus, the revision does not reflect an expansion of the scope of the CE; rather, it represents a clarification to TVA staff that applying the CE to such actions is appropriate. TVA experience indicates that the potential environmental effects of such projects and programs are substantially the same whether conducted by TVA staff or by other parties funded by TVA.

TVA would also revise the definition to include “programs.” TVA also does not consider this revision to expand the current scope of the existing CE because the meaning of “projects,” particularly in the context of conducting research efforts, can be synonymous with the meaning of “programs.” The term “program” may imply a series of actions coordinated over a period of time, rather than a discrete action occurring once, as the term “project” may imply; however, in practice, TVA staff has not made a distinction between projects or programs since CE 5.2.21 was established in 1983. Therefore, adding programs to the definition is considered to be a minor clarification to the CE’s definition, rather than a substantive change.

Since its ENTRAC database was established in 2002, TVA has completed more than 800 CEC reviews of actions falling under existing CE 5.2.21. These ENTRAC records reflect that many TVA business units frequently work with non-TVA entities (e.g., universities, municipal governments, industry research groups, national laboratories) to conduct and implement minor research projects and programs.

3.14.2 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.21 to be documented in its ENTRAC system. TVA staff would continue to be required to review proposed actions falling under this proposed CE to ensure that the CE would not be applied to major projects that could have significant effects on the environment.

3.14.3 Conclusion

TVA determined the activities contemplated by this CE have no potential for significant environmental effects. Adding the new text to the existing TVA CE is a minor change to the

scope of the category of activities covered by the CE and would not increase the likelihood or risk that such activities may have significant environmental effects. The activities covered by the proposed CE, as modified, would not involve different environmental effects than the activities covered by the existing CE.

3.15 CE 15 - RESERVED

In the Proposed Rule issued in June 2017, TVA proposed to establish a new CE for rights-of-way (ROW) maintenance activities:

Transmission and utility line right-of-way maintenance actions occurring within an existing maintained right-of-way, including routine vegetation management, removal of danger trees outside the right-of-way and access road improvements or construction (generally no more than 1 mile of road construction outside the right-of-way).

TVA has withdrawn the proposed CE pertaining to right-of-way maintenance actions from the final rule. CE 15 will be listed as “Reserved” in the procedures.

3.16 CE 16 - NEW TRANSMISSION INFRASTRUCTURE

TVA proposes to establish a new CE for construction of certain new transmission assets.

3.16.1 Proposed Categorical Exclusion Text

Construction of new transmission line infrastructure, including electric transmission lines generally no more than 10 miles in length and that require no more than 125 acres of new developed rights-of-way and no more than 1 mile of new access road construction outside the right-of-way; and/or construction of electric power substations or interconnection facilities, including switching stations, phase or voltage conversions, and support facilities that generally require the physical disturbance of no more than 10 acres.

3.16.2 Background

TVA's three-tiered mission includes delivering safe, clean, affordable public power throughout the Tennessee Valley Region. TVA owns and operates one of the largest and most reliable transmission systems in North America, serving over 9 million residents in an 80,000-square-mile area spanning portions of seven states. TVA's transmission system moves electric power from the energy resources where it is produced to distributors of TVA power and to industrial and federal customers across the region. Since 2000, the TVA system has delivered 99.999 percent reliability.

TVA has been constructing and maintaining electric transmission lines and maintaining their rights of way (ROWs). TVA operates one of the largest transmission systems in the U.S and provides electricity for 9 million people in parts of seven southeastern states. TVA's service area covers over 80,000 square miles through a network of more than 16,000 miles of transmission line; over 100,000 transmission line structures; over 500 substations, switchyards and switching stations; over 230,000 acres of ROW; and about 1,300 individual customer connection points. TVA's transmission system has 69 interconnections with 13 neighboring utilities at interconnection voltages ranging from 69-kV to 500-kV. These interconnections allow TVA and its neighboring utilities to buy and sell power from each other and to wheel power through their systems to other utilities. (TVA, 2019)

In recent years, TVA has built an annual average of about 150 miles of new transmission lines and several new substations and switching stations to serve new customer connection points and/or to maintain the capacity and reliability of the transmission system. In September 2017, TVA transmission planners estimated the likely expansion of TVA's rights-of-ways over a twenty year period through 2037. Over the period, TVA estimates that less than 100 miles of transmission would be constructed annually, with an increase in rights-of-way areas of approximately 20,600 acres.

The majority of new lines constructed in recent years are 161-kV. In 2008, TVA completed a 39-mile 500-kV transmission line in Tennessee, which was the first major TVA 500-kV line built since the 1980s. TVA also completed a 27-mile 500-kV transmission line in Tennessee in 2010. In Fiscal Year 2014, TVA spent \$301 million on transmission system construction. (TVA, 2019)

A ROW is designated for a transmission line and associated assets and requires maintenance to avoid risk of fires and other accidents. ROW widths vary based on voltage of transmission line to be installed within the ROW corridor. Typical corridor widths, unless otherwise specified in the ROW agreement, are as follows:

- 69-kV lines require a minimum 75-foot corridor
- 161-kV lines require a minimum 100-foot corridor
- 500-kV lines require a minimum 150-foot corridor

Generally, it is assumed that wider ROW corridors have a greater potential for environmental impacts because the area of disturbance would be greater.

TVA purchases easements from landowners for new ROWs. These easements give TVA the right to construct, operate the transmission line, and maintain the ROW, as well as remove “danger trees” adjacent to the ROW. Because of the need to maintain adequate clearance between tall vegetation and transmission line conductors, as well as provide access for construction equipment, usually most trees and shrubs initially are removed from the entire width of new ROW (this may vary in certain areas). Equipment used during ROW clearing can include chain saws, skidders, bulldozers, tractors, and/or low ground-pressure feller-bunchers. Marketable timber is salvaged where feasible; otherwise, woody debris and other vegetation would be piled and burned, chipped, or taken off site. In some instances, vegetation may be windrowed along the edge of the ROW to serve as sediment barriers.

Both permanent and temporary access roads are needed to allow vehicular access to each structure and other points along the ROW. Typically, new permanent or temporary access roads used for transmission lines are located on the ROW wherever possible, and are designed to avoid severe slope conditions and to minimize stream crossings. Access roads are typically about 20 feet wide and are surfaced with dirt or gravel. Culverts and other drainage devices, fences, and gates are installed as necessary. Culverts installed in any permanent streams are removed following construction. TVA’s proposed CE would limit the length of new road construction outside of the ROW corridor.

Construction of new transmission assets typically includes a construction assembly area for worker assembly, vehicle parking, and material storage. Selection criteria used for locating potential assembly areas include an area typically 5 acres in size; relatively flat; well drained; cleared; graveled and fenced; wide access points with appropriate culverts; sufficiently distant from streams, wetlands, or sensitive environmental features; and located adjacent to an existing paved road near the transmission asset. Although TVA attempts to use or lease properties that require no site preparation, at times property may require minor grading and installation of drainage structures such as culverts or graveled and fencing. Equipment used during the construction phase includes trucks, truck-mounted augers, drills, and excavators, as well as tracked cranes and bulldozers. Installation of conductors and ground wire typically involves a bulldozer and specialized tensioning equipment to pull conductors and ground wires to the proper tension.

Since 1983, many activities under the proposed CE #16 have been the subject of EAs and FONSI. Numerous shorter transmission line and/or smaller substation projects have been categorically excluded under TVA CE 5.2.17 (*Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line ROW easements*). TVA is proposing several new CEs relating to common transmission projects. The proposed CEs, including CE #16, are more explicit in identifying the nature of the actions which would be excluded. TVA NEPA specialists anticipate that having multiple newly defined CEs instead of one broad CE (5.2.17) would clarify for TVA staff which activities may be categorically excluded, thereby reducing staff time and resources committed to initial NEPA screening. Additionally, TVA NEPA specialists note that some TVA staff have found portions of the definition of the existing CE to be unclear. Clearly defined CEs for transmission actions such as CE #16 and other transmission-related CEs should improve understanding among TVA staff.

The definition of the proposed CE was developed based on activities whose environmental effects are minor in nature. The activities included in the CE are required for TVA to continue its mission and to reliably deliver power to its customers. These activities are usually minor in scope and occupy a limited amount of area. Completion of a CEC for every application of the proposed CE will allow TVA to review the proposal for extraordinary circumstances to ensure that the proposed CEs would not be applied to actions that could have major effects on the environment.

TVA proposes to introduce a spatial limit for such activities. Proposed CE #16 would be used for the majority of new transmission lines, which do not exceed 10 miles in length, nor create more than 125 acres of new developed rights-of-way or require more than 1 mile of new access road construction outside of the ROW. Proposed CE #16 also is suitable for new substations or interconnection facilities that would disturb generally no more than 10 acres of land.

These spatial limits are derived after careful consideration and review of TVA transmission projects and their impacts since 2005. In 2015, TVA completed an [Integrated Resource Plan](#), with associated EIS, which provides a direction for how TVA will meet the long-term energy needs of the Tennessee Valley region. TVA evaluated scenarios that could unfold over the next 20 years in the EIS. As part of the study, TVA quantified the general impacts of constructing new or upgraded transmission facilities. The spatial limits are based on this information.

For TVA's analysis of the Integrated Resource Plan, TVA identified and reviewed 39 EAs, 107 CECs, and 2 EISs for TVA transmission construction activities completed between 2005 and 2015. Thirty-two projects involved construction or expansion of a new or existing substation or switching station. There were 102 projects that involved the construction of new transmission lines totaling about 410 miles in length (some of these projects also involved new substation/switching station construction). Sixty projects involved modifications to existing transmission lines. TVA found that the average length of new transmission lines (subject to an EA or EIS) was 8.7 miles and the average area impacted per linear mile was 12.2 acres. The average length of new transmission for projects reviewed in the 39 EAs was almost 7 miles in length; 8 of the EAs addressed new transmission line projects that were greater than 10 miles in

length. The longest new transmission line that was categorically excluded was 7.4 miles in length and the majority were less than 2 miles in length. (TVA, 2015b)

In 2019, TVA updated its IRP and updated information relating to transmission construction impacts in the associated [Final EIS](#) (TVA, 2019). The 2019 Final EIS included projects reviewed under 9 new EAs and 141 CECs. Including analyses considered in the 2015 IRP, a total of 298 transmission projects serve as the basis of analysis in the 2019 IRP Final EIS. Incorporating new project information did not alter TVA's general findings from 2015 pertaining to the spatial limits identified for CE #16. The updated analysis found that new transmission projects since 2005 (subject to an EA or EIS) average 9.8 miles with an average area impacted per linear mile of 13.1 acres, a slight increase since the 2015 analysis. The nine additional EAs for projects involving the construction of new transmission lines provide further support for establishing the 10-mile spatial limits. The nine projects had an average of more than 16 miles of new transmission lines (the projects ranged from 4.6 to 43 miles of new lines), affecting about 12 acres of ROW per mile.

Because of the proposed acreage limit for CE #16, the length of TL project allowed under the proposed CE would vary based on the voltage of the proposed line. Projects for larger 500kV TLs would be shorter in length because the ROW widths for such lines is wider (i.e., the wider the TL ROW, the shorter the project).

Most new TLs constructed by TVA are 161-kV transmission lines, which have a standard right-of-way width of 100 feet. When 10 miles of 161-kV TL is constructed at the standard width, approximately 121 acres would be developed (i.e., a 100-foot corridor extending one mile equals about 12.1 acres). Less frequently, TVA constructs 500-kV lines along a standard ROW width of approximately 175 feet, which results in approximately 21.2 acres of impact per mile. With the acreage limit applied to actions involving new 500-kV TL construction, there would generally be less than 5.9 miles allowed under the proposed CE.

The average land requirements for substations and switching stations was also reviewed by TVA in 2015 and 2019. The 2019 IRP Final EIS found that the average land requirements for substations and switching stations was 10.8 acres (down from an average of 11.8 acres in the 2015 IRP EIS). The median for facilities supporting 161-kV transmission projects was 5.5 acres per project (up slightly from 5.1 acres in the 2015 IRP EIS). The median land requirements for 500-kV switching stations and substations was almost 50 acres (same as 2015 IRP EIS). The proposed CE includes a general spatial limit of no more than 10 acres of physical disturbance when constructing electric power substations or interconnection facilities, including switching stations, phase or voltage conversions. (TVA, 2015b; TVA, 2019) Thus, the proposed CE #16 would be applied to most 161-kV substations but not 500-kV substations. This 10-acre spatial limit is consistent with the limits included for other proposed CEs.

TVA benchmarked to language from the Department of Energy's long-standing CE B4.12. DOE's administrative record substantiating B4.12 provided the following rationale for these limitations:

DOE's long-term experience with electric transmission line construction indicates that the approximately 10-mile limit for categorical exclusion of transmission line construction outside of a previously disturbed or developed right-of-way, and the approximately 20-mile limit for categorical exclusion of transmission line in a previously disturbed right-of-way, have been reliable guides to the appropriate level of NEPA review for the actions. (DOE, 2011a)

The proposed spatial restrictions for CE #16 are based not only on TVA's extensive experience and analysis, they are supported by the experiences and established CE of the DOE. Because of these limitations, the activities contemplated by these CEs would not result in significant effects to the human environment.

3.16.3 Substantiating Information for Proposed CEs

In addition to reviewing the findings of the Integrated Resource Plan EIS, TVA NEPA staff has reviewed past actions for which TVA has completed a CEC since 2002. In addition, a comparison with CEs established by other agencies and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs were considered.

3.16.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in many instances of activities similar to those included in proposed CE #16. TVA's NEPA procedures includes a CE (5.2.17) pertaining to transmission assets that is commonly applied. For example, since 2002, TVA has documented over 600 individual proposed actions involving transmission lines, including proposed construction of new lines, rebuilding of existing lines, and actions involving the replacement of lines or parts. Separately, TVA has documented 79 activities involving the installation or replacement of switching stations. Most of these CECs used existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.17 (*Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line ROW easements*); and CE 5.2.25 (*Purchase, sale, abandonment or exchange of minor tracts of land, mineral rights, or landrights*).

Examples of CECs for activities relevant to the proposed CE include:

- *CEC 29719: Davidson 500-kV Substation Static VAR Compensator (24 acres of disturbance), (10/6/2014), CE 5.2.17*
- *CEC 28917: Hiwassee, TN. 500-kV SS - Provide Transmission Line Feeds - Project No. 403987 - W.O.s 3166P, 31679, 3167B, 3167T, 3167U, & 3167V, (8/19/2013), CE 5.2.17*
- *CEC 26639: License Agreement between Oak Ridge, Tennessee and TVA for consent to install a Transmission Line across TVA's Roane 500-kV SS Property, (7/9/2012), CE 5.2.24*
- *CEC 26541: Athens - Loudon 161 kV Transmission Line; Install Lightning Mitigation, (6/4/2012), CE 5.2.1*

- *CEC 13647: Coosa River 161-kV Delivery Point project. Scope included construction of a new 4 mile TL on 100 foot wide ROW; construction of a new 161-kV substation on a 13 acre site, (5/17/2007), CE 5.2.17*
- *CEC 674: IPP – Choctaw Gas – Ackerman (Tractebel) – Provide Interconnection - Scope included construction of a new 500-kV switching station on a 17.6-acre site provided by Choctaw Gas Generation LLC, (10/21/2002), CE 5.2.17*
- *CEC 1184: IPP – Reliant – French Camp – Provide Interconnection to TVA. Scope included construction of a new 500-kV switching station , (7/26/2002), CE 5.2.17*
- *CEC 145: Marshall-Murray 161-kV Transmission Line - Install 161-kV Switch Enhancement Devices at Benton, KY, (2/14/2002), CE 5.2.1*
- *CEC 35050: House 161-kV Delivery Point project - Upgrade existing substation and construct/operate approximately 9.7 miles of new transmission line on 100 foot wide ROW, Neshoba County, Mississippi. (6/21/2016), CE 5.2.17.*

3.16.3.2 TVA Experience with Relevant EAs

As noted above, TVA staff has completed dozens of EAs to consider new transmission infrastructure projects. TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. The analysis conducted as part of TVA’s 2015 and 2019 Integrated Resource Planning efforts substantiate our determination that limited transmission line construction and facility construction do not result in significant environmental impacts. Several of these EAs and FONSI are sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.16-1.

Table 3.16-1 Relevant NEPA Documents Supporting Proposed CE #16

EA Name	EA Location	Date FONSI Issued	New TL (miles)	New ROW Acres
Rugby-Sunbright Power Supply Improvements EA	Sunbright, TN	2/16/2017	7.5	103
Memphis Regional Megasite Power Supply EA	Fayette and Haywood Counties, TN	2/16/2016	10	158
Ashland, Mississippi 161kV Delivery Point EA	Benton and Marshall Counties, MS	6/8/2016	15	178
Hillsboro 161-kV Transmission EA	Coffee County, TN	12/17/2012	4.7	51
Volunteer-East Knox Bulk Transmission Project EA	Knox County, TN	12/4/2012	13.4	115
Burlison 161-Kilovolt Transmission Line EA	Tipton, County, TN	5/27/2011	7.2	88
Helicon, Alabama Power Supply Improvement Project EA	Lawrence and Winston Counties, AL	4/7/2011	6.5	79
Gallatin Fossil Plant-Angeltown 161-Kilovolt Transmission Line and Switching Station (10 acres) - Power System Improvements EA	Sumner County, TN	10/8/2010	19.6	163

EA Name	EA Location	Date FONSI Issued	New TL (miles)	New ROW Acres
Monroe, Tennessee - Provide 161-kV Delivery Point EA	Overton County, TN	12/22/2008	5.5	51
Basin Area Power Supply Improvement Plan EA	Fannin and Union counties, GA, and Polk County, TN	12/16/2008	22.7	Not Available
Bridgeport Alabama Power Supply Upgrade EA	Jackson County, AL	2/21/2008	4.8	58
SeverCorr 2 - Catalpa Creek - Lowndes County Power Supply Improvement Project EA	Lowndes County, MS	1/20/2008	10.3	59
New Transmission Line from Center Point to Moss Lake (w/ 6-acre substation) EA	Gordon and Whitfield Counties, GA	8/8/2007	15.5	306
New Transmission Line to Coldwater Station EA	Marshall County, MS	8/6/2007	5.6	53
Montgomery-Oakwood Transmission Line (w/ 6-acre switching station) EA	Montgomery County, TN	2/20/2007	13	158
Transmission Line Tap to New Bowling Green Municipal Util. Substation EA	Warren County, KY	12/20/2006	6	27.3
E. Franklin-Triune 161-kV Transmission Line Tap to Clovercroft 161-kV Substation EA	Williamson County, TN	11/14/2006	5.3	64
Calpine's Morgan Energy Center Transmission Line EA	Morgan and Limestone County, AL	9/16/2005	8.3	25
Columbus Air Force Base 161-kV Substation and Tap From West Point Lowndes 161-kV Transmission Line (w/ 6-acre substation) EA	Lowndes County, MS	9/14/2005	3.2	38
Ranger, North Carolina Substation – Provide 161-kV Delivery Point EA	Ranger, NC	4/14/2005	4.9	60
Etowah Power Supply Improvement Project EA	McMinn and Polk Counties, TN	3/11/2005	9	1.7
Columbus-Dekalb 161-kV Transmission Line Tap to Paulette EA	Noxubee County, MS	12/4/2003	7.8	83
Sweetwater-Madisonville 161-kV Transmission Line EA	Monroe County, TN	8/28/2002	9	109
Oxford-Coffeeville 161-kV Transmission Line EA	Oxford, MS	2/28/19	29	206

kV: kilovolt

Of those NEPA documents listed in the table above, the following are illustrative of the relevance of the activities and findings in these documents to the proposed CE:

Sweetwater-Madisonville 161-kV Transmission Line EA and FONSI: This EA evaluated the construction of a new 9-mile transmission line connecting an existing substation to a new

substation in Tennessee as well as the construction of a new ROW occupying 109 acres of undisturbed land. This EA also evaluated the enlargement of a substation and the installation of a new circuit breaker and other equipment. TVA found that the Proposed Action would not have significant effects on any resource areas, including endangered and protected species, recreation, floodplains, surface water, visual resources, cultural resources, and prime farmland. (TVA, 2002b) This EA is directly relevant to the proposed CE because it deals with the construction of new transmission line of less than ten miles, the reconstruction of existing facilities, and the creation of new ROW.

Burlison 161-Kilovolt Transmission Line EA and FONSI: This EA evaluated the environmental effects of the construction of 7.2 miles of new transmission line, two switch structures, and a new ROW that would occupy approximately 88 acres. Approximately half of the land within the proposed ROW and access road routes was used for agriculture, while another 15 percent is in early successional vegetation. About 35 percent is forestland. Because the construction of the proposed transmission line would not require extensive changes in land use, potential effects to vegetation, local wildlife populations or habitat, or aquatic life would be minor and insignificant. (TVA, 2011d) This EA is directly relevant to the proposed CEs because it deals with the creation of new transmission line of less than ten miles in length, the creation of new transmission infrastructure, and the creation of new ROW.

Gallatin Fossil Plant-Angeltown 161-Kilovolt Transmission Line and Switching Station - Power System Improvements EA and FONSI: TVA assessed its proposal to construct and operate a 19.6-mile, 161-kilovolt transmission line (13.4 miles of new ROW and 6.2 miles of existing ROW) and a 10-acre new switching station on undeveloped land in Sumner County. This action improved the bulk transmission system and ensured a reliable supply of electric power to TVA's Gallatin, Portland, and Lafayette power substations in Middle Tennessee. The transmission line provides an electrical connection between the Gallatin Fossil Plant and a new Angeltown Switching Station. Approximately 163 acres of new ROW was acquired and cleared for the new line. The analysis shows that approximately 70 acres of forests would be impacted, leading to habitat fragmentation (but that similar suitable habitat was abundant in the area such that impacts would be minimal), that impacts to water resources or to sensitive species could be minimized through best management practices and seasonal restrictions, and that the line could span forested wetlands within the ROW, allowing the wetlands to function in the same capacity such that impacts would be minimal.

Hillsboro 161-kV Transmission Line EA and FONSI: TVA assessed the environmental effects from the construction of a new 161-kV substation, 4.7 miles of new transmission line, and associated infrastructure. The new transmission lines, along with the substation, would be built in a newly constructed ROW. Based on the analyses in the EA, TVA determined that implementation of the Action Alternative would have minor and insignificant effects on most resources. There was no practicable alternative to filling 0.25 acres of wetland for an access road, but those impacts were mitigated. (TVA, 2012a) This EA is directly relevant to the proposed CE because it deals with the creation of new transmission line of less than ten miles in length, the creation of new transmission infrastructure, and the creation of new ROWs.

3.16.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities included in the EAs that are relevant to the proposed CE include but are not limited to the following:

- Construction of new electric transmission lines 10 miles in length or less, no more than 125 acres of new developed ROWs, and no more than 1 mile of new access road construction outside the right-of-way
- Construction of switching stations, phase or voltage conversions, and support facilities requiring no more than 10 acres

Based on previous NEPA reviews, TVA found that although several environmental resources may be affected by such activities, they do not have significant environmental effects, as summarized below:

Vegetation: Potential effects to vegetation resulting from activities associated with the proposed CE could include the permanent removal of forest and other tall vegetation from the ROW; the long-term maintenance of the ROW in grass, herbaceous, and/or shrubby vegetation; alteration of uncommon plant communities, especially those that are forested; and spread of invasive species. The review of the impacts of transmission line construction conducted for the Integrated Resource Plan found that an average of 5.6 acres of forest were cleared per mile of new line. Project effects on forest resources would be minor, however, when compared to the total amount of forested land in the region. Because of the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed, TVA has determined that these actions would not result in significant environmental impacts on vegetation and forests. (TVA, 2002b; TVA, 2012; TVA, 2015b)

Water Resources: During transmission line construction, soil disturbances associated with ROW clearing, access road construction, preparation of transmission structure foundations, and other activities could cause short-term, minor, erosion and sedimentation, which could clog small streams and threaten aquatic life. Removal of the tree canopy at stream crossings could result in temporary water temperatures changes and minor adverse effects to aquatic biota. Improper use of herbicides to control vegetation could result in runoff to streams and subsequent aquatic effects. The review of the impacts of transmission line construction conducted for the Integrated Resource Plan found that 76 percent of proposed new lines would cross streams, with an average of 2.9 stream crossings per mile of new line (TVA 2019). About half the new lines crossed streams at which one or both banks were forested, with an average of 1 forested stream crossings per mile of new line. The effects would typically be localized, temporary, and minor. Because of the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed, the actions would not result in significant environmental impacts on water resources. (TVA, 2011d; TVA, 2012; TVA, 2015b)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete a construction or rebuilding activity could occur from the activities associated with the proposed CEs. Thus, significant environmental effects would not be anticipated from covered actions; each proposal would be reviewed by TVA and extraordinary circumstances would be

considered to ensure that actions would not significantly affect air quality. (TVA, 2002b; TVA, 2011d)

Cultural Resources: Any land disturbing activity has potential to cause effects on cultural resources. However, each project footprint would be reviewed by TVA cultural staff to determine whether sensitive cultural or archaeological resources are present. TVA would comply with all applicable federal, state, and TVA regulations to mitigate any effects on cultural resources. The potential impacts, mitigation commitments, and associated consultation would be recorded by TVA in a CEC in the ENTRAC database. The review of the impacts of transmission line construction conducted for the 2019 Integrated Resource Plan found that 14 percent of the projects had potential to affect historic properties; these effects were minimized or mitigated such that the overall effects were not adverse. (TVA, 2002b; TVA, 2019)

Soils: Short-term, minor effects from the land disturbing activities associated with the proposed CEs could include increased erosion and mixing of surface layers of soil due to disturbances caused by construction or replacement of transmission lines. The construction of transmission lines typically does not convert prime farmland to non-farm uses. The review of the impacts of transmission construction projects conducted for the 2019 Integrated Resource Plan found that 64 percent of substation and switching station projects affected prime farmland, with these projects converting an average of 6.9 acres of prime farmland. Because of the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed, the actions would not result in significant environmental impacts on soils or important farmland. (TVA, 2002b; TVA, 2011d; TVA, 2012; TVA, 2019)

Wetlands: Potential wetland effects resulting from transmission line construction could include the conversion and fragmentation of forested wetlands, erosion, and sedimentation in wetlands, soil compaction, hydrologic alteration, and reduction of certain functions such as providing wildlife habitat. Specifically, clearing and conversion of forested wetlands could result in the loss of vegetation and other habitat features such as stumps, downed trees, and snags. Any such potential impacts would be appropriately mitigated. The review of the impacts of transmission construction projects conducted for the 2019 Integrated Resource Plan found that 55 percent of new transmission line projects and 15 percent of substation and switching station projects reviewed by TVA resulted in wetland impacts. The transmission line projects affected an average of 0.9 acres of wetlands per mile of new line; 0.3 acres per mile were forested wetlands. The average area of wetlands affected by new substation and switching station projects was 0.1 acre. Thus, past projects indicate that impacts to wetlands are limited. Further, because of spatial limits applied to the proposed CE, TVA's review for extraordinary circumstances (including the presence of wetlands) when actions are proposed and regulatory requirements to mitigate for most wetland impacts, the actions would not result in significant environmental impacts on wetlands. (TVA, 2012; TVA, 2019)

Wildlife: Construction of a transmission line frequently results in a change in the structure and function of wildlife habitat along the length of a corridor. Initial clearing of vegetation along a ROW could temporarily displace large animals, such as deer and turkey, from the site. Many smaller animals, such as shrews, moles, frogs, and salamanders could be destroyed by construction activities. Clearing of forest eliminates habitat for forest-dependent species and the

resulting forest fragmentation can affect nearby populations of forest-dependent species. Following the construction and revegetation of the site, wildlife favoring edge and early successional habitats would occupy the area. Depending on the wildlife species, the effects of transmission system construction can be either adverse or beneficial. Because of spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed, the actions would not result in significant environmental impacts on wildlife.

Noise: Effects from noise would be limited to any construction activities from the proposed activities associated with CE #16 and would be short-term and localized. (TVA, 2011d; TVA, 2012)

Visual Resources: Visual effects associated with the construction of a transmission line result from the construction of access roads and material lay-down areas, removal of trees and most other vegetation from the ROW, erection of tall, silvery-gray single- or double-pole, or, less commonly, laced steel transmission line structures, and installation of silvery-gray metal conductors between structures. The transmission line structures and conductors would become permanent features in the landscape. The long-term visibility of the cleared transmission line ROW depends on the surrounding landscape, and the cleared ROW can be more prominent in a forested landscape than in a cleared agricultural landscape. Because of the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed, the actions would not result in significant impacts on an area's visual resources. (TVA, 2012a)

Electric and Magnetic Fields: Electric and magnetic fields (EMF) are frequently produced along the length of a transmission line. The strength of the fields within and near the ROW would vary with the electric load on the line as well as with the terrain. Public exposure to EMF could vary, based on land use. TVA would minimize public exposure to EMF through engineering features and line routing decisions. Therefore, no significant effects from EMF are anticipated. (TVA, 2015h; TVA, 2014f)

Recreation: Recreation activities in the immediate vicinity of construction or rebuilding activities could be temporarily disrupted, which could have minor, localized, short-term environmental effects. The spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA would ensure that there are no significant impacts on recreation resources. (TVA, 2002b)

Summary: TVA EAs and resulting FONSI have shown that activities contemplated under these CEs could have minor, typically short-term adverse effects on some natural resources and do not individually or cumulatively cause significant environmental effects. The spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed ensure that these actions would not result in significant effects.

3.16.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in the proposed CE. TVA started by identifying other agencies with similar missions,

and experience with power transmission line construction and rebuilding of transmission lines. Based on this search, the Department of Energy, the Department of Commerce (DOC) Broadband Technology Opportunities Program (BTOP), and the Rural Utility Service were determined to have similar characteristics to TVA. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage public lands; have missions, mandates, responsibilities, and authority to manage power transmission facilities; and have extensive histories and experience with creating ROWs. The following CEs currently in use at these agencies are similar in the nature, scope, and intensity of included activities to proposed CE #16 and provide support for TVA's conclusion that its activities under the proposed CEs would not result in significant effects to the human environment either individually or cumulatively.

DOE CEs B4.11 and B4.12 (76 FR 63764, 2011)

B4.11: Electric power substations and interconnection facilities

Construction or modification of electric power substations or interconnection facilities (including, but not limited to, switching stations and support facilities).

B4.12: Construction of powerlines

Construction of electric powerlines approximately 10 miles in length or less, or approximately 20 miles in length or less within previously disturbed or developed powerline or pipeline rights-of-way.

TVA reviewed DOE's proposed rule (76 FR 214) for the substantiation on adopted changes to the long-standing CE B4.11. In DOE's rationale to add interconnection facilities to the CE text, it explained that such facilities have similar equipment and function, "Substations switch, step down, or regulate voltage of electricity being transmitted, and may serve as controls and transfer points on a transmission system; interconnection facilities add electric power resources to transmission systems through similar functions." (DOE, 2011b)

In the same document, DOE explained why it added to existing CE B4.12, "relocation of existing electric transmission lines approximately 20 miles in length or less." DOE stated that its

"long-term experience with electric transmission line construction indicates that the approximately 10-mile limit for categorical exclusion of transmission line construction outside of a previously disturbed or developed right-of-way, and the approximately 20-mile limit for categorical exclusion of transmission line in a previously disturbed right-of-way, have been reliable guides to the appropriate level of NEPA review for the actions." (DOE, 2011a)

This DOE CE directly aligns to activities included under the proposed TVA CE #16.

Department of Commerce BTOP CEs B2, B6, B9, (BTOP, 2009)

(B2) Construction of microwave facilities involving no more than five acres (2 hectares) of physical disturbance at any single site

(B6) Construction of substations, switching stations, or telecommunications switching or multiplexing centers requiring no more than five acres (2 hectares) of new physically disturbed land or fenced property

(B9) The construction of telecommunications facilities within the fenced area of an existing substation, switching station, or within the boundaries of an existing electric generating facility site

TVA reviewed BTOP's administrative record for CEs B2, B6 and B9 to support construction activities related to telecommunications. The BTOP established its CEs based on the existing NEPA requirements and experience of Rural Utility Service' Telecommunication Program, which addressed potential environmental effects from activities similar to TVA's telecommunication installation systems. According to BTOP's administrative record, CE B2 and B6's substantiation of no significant environment effects was based on "extensive history of RUS application of these Categorical Exclusions and the lack of extraordinary circumstances associated with their application" (BTOP, 2009). For each of the three BTOP CEs, BTOP substantiated that the CE would have no significant environmental effects based on the extensive history of other agencies' in applying the CE. (BTOP, 2009).

Rural Utility Service Department of Agriculture (Rural Development) CEs 1970.54 c1 and c2 (7 C.F.R. Part 25 , 2016)

The following CEs apply to financial assistance for:

1970.54 (c): Small-scale energy proposals:

(1) Construction of electric power substations (including switching stations and support facilities) or modification of existing substations, switchyards, and support facilities;

(2) Construction of electric power lines and associated facilities designed for or capable of operation at a nominal voltage of either:

(i) Less than 69 kilovolts (kV);

(ii) Less than 230 kV if no more than 25 miles of line are involved; or

(iii) 230 kV or greater involving no more than three miles of line, but not for the integration of major new generation resources into a bulk transmission system;

The general scope and scale of these activities would generally be similar to those performed by TVA, although the RUS's CEs address providing financial assistance for such actions. TVA notes that CE 1970.54(c)(2) includes less restrictive line length limits for lines of less than 230-kV than proposed by TVA for CE #16. The BTOP CE administrative record references and benchmarks to RUS's CEs extensively as substantiation of no significant effects (BTOP, 2009). These CEs do provide support that TVA's proposed CEs do not generally have significant environmental impacts.

Federal Energy Regulatory Commission CE 17 (18 CFR 380.4)

(17) Approval of electrical interconnections and wheeling under sections 202(b), 210, 211, and 212 of the Federal Power Act, that would not entail:

- (i) Construction of a new substation or expansion of the boundaries of an existing substation;*
- (ii) Construction of any transmission line that operates at more than 115 kilovolts (KV) and occupies more than ten miles of an existing right-of-way; or*
- (iii) Construction of any transmission line more than one mile long if located on a new right-of-way;*

Comparability of CEs

Table 3.16-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.16-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #16	DOE	BTOP	RUS	FERC
Construction of new transmission assets, including electric transmission lines 10 miles in length or less on new or undeveloped ROWs, and/or electric power substations or interconnection facilities	X		X ¹	
Construction of switching stations, phase or voltage conversions, and support facilities	X	X	X	X

¹ Less restrictive length limits for low-voltage lines and more restrictive length limits for high-voltage lines

The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CEs, including the construction of transmission lines and equipment. This includes many of the same restrictions in terms of size and scope of the projects. The DOE CEs include activities such as construction of electric transmission lines in similar environmental settings as those being proposed in CE #16. The BTOP, RUS and FERC CEs address the construction of electric power substations and other interconnection facilities for both power and telecommunication equipment and have spatial limits. The construction activities that these agencies perform would use similar equipment and methods as those used by TVA during construction of activities under proposed CE #16.

All of the activities included in TVA’s proposed CE would occur in a similar environmental context to those actions performed by the federal agencies listed in Table 3.16-2 and covered by those agencies’ CEs. TVA notes that all of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.16.4 CE Documentation Requirement

Although TVA does not propose to promulgate documentation requirements to record CEs, TVA has determined that staff would complete a CEC in TVA’s ENTRAC database to document when the CE #16 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further

analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment.

3.16.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agencies' CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term effects, depending on the location of the project. Generally, environmental impacts would be limited to the construction phase with no or negligible operational impacts and are therefore temporary and limited in scope. Accordingly, through a deliberative process, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. When applying the proposed CE, TVA specialists would complete a CEC in ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.17 CE 17 - EXISTING TRANSMISSION INFRASTRUCTURE

TVA proposes to eliminate its existing CE 5.2.17 and establish a new CE that addresses similar actions to alter and modify existing transmission infrastructure.

3.17.1 Proposed Categorical Exclusion Text

Routine modification, repair, and maintenance of, and minor upgrade of and addition to, existing transmission infrastructure, including the addition, retirement, and/or replacement of breakers, transformers, bushings, and relays; transmission line uprate, modification, reconductoring, and clearance resolution; and limited pole replacement. This exclusion also applies to improvements of existing access roads and construction of new access roads outside of the right-of-way that are generally no more than 1 mile in length.

After publishing the Proposed Rule in June 2017, TVA received public comments expressing concern for the scope of proposed CE #17. Based on these comments, TVA made a minor revision to the first part of the CE's definition to further clarify and emphasize that only routine modifications, repairs and maintenance actions are covered by the CE, and that any upgrades or additions to existing transmission infrastructure should be minor.

TVA also removed from scope of the proposed CE "work on power equipment and structures within existing substations and switching stations as well as work on existing transmission lines...." After further internal deliberations, TVA determined that minor maintenance actions at existing substation and switching station facilities are actions that would be covered under proposed CEs #36 or #37. Removing the text from the definition of proposed CE #17 also clarifies that the CE is intended to cover only transmission line infrastructure actions. TVA added an example under CE #36 to clarify this as well.

3.17.2 Background

As noted above, TVA owns and operates over 16,000 miles of transmission lines and over 100,000 transmission line structures. Along with these lines and facilities, TVA is responsible for over 230,000 acres of ROW. The large number of transmission lines, associated structures and ROW assets mean that TVA is usually undertaking multiple maintenance, upgrade, and replacement projects at any given time. TVA has upgraded many existing transmission lines in recent years to increase their capacity and reliability by re-tensioning or replacing conductors (the lines), installing lightning arrestors and other measures. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology, which provides a clearer picture of grid conditions over a wider area at any given time. These upgrades include modifications of existing lines and new installations as necessary to provide adequate power transmission capacity, maintain voltage support and ensure generating plant and transmission system stability.

Because of their similar nature, the activities under proposed CE #17 have been primarily categorized since 1983 under TVA's existing CE 5.2.17 (*Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and*

projects requiring acquisition of minor amounts of additional substation property or transmission line ROW easements). Through the development of several new CEs for transmission-related actions, TVA is proposing to provide more specific definitions of the activities that have been carried out under existing CE 5.2.17. The new CEs would provide detail and their use would improve transparency (it would be clearer what activities are categorically excluded). TVA NEPA specialists anticipate that having multiple newly defined CEs instead of one broad CE (5.2.17) would clarify for TVA staff that the activity may be categorically excluded, which may reduce staff time and resources committed to initial NEPA screening.

The proposed CE addresses routine maintenance, upgrades, and repair of existing infrastructure and maintenance of ROW activities, which are required for TVA to continue its mission and to make sure that its assets are able to provide power to its customers. These activities are usually minor in scope, and address already-constructed facilities and transmission equipment. Although such actions usually occur in previously disturbed areas, TVA proposes to include new access road construction in the scope of this CE, with the same spatial limit (1 mile) of new road construction that would apply to other proposed CEs for land management actions and other transmission activities.

3.17.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CE would be excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment absent extraordinary circumstances.

3.17.3.1 TVA Experience with Related CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in many instances of activities similar to those included in proposed CE #17. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002, TVA has documented over 600 individual activities involving transmission lines. Of these, over 200 actions are related to transmission line installation, additions and modifications, retirement, uprate, or reconductoring. Separately, TVA has documented over 30 activities involving transmission line rights-of-way. TVA has also reviewed the actions of TVA business units that are focused on electric systems projects and operations, and noted these business units applied existing CEs over 2,400 times. These business units used existing CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*) and CE 5.2.17 (*Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of*

minor amounts of additional substation property or transmission line right-of-way easements) for most of these actions. Examples of CECs for activities relevant to the proposed CE include:

- CEC 29679: Bowling Green, KY. 161-kV SS - Upgrade Spare Line Bay - Project No. 407796 - W.O. 335PL, (1/16/2014), CE 5.2.1
- CEC 29589: WCF U7 Precipitator Controls Upgrade and replace 7A5 T/R Set, (12/12/2013), CE 5.2.1
- CEC 3795: Winner-Pandora transmission line maintenance, (8/13/2003), CE 5.2.1
- CEC 1110: Memphis Area Interchange Meter Upgrades - Project No. XLKRP - W.O.s E0057 through E0065, (7/17/2002), CE 5.2.1
- CEC 174: West Cookeville, TN 161-kV Substation - Upgrade Relays for Overcurrent Breaker 774, (3/14/2002), CE 5.2.1
- CEC 31366: Clay-Okolona, MS 161-kV Transmission Line - Replace Switches to Egypt, MS Pumping Station - Project: 103168 - W.O.: 31F4D, 644W5, (10/15/2014), CE 5.2.17
- CEC 35050: House 161-kV Delivery Point project - Upgrade existing substation (and construct/operate approximately 9.7 miles of new transmission line on 100 foot wide ROW, occupying a total of 118 acres). Neshoba County, Mississippi. (6/21/2016), CE 5.2.17.

3.17.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.17.1.

Table 3.17-1 Relevant NEPA Documents

EA Name	EA Location	FONSI Date	Length of Project
Helicon, Alabama Power Supply Improvement Project EA	Lawrence and Winston Counties, AL	4/7/2011	6.5 miles
Replacement of Structure 7 – Kentucky Hydroelectric Plant – Gilbertsville 69-kV Transmission Line EA	Kentucky Dam Reservation	6/15/2010	N/A
Entergy Mississippi, Inc., Florence-South Jackson, Mississippi, 115-kilovolt Transmission Line Upgrade EA	Hinds, Rankin, and Scott Counties, MS	11/12/2009	7.5 miles
Basin Area Power Supply Improvement Plan EA	Fannin and Union counties, GA, and Polk County, TN	12/16/2008	22.7 miles
SeverCorr 2 - Catalpa Creek - Lowndes County Power Supply Improvement Project EA	Lowndes County, MS	1/20/2008	10.3 miles
Murfreesboro-E. Franklin and Pinhook-Radnor 161-kV Transmission Line Upgrades EA	Rutherford, Williamson, and Davidson Counties, TN	3/30/2007	33 miles

kV: kilovolt

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

SeverCorr 2 - Catalpa Creek - Lowndes County Power Supply Improvement Project EA and FONSI includes upgrading 10.3 miles of existing line from 46-kv to 161-kv and expanding an existing substation in Lowndes County, Mississippi. The power supply improvements would address the electrical needs of an expansion of the SeverCorr steel mill, a new plant, and anticipated reliability problems resulting from other industrial load growth in the Golden Triangle area. Based on the analysis in the EA, TVA concluded that the proposal would have minor and insignificant impacts on groundwater, surface water, aquatic ecology, and recreation. The proposed action resulted in the clearing of about 23 acres of forest and an identified rare plant community. The loss of the forested area and associated changes in wildlife populations would not result in significant local or regional impacts, given the total amount of forested land in the region. (TVA, 2008d) This EA is directly relevant to the proposed CE because it deals with the upgrade of existing facilities in previously disturbed areas.

Entergy Mississippi, Inc., Florence-South Jackson, Mississippi, 115-kilovolt Transmission Line Upgrade EA and FONSI, TVA assessed the potential environmental effects for the upgrade of approximately 7.5 miles of an existing 115-kilovolt (kV) transmission line on the Entergy Mississippi, Inc., transmission system. The upgrade was necessary to support the transfer of 724 megawatts of electricity from the Ackerman (Suez Choctaw) generating facility to the TVA transmission system. The upgraded transmission line used mostly single-pole steel structures on existing 100-foot ROW, occupying about 92 acres. Additionally, two switches were replaced at Entergy Mississippi, Inc.'s Morton 115-kV Substation in Scott County. TVA provided the funds to Entergy Mississippi, Inc. for these necessary upgrades. (TVA, 2010g) This EA is directly relevant to the proposed CE because it deals with the upgrade of existing power supply facilities in previously disturbed areas.

Other applicable TVA proposed actions include small substation or individual pole replacement actions as well as larger projects covering many miles of transmission line modifications. Those EAs listed above that pertain more to construction of new transmission lines and equipment than to maintenance activities would have similar effects on those associated with line maintenance. While all of the EAs listed in Table 3.17-1 addressed maintenance activities on some scale, they generally disclose much larger potential for environmental effect; despite this, TVA still determined the projects to have no significant impacts.

3.17.3.3 Potential Environmental Effects

Based on previous NEPA reviews, TVA found that although several environmental resources may be affected by such activities, they do not have significant environmental effects, as summarized below:

Vegetation: Minor transmission and/or infrastructure maintenance activities could have short-term minor effects on native vegetation in the area of the ROW. However, because the ROWs covered by the proposed CE are previously disturbed or developed areas, the native vegetation has been affected by previous construction and vegetation removal efforts. Therefore, effects on

native vegetation and other vegetation would generally be localized, minor and temporary. However, some access road construction could result in the removal of vegetation in disturbed areas; impacts would be limited by spatial limits established in the proposed CE. (TVA, 2008d; TVA, 2010g)

Water Resources: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation. Increased sedimentation could result from repairing transmission facilities near streams, rivers, or lakes, or from maintaining structures near rivers or streams, and could cause short-term, minor effects. Increased runoff from areas where vegetation or other materials providing ground cover are removed could cause temporary increased turbidity, and siltation in receiving waters. Over the longer term, maintenance and limited access road construction activities near streams, rivers, or lakes could result in beneficial effects that would include reduced suspended solids and turbidity, resulting in reduced sediment accumulation. (TVA, 2008d; TVA, 2010g)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete a specific construction, maintenance, or upgrade activity could occur from the proposed CE activities. (TVA, 2008d; TVA, 2010g)

Soils: Short-term, minor effects could include increased erosion and mixing of surface layers, which can affect mineral content of soil due to disturbances caused by heavy equipment used for replacing transmission facilities, access road construction or improvements, or from ROW maintenance. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from ROW maintenance activities. (TVA, 2008d; TVA, 2010g)

Wildlife: The proposed TVA CE would only address activities associated with existing transmission infrastructure and occurring on already disturbed sites. As such, wildlife near the project areas are acclimated to local conditions. Effects to wildlife from these activities would be short-term, affecting the local environment only during the duration of the upgrade, maintenance, or replacement timeframe. (TVA, 2008d; TVA, 2010g)

Noise: Effects from noise would be limited to any construction activities that would occur under the proposed activities associated with the proposed CE. As such, they would be short-term and limited in scope. Effects from activities associated with the proposed CEs would be minor. (TVA, 2008d; TVA, 2010g)

Summary: The TVA EAs and FONSI have proven that the activities contemplated under these CEs could have localized, minor, short-term adverse effects for the natural resources within the Tennessee Valley region and do not cause major environmental effects. The spatial limit applied to certain actions of the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed ensures that these actions would not result in significant effects.

3.17.3.4 Benchmarking of Other Agencies' Experience

TVA identified the following CEs currently used by other agencies as similar in the nature, scope, and intensity to activities included in the proposed TVA CE. Specifically, these CEs

include activities similar to TVA's proposed CE, including maintenance, upgrade, and repairs to transmission systems. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage public lands; have missions, mandates, responsibilities, and authority to manage power transmission lines and facilities.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CEs B4.6, B4.9, and B4.13 (76 FR 63764, 2011)

B4.6: Additions and modifications to transmission facilities

Additions or modifications to electric power transmission facilities within a previously disturbed or developed facility area. Covered activities include, but are not limited to, switchyard rock grounding upgrades, secondary containment projects, paving projects, seismic upgrading, tower modifications, load shaping projects (such as the installation and use of flywheels and battery arrays), changing insulators, and replacement of poles, circuit breakers, conductors, transformers, and crossarms.

B4.9: Multiple use of powerline rights-of-way

Granting or denying requests for multiple uses of a transmission facility's rights-of-way (including, but not limited to, grazing permits and crossing agreements for electric lines, water lines, natural gas pipelines, communications cables, roads, and drainage culverts).

B4.13: Upgrading and rebuilding existing powerlines

Upgrading or rebuilding approximately 20 miles in length or less of existing electric powerlines, which may involve minor relocations of small segments of the powerlines.

Because DOE manages and maintains extensive networks of transmission lines, its transmission-related CEs are particularly relevant benchmarks. TVA identified four DOE CEs that serve as benchmarks to the proposed CE #17. DOE's CE B4.6 covers additions or modifications to electric power transmission facilities, as long as they are within previously disturbed areas. This CE covers the replacement of poles, breakers, and transformers, much like the proposed TVA CE #17. DOE requires documentation of these CEs. TVA specialists would likewise be required to document a review if the proposed CE #17 is established and applied. (76 FR 63764, 2011).

Other related DOE CEs may be less relevant to the proposed CE but are additional examples of transmission-related categories of actions that have been found to not result in significant environmental effects. DOE's CE 4.9 serves as an example of activities occurring along or within an existing transmission right-of-way that may have effects on the environment. (76 FR 63764, 2011) DOE's CE B4.13 addresses changes to existing transmission infrastructure: the upgrading and rebuilding of existing powerlines up to approximately 20 miles in length and involving some relocations of segments.

Department of Commerce BTOP CEs B13 (BTOP, 2009)

(B13) Phase or voltage conversions, reconductoring or upgrading of existing electric distribution lines, or telecommunication facilities

TVA reviewed BTOP's administrative record for B13 to support modification and upgrade activities related to telecommunication. BTOP established the CE based on the existing NEPA requirements and experience of the Rural Utilities Services' Telecommunication Program, which addressed potential environmental effects from activities similar to TVA's telecommunication installation systems. According to BTOP's administrative record, BTOP referred to existing DOE CE B4.6 as their source of evidence for no significant effects when it established B13. (BTOP, 2009)

Comparability of CEs

The CEs of DOE and BTOP are comparable to the CE proposed by TVA because they are limited to power transmission activities and address maintenance of infrastructure. While other agency CEs are limited in their size or scope, TVA's proposed CE is not. However, these other agencies looked into projects that would have similar environmental effects as the proposed TVA CE, and determined that they would not have any major effects on the natural environment in the area of the projects. As such, these CEs are relevant to the proposed TVA CE.

The DOE CEs incorporate similar coverage of projects as those covered by the proposed CE and are compatible with those proposed by TVA because they are limited in scope to just those projects that deal with transmission facilities, as well as limiting the size of the project that are covered by the CE. DOE CE B4.9 is comparable because it is limited to ROW activities, and as such is limited in the scope of the projects to be completed, and the limited geographical area covered by the projects.

Other agencies have established CEs for road construction, maintenance and improvement actions such as those that would apply to limited access road construction and improvements under proposed CE #17. TVA discusses CE benchmarking information and comparability in the discussions of proposed CE #41 and #42 below. See Sections 3.41 and 3.42, respectively.

3.17.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when the CE #17 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment.

3.17.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. Because many of the covered actions

would occur only in previously disturbed areas, these activities would have only minor, short-term effects on the surrounding environment. Potential environmental impacts would typically be limited to the period of work activities, with no or negligible operational impacts. Accordingly, through a deliberative process, TVA determined that the proposed CEs encompass activities that do not have individual or cumulative significant effects on the human environment. TVA specialists will complete a CEC in ENTRAC for each application of these CEs to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by these CEs.

3.18 CE 18 - TELECOMMUNICATIONS & SMART GRID

TVA proposes to revise the definition of current CE 5.2.18 to make clarifications and add additional examples of activities.

Existing CE text: *Construction and operation of communication facilities (i.e., powerline carrier, insulated overhead ground wire, VHF radio, and microwave).*

Proposed CE text: *Construction and operation of new, or modifications to existing, communication facilities and/or equipment, including, but not limited to, (i.e., power line carriers, insulated overhead ground wires/fiber optic installation or retirement, electricity transmission control and monitoring devices, VHF radios, and microwaves and support towers).*

3.18.1 Background and Substantiating Information for Revised CE:

TVA's proposed clarifications to this CE include adding the word "new," and adding "electricity transmission control and monitoring devices" as covered activities. Modifications to existing facilities would also be added. Electricity transmission control and monitoring devices are considered smart grid devices, and are an important part of TVA's communication systems. By adding the examples of devices in the revised CE's text, TVA is clarifying for staff that these important devices are categorically excluded (found to have no significant effects on the environment). TVA's examples are not intended to be exhaustive of all possible activities that fit within the subject class of activities. TVA anticipates that the inclusion of examples would more clearly define the activities associated with this CE.

TVA NEPA staff reviewed the ENTRAC database for previous uses of CE 5.2.18 since February 2002, and found that it had been documented 171 times. Previous application of this TVA CE indicates that the covered activities were considered to produce no significant harm to the quality of the human environment. Examples of application of CE 5.2.18 include:

- *CEC 29492: On the existing easement of the TVA eight acre Model, TN communication Site on the US Forest Service's Land Between The Lakes Recreation Area, (11/22/13)*
- *CEC 28727: TVA would give permission for the installation of new AT&T antennas and its associated equipment on an existing communication tower in the switchyard in Oxford, MS, (7/15/2013)*
- *CEC 19368: TVA will lease a 10000 sq. ft. site to T-Mobile on its Radnor Substation property for the installation of a 180 ft.-tall cell tower, (10/15/2008)*
- *CEC 7988: Cumberland Fossil Plant. Install Nextel Radio System and Cell Site. TVA will install a new 400 foot guyed cell tower adjacent to the existing 400 feet met tower located in Cumberland City, (11/15/2004)*
- *CEC 2366: American Towers and Structures Inc., turnkey installation of mobile band radio towers at the Meredith and Elkton-Hill repeater sites, (1/7/2003)*

3.18.2 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.18 be documented in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment. TVA staff would continue to document the use of CE #18, as modified.

3.18.3 Conclusion

Based on TVA experience, relevant studies, and other agency experience with similar actions, the activities covered under the proposed revised CE would not individually or cumulatively cause significant effects. The proposed changes to the CEs do not expand the scope of effects that would occur under such proposals.

3.19 CE 19 - TRANSMISSION LINE RETIREMENT & REBUILDING

TVA proposes to establish a new CE pertaining to transmission line retirement or rebuilding.

3.19.1 Proposed Categorical Exclusion Text

Removal of conductors and structures, and/or the cessation of right-of-way vegetation management, when existing transmissions lines are retired, or the rebuilding of transmission lines within or contiguous to existing rights-of-way involving generally no more than 25 miles in length and no more than 125 acres of expansion of the existing right-of-way.

3.19.2 Background

As previously noted, TVA has extensive experience in constructing and maintaining power transmission lines and maintaining their ROWs. TVA operates one of the largest transmission systems in the U.S, with a service area covering nearly 10 million customers and over 80,000 square miles. TVA's network of more than 16,000 miles of transmission line; over 500 substations, switchyards and switching stations; over 230,000 acres of ROW; and about 1,300 individual customer connection points. TVA's transmission system has 69 interconnections with 13 neighboring utilities at interconnection voltages ranging from 69-kiloVolt (kV) to 500-kV. (TVA, 2019)

Since 1983, TVA has had one CE that addresses the construction and modification of transmission system infrastructure (5.2.17, *Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line ROW easements*). TVA staff regularly cite to other existing CEs when considering proposed actions as well. Through the development of new CEs for transmission-related actions, including the proposed CE #19, TVA is proposing to provide more specific definitions of categories of action that may have previously been carried out under existing CE 5.2.17 or other CEs. The new transmission-related CEs would provide detail and their use would improve transparency (i.e., it would be more clear what activities are categorically excluded). Additionally, TVA NEPA specialists have frequently been asked for clarification on the definition of the existing CE and in determining whether a proposed action fell under the defined category. Such questions indicate the need to establish more clearly defined CEs for transmission actions such as CE #19 and other transmission-related CEs, to improve clarity and the potential for inappropriate CE use.

The activities included in the proposed CE will help ensure the reliability of TVA's transmission system in providing power to TVA's customers. Because actions pertain to retirement or rebuilding of existing transmission assets, the activities are usually minor in scope and typically occur in previously disturbed areas. Completion of a CEC for every application of these CEs will ensure that the proposed CEs would not be applied to actions that could have major effects on the environment.

Typically, rebuilding transmission lines consists of removing and replacing most or all of the transmission structures and conductors on a transmission line and may include expanding the width of the existing ROW. In proposed CE #19, TVA proposes to limit rebuilding actions to 25 miles and 125 acres. TVA used a combination of the agency's extensive experience to identify a proper limit for the proposed CE #19. As described in greater detail above in the discussion of proposed CE #16, TVA reviewed the analysis conducted in its Integrated Resource Plan EIS to determine the average impacts associated with new or upgraded transmission infrastructure projects. The 25-mile limit for redevelopment along existing ROWs is consistent with projects analyzed in previous EAs and EISs. The spatial limit for area of disturbance (acres) proposed for CEs #16 would be the same applied to CE #19.

As discussed below, further supporting the proposed limits are CEs established by other agencies that serve as benchmarks to TVA.

3.19.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.19.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in many instances of activities similar to those included in other transmission-related proposed CEs. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002, TVA has documented over 600 individual activities involving transmission lines. Of these, there are 6 rebuilding actions and 52 actions involving the replacement of lines or parts. Separately, TVA has documented over 50 activities involving the retirement of transmission lines. Several existing CEs were applied for these actions: TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.17 (*Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line ROW easements*); and CE 5.2.25 (*Purchase, sale, abandonment or exchange of minor tracts of land, mineral rights, or landrights*). Examples of CECs for activities relevant to the proposed CE include:

- *CEC 32974: Fontana-Peppertree 13-kV relocation/rebuild, (7/24/2015), CE 5.2.17*
- *CEC 29695: Volunteer-North Knoxville 161kV Rebuild (11.3 miles), (1/10/2014), CE 5.2.1*

- CEC 27943: Browns Ferry-Athens 161-kV TL Rebuild. Replace 139 structures, 29 in new locations on 14-mile TL, (6/28/2013; 10/2/2013), CE 5.2.17
- CEC 30392: John Sevier - Volunteer 161-kV TL - Rebuild. Replacement of 92 structures and various locations along a 54-mile TL, (2/3/2015), CE 5.2.1
- CEC 31366: Clay-Okolona, MS 161-kV Transmission Line - Replace Switches to Egypt, MS Pumping Station - Project: 103168 - W.O.: 31F4D, 644W5, (10/15/2014), CE 5.2.17
- CEC 28917: Hiwassee, TN. 500-kV SS - Provide Transmission Line Feeds (partial retirement of line), (8/19/2013), CE 5.2.17
- CEC 26978: FY-2012 Mechanical Mowing and Hand Clearing, Herbicide Application, and Reclaiming Existing ROW for Kingston-ORNL 161-kV Transmission Line - L5116KX, (8/27/2012), CE 5.2.1
- CEC 19799: Mayfield-Martin 161kV Line Retirement (14.3 miles), (1/7/2009), CE 5.2.1
- CEC 35595: Westbourne-Jellico 69kV TL line retirement, (11/8/2016), 5.2.1
- CEC 35161: Retirement of Johnsonville-Trace Creek 161kV Structures 3a to 23, (8/8/2016), CE 5.2.1
- CEC 34009: Rogersville-Fitts Gap 69kV TL Retirement (15 miles), (5/12/2016), CE 5.2.1
- CEC 32708: Dover-Erin 69kV TL Retirement (10 miles), (7/13/2015), CE 5.2.1
- CEC 32050: TL Retirement Rockwood-Spring City (19 miles), (3/19/2015), CE 5.2.1

3.19.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.19-1.

Table 3.19-1 Relevant NEPA Documents

EA Name	EA Location	Date FONSI Issued	TL (miles)	New ROW Acres
Putnam-Cumberland, Tennessee Improve / Upgrade Power Supply Project EA	Putnam and Cumberland Counties, TN	11/13/2013	17	N/A
Hillsboro 161-KV Transmission Line EA (w/ retirement of 2 miles of line)	Coffee County, TN	12/17/2012	4.7	51
Helicon, Alabama Power Supply Improvement Project EA	Lawrence and Winston Counties, AL	4/7/2011	6.5	79
Gallatin Fossil Plant-Angeltown 161-Kilovolt Transmission Line and Switching Station - Power System Improvements EA	Sumner County, TN	10/8/2010	19.6	163
Entergy Mississippi, Inc., Florence-South Jackson, Mississippi, 115-kilovolt Transmission Line Upgrade EA	Hinds, Rankin, and Scott Counties, MS	11/12/2009	7.5	Not Available

EA Name	EA Location	Date FONSI Issued	TL (miles)	New ROW Acres
Basin Area Power Supply Improvement Plan EA	Fannin and Union counties, GA, and Polk County, TN	12/16/2008	22.7	Not Available
SeverCorr 2 - Catalpa Creek - Lowndes County Power Supply Improvement/Upgrade Project EA	Lowndes County, MS	1/20/2008	10.3	59
Murfreesboro, E. Franklin and Pinhook-Radner 161kV TL EA (13 mile rebuild, 10 mile upgrade)	Rutherford, Williamson and Davidson Counties, TN	3/7/2007	23	2
Transmission Line Tap to New Bowling Green Municipal Utilities (BGMU) Substation EA (3 miles rebuilt)	Warren County, KY	12/20/2006	6	27.3
Etowah Power Supply Improvement / Rebuilding Project EA	McMinn and Polk Counties, TN	3/11/2005	9	1.7
Kirkmansville-Clifty City Power Improvement Project EA (rebuild 23 mile section and 5-acre substation)	Christian, Muhlenburg and Todd Counties, KY	2/7/2005	45.7	

TL: transmission line

Of the NEPA documents listed above, the following are illustrative of the relevance of the activities and findings in these documents to the proposed CE:

Murfreesboro, E. Franklin and Pinhook-Radner 161kV TL EA and FONSI: This 2007 EA evaluated TVA’s proposal to rebuild and upgrade about 33 miles of transmission lines and make associated upgrades to substations in Middle Tennessee. The proposal was needed to relieve the potential for transmission line overloading in the project area. A 23-mile long 161-kV transmission line between TVA’s existing Murfreesboro and East Franklin Substations was established by rebuilding a 13-mile segment of a de-energized line and a 10-mile segment of operating 46-kV line. The 10-mile Pinhook Radnor line was upgraded by adding new conductors. Only 1.75 miles of new right-of-way were required for the project. In the EA, TVA found that the project would have minor impacts on groundwater, surface water, vegetation, wildlife, wetlands, recreation, natural areas, and visual and aesthetic resources. Impacts were avoided after TVA rerouted a portion of the line to avoid impacting an endangered species. (TVA, 2007) This EA is supporting documentation for the proposed CE because actions included rebuilding TLs and the removal of conductors and/or structures along existing lines. In addition, the rebuilding occurred along a 33-mile TL, which is a greater distance than the proposed limit to the CE #19.

Kirkmansville-Clifty City Power Improvement Project EA and FONSI: In this 2005 EA, TVA reviewed a proposed 45.7-mile long Paradise-Hopkinsville 69-kV TL to supply power to TVA and Pennyriple Rural Electric Cooperative Corporation substations in Christian, Muhlenberg, and Todd Counties in Kentucky. The project was needed because this line had experienced numerous power interruptions in prior years and excessive voltage fluctuations had occurred at the Kirkmansville and Clifty Substations. To remedy the situation, TVA proposed to:

retire and replace a substation (161-26kV, about 11 acres) and establish a new connection to an existing nearby TL; construct a new 161-69-kV substation (about 5 acre) to provide a new power source in the area; and rebuild a 23-mile section of an existing TL from an existing substation tap to the TVA Paradise Fossil Plant. The new line was built on existing right-of-way and TVA used steel-pole structures to replace wooden poles. TVA found that the proposed action would not have significant impacts on any resources because of site planning to avoid sensitive resources and the implementation of best management practices and other environmental quality protection specifications. (TVA, 2005) This EA is directly relevant to the proposed CE because actions included rebuilding TLs and the removal of conductors and/or structures along existing lines. In addition, the rebuilding occurred along a 23-mile TL, which is a similar distance as the proposed limit to the CE #19.

3.19.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities included in the EAs that are relevant to the proposed CEs include but are not limited to the following:

- Rebuilding or upgrading existing power transmission lines (up to 25 miles in length and no more than 125 acres of expansion to the existing right-of-way)
- Removal of conductors and/or structures
- Retirement of existing transmission lines

Based on previous NEPA reviews, TVA found that although several environmental resources may be affected by such activities, they do not have significant environmental effects, as summarized below. Potential impacts from widening existing ROWs would be similar to those of constructing new ROWs described for proposed CE #16.

Vegetation: Generally, rebuilding of transmission lines along existing ROW would have minimal effects on vegetation since areas have previously been disturbed and maintained by periodic vegetation management as early successional plant communities. (TVA, 2007; TVA 2005b) Conducting transmission line retirement actions may result in temporary impacts to vegetation along lines, but such impacts would be minor. Unless maintained by the landowner, the ROWs of most retired transmission lines would eventually revert to forest. (TVA, 2002b; TVA, 2012)

Water Resources: During transmission line rebuilding or retirement actions, soil disturbances associated with ROW expansion (if applicable), equipment access, modifications to transmission structure foundations, and other activities could cause short-term, minor, erosion and sedimentation of small streams, which would impact aquatic life. (TVA 2005; TVA 2007) Removal of the tree canopy at stream crossings in expansion areas could result in temporary water temperatures changes and minor adverse effects to aquatic biota. Improper use of herbicides to control vegetation could result in runoff to streams and subsequent aquatic effects. Such effects would be localized, temporary, and minor. (TVA, 2011d; TVA, 2012; TVA, 2015b)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete rebuilding or retirement activities could occur from the activities associated with the proposed CEs. (TVA, 2002b; TVA, 2011d)

Cultural Resources: Any land disturbing activity could have minor effects on cultural resources. Activities that come across any cultural or archaeological resources would be conducted in accordance with all applicable federal and state regulations to mitigate any effects on cultural resources. (TVA, 2002b; TVA, 2015b)

Soils: Short-term, minor effects from the land disturbing activities associated with the proposed CE could include increased erosion and mixing of surface layers of soil due to disturbances caused by replacement or retirement of transmission lines. (TVA, 2002b; TVA, 2011d; TVA, 2012a)

Wetlands: Potential wetland effects resulting from transmission line upgrading or construction (including access road construction) could include the conversion and fragmentation of forested wetlands, erosion, and sedimentation in wetlands, soil compaction, hydrologic alteration, and reduction of certain functions such as providing wildlife habitat. (TVA 2005; TVA 2007) Any such potential impacts would be appropriately mitigated. Specifically, clearing and conversion of forested wetlands could result in the loss of vegetation and other habitat features such as stumps, downed trees, and snags. (TVA, 2012a)

Wildlife: Expansion of a transmission line could result in a change in the structure and function of wildlife habitat along the length of a corridor. The initial clearing of vegetation along the ROW could temporarily displace large animals, such as deer and turkey, from the site. Many smaller animals, such as shrews, moles, frogs, and salamanders could be destroyed by construction activities. Following the revegetation of the site, wildlife favoring edge and early successional habitats would occupy the area.

Noise: Effects from noise would be limited to equipment use during the proposed activities associated with the CE and would be short-term and localized. (TVA, 2011d; TVA, 2012a)

Visual Resources: Visual effects associated with the reconstruction or expansion of a transmission line result from the removal of trees from widened ROWs, establishment of material lay-down areas, and frequently the erection of taller and more visible steel transmission line structures and metal conductors. (TVA 2005; TVA 2007) The operation of construction equipment could result in short-term visual impact. The transmission line structures and conductors would become permanent features in the landscape that already has transmission lines. (TVA, 2012a)

Electric and Magnetic Fields: Electric and magnetic fields could be produced along the length of a transmission line. The strength of the fields within and near the ROW would vary with the electric load on the line as well as with the terrain. Public exposure to EMF could vary, based on land use. Because TVA would minimize public exposure to EMF through engineering features and line routing decisions, no significant effects from EMF are anticipated. No EMF effects would occur after line retirement. (TVA, 2015h; TVA, 2014f)

Recreation: Recreation activities in the immediate vicinity of rebuilding activities could be temporarily disrupted, which could have minor, localized, short-term environmental effects.

Areas along retired transmission lines may return to a natural setting and more conducive to recreational use. (TVA, 2002b)

Summary: TVA EAs and resulting FONSI have shown that activities contemplated under these CEs could have minor, short-term adverse effects for the natural resources within the Tennessee Valley region. However, such activities would not individually or cumulatively cause significant environmental effects. The spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed would further ensure that these actions would not result in significant effects.

3.19.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in this proposed CE. TVA started by identifying other agencies with similar missions, and experience with power transmission line construction and rebuilding of transmission lines. Based on this search, the Department of Energy, the Department of Commerce Broadband Technology Opportunities Program, and the Rural Utility Service were determined to have similar characteristics to TVA. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage public lands; have missions, mandates, responsibilities, and authority to manage power transmission facilities; and have extensive histories and experience with creating ROWs.

The following CEs currently in use by these agencies are similar in the nature, scope, and intensity as those activities TVA would categorically exclude under this CE. Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded.

Department of Energy CE [B4.10](#), [B4.12](#) and [B4.13](#) (76 FR 63764, 2011)

B4.10: Removal of electric transmission facilities

Deactivation, dismantling, and removal of electric transmission facilities (including, but not limited to, electric powerlines, substations, and switching stations) and abandonment and restoration of rights-of-way (including, but not limited to, associated access roads).

B4.12: Construction of powerlines

Construction of electric powerlines approximately 10 miles in length or less, or approximately 20 miles in length or less within previously disturbed or developed powerline or pipeline rights-of-way.

B4.13: Upgrading and rebuilding existing powerlines

Upgrading or rebuilding approximately 20 miles in length or less of existing electric powerlines, which may involve minor relocations of small segments of the powerlines.

DOE has 3 CEs that are relevant to proposed CE #19. Each pertains to removal, rebuilding, or constructing transmission infrastructure within previously disturbed rights-of-way. TVA reviewed DOE's proposed rule (76 FR 63764) for the substantiation on adopted changes to the

CEs. In the document, DOE substantiated the 20-mile limits for CEs B4.12 and B4.13 as having no significant effects based on their “long-term experience with electric transmission line construction.” (DOE, 2011b) DOE CE B4.12 aligns to activities included under the proposed TVA CE #19 because it pertains to actions occurring in previously disturbed or developed ROWs and addresses reconstruction or relocations of existing assets.

More relevant to proposed CE #19 are the DOE CEs B4.10 and B4.13, for removal of transmission facilities and upgrading/rebuilding existing powerlines, respectively. The DOE categories of actions are substantially the same in nature and scope as those conducted regularly by TVA. The DOE CE B4.13 varies in the mileage limit applied and the definition of the DOE category differs in how expansions or relocations outside of existing ROWs are included. The existence of these DOE CEs supports TVA’s conclusion that there would be no significant effects from the proposed CE.

Department of Commerce BTOP CE B4 (BTOP, 2009)

(B4) Changes to existing transmission lines that involve less than 20 percent pole replacement, or the complete rebuilding of existing distribution lines within the same right of way. Changes to existing transmission lines that require 20 percent or greater pole replacement will be considered the same as new construction.

In its administrative record supporting this CE, BTOP stated that their promulgation of the CE relied on an identical Rural Utility Service CE’s administrative record (note, as indicated below, this RUS CE was revised in a rulemaking process completed in 2016). BTOP established their CE based on the existing NEPA requirements and experience of RUS’s Telecommunication Program, which addressed potential environmental effects from activities similar to TVA’s telecommunication installation systems. According to BTOP’s administrative record, CE B4’s substantiation of no significant environment effects was based on “extensive history of RUS application of these Categorical Exclusions and the lack of extraordinary circumstances associated with their application” (BTOP, 2009). BTOP also referred to DOE’s CE B4.6 relating to modification of electric power facilities to further support its CE. (BTOP, 2009).

Rural Utility Service Department of Agriculture (Rural Development) CEs d1, d3, d4, and c3 (7 C.F.R. Part 25, 2016)

The following Department of Agriculture’s CEs apply to financial assistance for energy proposals.

1970.53(d)(1) Upgrading or rebuilding existing telecommunication facilities (both wired and wireless) or addition of aerial cables for communication purposes to electric power lines that would not affect the environment beyond the previously-developed, existing rights-of-way;

1970.53(d)(3) Changes to electric transmission lines that involve pole replacement or structural components only where either the same or substantially equivalent support structures at the approximate existing support structure locations are used;

1970.53(d)(4) Phase or voltage conversions, reconductoring, upgrading, or rebuilding of existing electric distribution lines that would not affect the environment beyond the previously developed, existing rights-of-way. Includes pole replacements but does not include overhead-to-underground conversions;

1970.54(c)(3) Reconstruction (upgrading or rebuilding) or minor relocation of existing electric transmission lines (230 kV or less) 25 miles in length or less to enhance environmental and land use values or to improve reliability or access. Such actions include relocations to avoid right-of-way encroachments, resolve conflict with property development, accommodate road/highway construction, allow for the construction of facilities such as canals and pipelines, or reduce existing impacts to environmentally sensitive areas;

The general scope and scale of these activities would generally be similar to those performed by TVA, although the RUS CEs address providing financial assistance for such actions. TVA notes that CE 1970.54(c)(3) includes the same 25-mile limit as proposed by TVA for CE #19. When promulgating the CE, the Department of Agriculture noted that it benchmarked on the experiences of DOE in applying a limit. These CEs do provide support that TVA’s proposed CEs would not have significant environmental impacts.

Comparability of CEs

Table 3.19-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.19-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #19	DOE	BTOP	RUS
Rebuilding or upgrading of existing transmission lines (up to 25 miles in length and within existing)	X	X	X
Removal of conductors and/or structures	X	X	X

The DOE CE is comparable because it involves the same or similar activities as TVA’s proposed CE and include similar restrictions in terms of size and scope of the projects. The DOE CE includes activities such as the rebuilding of existing transmission lines in similar environmental settings as those being proposed in CEs #19. The BTOP and RUS CEs address the rebuilding or upgrading of transmission lines for both power and telecommunication equipment and have spatial limits. The construction activities that these agencies perform would use similar equipment and methods as those used by TVA during construction of activities under proposed CE, although each agency would apply a different spatial limit than TVA proposed for CE #19.

All of the activities included in TVA’s proposed CE would occur with similar timing and in a similar environmental context to those actions performed by DOE listed in Table 3.19-2. For this particular CE, the setting would occur in both wooded and developed areas for TVA’s activities. TVA notes that all of the CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.19.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when the CE #19 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment.

3.19.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agencies' CEs shows that no individually or cumulatively major effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term effects, depending on the location of the project. Environmental impacts would be limited to the retirement or rebuilding phase with no or negligible operational impacts and are therefore temporary and limited in scope. Accordingly, through a deliberative process, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. The CEs of other federal agencies provide additional support of TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively. TVA would require its specialists to complete a CEC in ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects.

3.20 CE 20 - TRANSMISSION TRANSACTIONS

TVA proposes to revise the definition of existing CE 5.2.20 to more clearly identify the transmission actions included in the CE.

Existing CE text: *Purchase, exchange, lease or sale, or lease purchase of stepdown facilities, transmission lines, and transmission line rights of way by distributors or customers directly served by TVA.*

Proposed CE text: *Purchase, conveyance, exchange, lease, ~~or sale, or lease purchase of stepdown facilities, transmission lines, and/or disposal of existing substations, substation equipment, switchyards, and/or transmission lines and rights-of-way~~ and associated equipment between TVA and other utilities and/or customers. ~~by distributors or customers directly served by TVA.~~*

3.20.1 Background and Substantiating Information for Revised CE:

As noted above, TVA is the largest public power producer in the United States and operates one of the largest transmission systems in the U.S. It serves an area of more than 80,000 square miles through a network of more than 16,000 miles of transmission line; over 500 substations, switchyards and switching stations; and almost 1,300 individual customer connection points. Substations at delivery points reduce the voltage for delivery through local power company distribution lines serving end users.

TVA proposes several changes to the existing CE. TVA would add the term “conveyance” to clarify that the emphasis in this CE is on transfer of ownership (including sales), rather than just monetary purchases. Similarly, TVA would delete the term “or sale” because it may imply only monetary transfers; the CE is intended to primarily address the transfer of property. The words “stepdown facilities” would be deleted because the term is no longer commonly used and may create confusion. The phrase “by distributors or customers directly served by TVA” would be replaced with the simpler phrase “between TVA and other utilities and/or customers” for clarification. Note, the term “disposal of” refers to the sale or conveyance of the TVA asset, rather than the removal, discarding or scrapping of the asset.

TVA NEPA staff reviewed the ENTRAC database for previous uses of CE 5.2.20, and found that it had been documented 86 times since 2002. Similar activities were also documented under CE 5.2.25 (*Purchase, sale, abandonment, or exchange of minor tracts of land, mineral rights, or landrights*). Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. Examples include:

- *CEC 21959: Cedar Grove 161-kV Tapline Purchase. TVA purchased from Powell Valley EC the 6 mile Cedar Grove 161-kV transmission line, CE-5.2.20*
- *CEC 11327: Purchase Lenoir City Utilities Board (LCUB) Property for future Switching Station. TVA purchased property from LCUB to build a 161-kV switching station adjacent to LCUB's new Watt Road Substation, CE-5.2.25*

- *CEC 7947: Richard City–Stevenson 69-kV Transmission Line, Purchase Right-of-Way. TVA owned the Richard City–Stevenson 69-kV transmission line (TL). Part of the TL was relocated for Alabama Department of Transportation in 1995, CE-5.2.25*
- *CEC 8007: License Agreement Between TVA and Brownsville, TN. Brownsville UD constructed a 161-kV transmission line from TVA's Brownsville 161-kV, CE-5.2.20*

3.20.2 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.20 be documented in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment. Although TVA does not propose to promulgate documentation requirements to record CEs, TVA has determined that staff would complete a CEC in TVA's ENTRAC database to document when the CE #20 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis and that the action would not have significant effects on the environment.

3.20.3 Conclusion

The revised CE #20 text would more clearly define the activities associated with this CE and allow TVA specialists to apply the CE correctly, saving TVA money and time. The word changes clarify the text and do not add to or modify the potential for environmental effects. Therefore, TVA has concluded that the activities covered under the revised CE would not individually or cumulatively cause significant effects.

3.21 CE 21 - POWER PLANT ACQUISITION

TVA proposes to establish a new CE pertaining to the purchase of existing plant and infrastructure.

3.21.1 Proposed Categorical Exclusion Text

Purchase or lease, and subsequent operation of existing combustion turbine or combined-cycle plants for which there is existing adequate transmission and interconnection to the TVA transmission system and whose planned operation by TVA is within the normal operating levels of the purchased or leased facility.

After publishing the Proposed Rule in June 2017, TVA received public input on the definition of this CE and has revised the CE's definition as a result. TVA replaced the phrase "within the existing environmental permits for" with "within the normal operating levels of" at the end of the CE.

One commenter expressed concern that the "normal" operations in the past should be considered rather than the permitted limits because they more accurately reflect the baseline condition. The revision addresses the potential delta between normal operations and what is permitted. The revision would mean that TVA could not use the proposed CE to acquire a facility and then propose to operate it at greater levels of generation than past operations. This revision would ensure consideration of changes to air or greenhouse gas emissions and brings the definition of the proposed CE more in line with the DOE CE, to which TVA has benchmarked.

3.21.2 Background

TVA is the largest public power producer in the United States. The agency has been actively involved in managing power generation and transmission in tandem with land and water resources for over 80 years. TVA has 87 natural gas-fueled simple-cycle combustion turbine (CT) units at 9 sites. The oldest CTs were completed in 1971 and the newest in 2002. Fifty-six CTs are co-located at 4 coal-fired plant locations and 31 CTs are located at five stand-alone plant sites. Most of the CT units are capable of using fuel oil and 60 are capable of quick start-up by reaching full generation capability in about 10 minutes. TVA also has 21 natural-gas fueled combined-cycle combustion turbine (CC-CT) units at 8 standalone plant sites. The total net summer dependable capacities are 5,231 megawatt (MW) for the simple-cycle CT units and 6,778 MW for the CC-CT units. (TVA, 2019) The following describes the differences between these types of generation units.

Combustion Turbine Plant – A simple cycle CT generator consists of an air compressor, combustor, and expansion turbine. The combustor burns fuel, and the heated, high-pressure combustion products drive the turbine, which drives the compressor and electric generator. The main fuel is natural gas, with fuel oil being the back-up fuel for most TVA CTs. CTs have low capital cost, short construction times, and rapid start-up, and are used for generating peaking power. Both emissions and efficiency are relatively low. Major plant components include the combustion turbines, generators, pipeline connection to the natural gas supply, fuel oil storage tanks, office/maintenance building, and transformer yard and switchyard connected to the area

electric grid. The primary criteria for siting CTs are proximity to a major gas transmission pipeline, adequate electrical transmission facilities, and roads/railroad for access and delivery of materials. Water requirements normally can be supplied either from a groundwater source or from a municipal/rural water system. Due to size and installation versatility, CTs can often be located in a manner to support existing transmission system needs thereby reducing transmission system upgrades that would otherwise be necessary to connect isolated new sites. (TVA, 2015b)

Combined Cycle Plant – A CC-CT plant combines one or more CT generators with a heat recovery steam generator (HRSG). CC-CT units require water for steam system supplementation and cooling tower evaporation replacement (makeup). The hot exhaust gases from the CTs pass through the HRSGs, where the steam powers a turbine-generator. Steam turbine exhaust is condensed and returned to the HRSG as feedwater and heat is rejected to the atmosphere in a mechanical draft-cooling tower. The primary fuel is natural gas. CC-CT plants are among the most efficient of conventional generators and have been typically used for intermediate capacity additions. Major plant components include the CTs, HRSG, air emissions control system, forced draft condenser cooling system and associated water supply, pipeline connection to the natural gas supply, office/maintenance building, and transformer yard and switchyard connected to the area electric grid. (TVA, 2015b)

TVA proposes CE #21 because previous experience with such activities confirm that there is little potential for significant environmental effects of such actions. Generally, the activities defined in the proposed CE pertain to *existing* infrastructure located near or within TVA's existing service area. Currently and in the past, TVA specialists have relied on a generic EA: *Generic EA for the Purchase of Additional Combustion Turbine Capacity* (see summary of the EA below in 3.21.4.2). TVA determined that the Generic EA substantiates the creation of an associated CE, *Commissioning of Purchased CT facilities*. TVA's current NEPA procedures, under CE 5.2.28, allow for categorically excluding actions which were the subject of an EA review; CE 5.2.28 would be eliminated in the current rulemaking to more accurately reflect CEQ's requirements for establishing new CEs. The intent of the EA was to programmatically review such actions (the purchase of additional CTs) in order to expedite the environmental review process for such activities in the future.

By having a specific, relevant CE that addresses these routine activities (purchase, lease, and subsequent operation of CT or CC-CT plants), TVA would save time and money while providing low-cost, reliable power. The proposed CE aligns with TVA plans, missions, policies, and procedures. TVA would only apply the CE in cases where adequate existing interconnection to the grid and adequate transmission capacity exist, and only if future operation would be the same as past operations. CC and CT plants are a large part of TVA's power generation, and the routine purchase, lease, and operation of existing combustion turbines has minimal effects on the environment.

The definition of the proposed CE, including the limitation on operations specified in the CE's definition, was developed to identify activities with limited environmental effects.

3.21.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.21.3.1 TVA Experience with Relevant CEs, EAs or EISs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in few activities similar to those proposed in CE #21. The most relevant support of the proposed CE #21 is found in the generic EA and FONSI mentioned in Section 3.21.3 above, which TVA completed in 2007 to analyze the purchase of combustion turbine capacity. Based on this EA, TVA completed a CEC in ENTRAC in 2007 and affirmed that the activity would not result in significant impacts (CEC 14714, Commission of Purchased CT Facilities, April 2007, citing to CE 5.2.1).

In addition, TVA NEPA staff found several other relevant EAs that support the proposed CE. See Table 3.21-1 below. Many of these EAs and the associated FONSI address new construction and installation of plants, which are actions that by comparison have much greater environmental impacts than the acquisition of an existing power plant. These EAs and FONSIs are relevant because they address various aspects of CT and CC generation unit development, maintenance, and operation. The EAs support the establishment of the proposed CE because TVA found that the projects would not have significant impacts on the environment despite the projects having greater impacts than those of the actions under the proposed CE.

Table 3.21-1 Additional Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Generic EA for the Purchase of Additional Combustion Turbine Capacity	TVA-wide	2/27/2007
Allen Fossil Plant Emission Control Project EA	Shelby County, TN	8/19/2014
John Sevier Fossil Plant Addition of Gas-fired Combustion Turbine/Combined-Cycle Generating Capacity and Associated Gas Pipeline EA	Hawkins County, TN	3/12/2010
Supplemental EA for the Potential Upgrade of Tenaska Site for Establishing a Simple-Cycle or Combined-Cycle Electric Generation Facility	Haywood County, TN	8/8/2008
Final Environmental Assessment for Potential Upgrade of the Tenaska Site for Establishing a Simple-Cycle or Combined-Cycle Electric Generation Facility	Haywood County, TN	2007

Title	Location	Date FONSI Issued
Gas Turbine Peaking Plant Addition, Units 17-20 Thomas H. Allen Steam Plant EA	Shelby County, TN	9/6/2002
Johnsonville Fossil Plant Combustion Turbine Dual Fuel Conversion Project and Installation of Associated Natural Gas Pipeline - EA	Humphreys County, TN	7/30/1999 (Second reevaluation)
Gallatin Combustion Turbines Dual Fuel Conversion Project and Installation of Associated Natural Gas Pipeline, Gallatin Fossil Plant Combustion Turbine Site EA	Sumner County, TN	2/18/1998
Gas Turbine Peaking Plant Addition Thomas H. Allen Steam Plant Units 1-16 EA	Memphis, TN	10/29/1971

TVA’s *Purchase of Additional Combustion Turbine Capacity Generic EA* is directly relevant to the proposed CE and is summarized below. Also summarized below is an additional EA that is representative of environmental reviews for other actions related to CT and CC-CT plants. Both support TVA’s finding that such activities would not result in significant environmental impacts.

Purchase of Additional Combustion Turbine Capacity Generic EA and FONSI: TVA completed this programmatic EA to expedite the environmental assessment of the lease, purchase, and operation of existing CT and CC-CT facilities to add additional peaking and intermediate power capacity purchase and operate existing CT or CC-CT plants within TVA’s Power Service Area, the area in which TVA is a major provider of electric power and/or operates generating facilities. These plants help TVA address the demand for peak and intermediate load electrical power in its service area. This EA’s purpose and the scope of the action considered are nearly identical to that of the proposed CE. TVA used its extensive experience in preparing detailed environmental reviews related to the effects of the construction of individual CT or CC-CT plants as a source for this generic EA. The EA established classes of plants based on their completion and operational status and describes subsequent environmental review requirements for individual plant purchases based on their classification. The EA and a supplemental FONSI found that the environmental effects of purchase, lease, and operation of existing operational combined cycle and CC-CT plants, or plants that had been suspended for up to two years, would be insignificant. (TVA, 2006; TVA, 2007a)

Gas-Fired Combustion Turbine/Combined-Cycle Generating Capacity and Associated Natural Gas Pipeline EA and FONSI: This EA pertains to a TVA proposal to construct and operate a new gas-fired CC-CT generating plant on the site of its John Sevier Fossil Plant. Operation of the proposed John Sevier Fossil Plant CC-CT facility required 16.3 miles of new gas pipeline and upgrades to approximately 11.7 miles of existing gas pipeline, a new meter station, a new regulator, and modifications to four existing compressor stations to supply fuel for the new CC-CT plant. Based on the EA, TVA concluded that implementation of the Action Alternative would have minor and insignificant effects on most resource areas. Effects to transportation and noise would be temporary and negligible. Operation of the proposed CC-CT gas-fired units would result in benefits to local and regional air quality. (TVA, 2010d) This EA is relevant to the proposed CE because it assesses the environmental effects related to the operation of a combustion turbine plant and because TVA found that the project would not have significant

impacts on the environment despite the project having greater impacts than those of the actions under the proposed CE.

3.21.3.2 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects related to purchase, lease and operation of existing combustion turbine or combined cycle plants.

Under the proposed CE, TVA would purchase or lease existing CC or CC-CT electric generating plants. The action of purchasing or leasing plants would itself have no environmental effects other than possible socioeconomic effects from the financial transaction. There is no difference from a NEPA environmental effects standpoint between a purchase or lease transaction. Future operation of these existing plants, for which there is existing adequate transmission and interconnection to the TVA system, and when within past, normal operating levels, would have no direct environmental effects to vegetation, wildlife, archeological resources, or socioeconomics. There may be existing noise, air quality, and water effects; however, since this would an existing plant, TVA would ensure that all relevant permits are in place and regulations are being followed prior to implementing a proposed activity. Therefore, there would be no potential for new and significant environmental effects from the proposed CE. (TVA, 2006; TVA, 2010d; TVA, 2007a)

Summary: The purchase, lease, and continued operation of existing CC or CC-CT electric generation plants would not have the potential for significant environmental effects.

3.21.3.3 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CE currently in use by the DOE is similar in the nature, scope, and intensity of included activities to the proposed TVA CE #21 because it addresses acquisition of power from existing sources and sources operating within normal operating limits. The DOE CE is also directly relevant to TVA activities because DOE has missions, mandates, responsibilities, and authorities similar to those of TVA. The mission of the DOE is to "ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges," and like TVA, DOE must operate in compliance with NEPA and all applicable federal, state, and local environmental laws. (DOE, 2015b)

It is reasonable to assume that TVA's activities conducted under the proposed CE would be similar in size and scope under similar resource conditions and with similar environmental effects to DOE actions included in the CE. Like the proposed TVA CE, the DOE CE concerns acquisition of power from existing plants. DOE's CE also includes plants "operating within their normal limits," as proposed by TVA (as revised). The DOE CE, then, supports TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy [CE B4.1](#) (76 FR 63764, 2011)

Establishment and implementation of contracts, policies, and marketing and allocation plans related to electric power acquisition that involve only the use of the existing transmission system and existing generation resources operating within their normal operating limits.

An administrative record documenting DOE's substantiation of this CE was not readily available for TVA to review. However, DOE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. CEQ has affirmed this determination as well.

3.21.4 CE Documentation Requirement

Although TVA does not propose to promulgate documentation requirements relating to CEs in its updated procedures, TVA would require documentation when this CE is applied. When applying this CE, TVA staff would prepare a CEC in TVA's Environmental Tracking database. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis and that the action would not have significant effects on the environment.

3.21.5 Conclusion

The review of TVA's previous NEPA analyses of similar actions and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. Accordingly, through a deliberative process, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. Although documentation requirements will not be promulgated as part of TVA's NEPA procedures, TVA would require that TVA specialists complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.22 CE 22 - DISPERSED RECREATION

TVA proposes to establish a new CE pertaining to dispersed recreation on TVA-managed public lands.

3.22.1 Proposed Categorical Exclusion Text

Development and maintenance of dispersed recreation sites (generally not to exceed 10 acres in size) to support activities such as hunting, fishing, primitive camping, wildlife observation, hiking, and mountain biking. Actions include, but are not limited to, installation of guardrails, gates and signage, hardening and stabilization of sites, trail construction, and access improvements/controls.

After publication of the Proposed Rule in June 2017, TVA received comments regarding this proposed CE that indicated potential confusion by the public on covered actions. TVA has changed the term “stabilization of sites” to “hardening and stabilization of sites” in the list of potential actions. After consulting further with TVA recreation staff, the term “hardening” was added because it is a term more frequently used in the context of dispersed recreation management. “Hardening” of sites captures the types of actions occurring at primitive, dispersed recreation sites that TVA employ to concentrate visitor use, consistent with Leave No Trace principles. For example, TVA commonly installs a simple rectangular tent pad (i.e., posts laid to indicate a perimeter, filled with pebble gravel) to concentrate use on the pad, rather allowing multiple dispersed spots around the campsite perimeter.

3.22.2 Background

TVA’s reservoir properties attract more than 6 million visits annually for developed and dispersed recreation purposes, and these visits generate local and regional economic benefits. In addition to TVA’s developed recreation sites, approximately 229,000 acres of land are managed for dispersed recreation. Dispersed recreation is defined as recreation of an informal nature, such as hunting, primitive camping, bank fishing, picnicking, mountain biking, hiking, and bird-watching. These activities are typically not associated with developed facilities other than those providing access. (TVA, 2015c) TVA notes that dispersed recreation sites such as trails or primitive campsites are more likely to be much smaller in size than developed TVA recreation sites that are more accessible to the public (e.g., campgrounds, picnic areas, trailheads). Establishing and maintaining a dispersed recreation site typically requires less intensive, smaller-scale activities. Dispersed recreation activities support TVA’s effort to maximize the benefits of TVA-managed lands for public use by maintaining, enhancing, and expanding recreational and educational opportunities for Valley stakeholders to enjoy.

The proposed CE #22 revises TVA’s CE list to reflect the public’s growing interest in using dispersed recreation sites on TVA lands and TVA’s need to be able to develop and maintain the sites. With more than 800 existing dispersed recreation sites, TVA needs to develop and manage such sites efficiently while protecting and conserving natural resources (TVA, 2011b). The dispersed recreation management program provides a proactive approach toward managing impacts on TVA public lands associated with dispersed recreational use. This management approach enhances dispersed recreation sites on TVA public lands, thus providing the user with a

higher quality recreational experience. The activities associated with the proposed CE would have minimal environmental effects, or would occur on existing dispersed recreation sites, which are already disturbed areas.

The CE would allow TVA to more efficiently consider and carry out projects to achieve those objectives. The CE aligns with TVA's 2011 Natural Resources Plan, its recreation management program, and other TVA plans, policies, and procedures.

3.22.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE. Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.22.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 identified records for many activities similar to those included in the proposed CE # 22. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002, TVA has documented more than 70 individual actions involving recreation areas, 4 actions involving sign installation, and 13 actions involving site stabilization. TVA has also reviewed the actions of TVA business units that are focused on commercial and public recreation, and noted these units applied existing CEs 147 times. Of these applications, 36 activities involved improvements, upgrades, or modifications. In most of these CECs, TVA staff cited to existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities.*); CE 5.2.23 (*Development of minor TVA public use areas and stream access points.*); or CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities.*). Examples of CECs for activities relevant to the proposed CE include:

- *CEC 28551: Install fence posts for NMV signage, (6/24/2013), CE 5.2.11*
- *CEC 27065: Cave Mountain trail & vulture signage, (10/1/2012), CE 5.2.1*
- *CEC 18095: Thief Neck Island Dispersed Recreation Improvements, (5/2/2008), 5.2.23*
- *CEC 5277: North Alabama Birding Trail-Signage, (12/11/2003), CE 5.2.23*
- *CEC 5197: Chickamauga Signage, (10/27/2003), CE 5.2.27*
- *CEC 3902: Wilson Egress Signage and Emergency Lighting, (5/28/2003), CE 5.2.1*

3.22.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs, FONSI, EISs and RODs were prepared.

Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.22-1.

Table 3.22-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ ROD Issued
Muscle Shoals Outdoor Education and Recreation Area Improvements EA	Colbert County, AL	3/18/2015
Natural Resource Plan EIS	TVA-wide	9/15/2011
Northeastern Tributary Reservoirs Land Management Plan EIS	Carter, Johnson, Sullivan, and Washington Counties, TN; Washington County, VA	7/13/2010
Watts Bar Reservoir Land Management Plan, Final EIS	Loudon, Meigs, Rhea, and Roane Counties, TN	2/8/2010
Bear Creek Reservoir Land Management Plan EA	Franklin, Marion, and Winston Counties, AL	3/13/2001
Boone Reservoir Land Management Plan EA	Sullivan and Washington Counties, TN	3/15/1999

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Muscle Shoals Outdoor Education and Recreation Area Improvements EA and FONSI:

Improvements were considered to the Muscle Shoals walking and hiking trail network in Alabama. The activities consisted of improvements to the trail system, including existing trailheads. Improvements included native plant restoration, pavilion construction, repairs to pathways, creating handicap access, and other site improvements. These activities are directly relevant to the scope of the proposed CE. This EA is relevant to the proposed CE because it assesses the environmental effects of maintenance and improvements to dispersed recreation sites. The EA determined that the preferred alternative would have minimal adverse effects, with short-term and temporary effects on recreation during construction and longer-term beneficial effects. (TVA, 2015d)

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts. The NRP addresses TVA's management of biological, cultural, and water resources; recreation; reservoir lands planning; and associated public engagement over the next 20 years. The goal of the plan is to integrate the objectives of these resource areas, provide for the optimum public benefit, and balance conflicting resource uses. (TVA, 2011b) This EIS is directly relevant to the proposed CE because it evaluated action alternatives that would repair up to 25 heavily impacted dispersed recreational areas annually, and implement up to 20 key dispersed recreational opportunities annually, consistent with TVA's intent to provide ecofriendly dispersed recreation. The EIS found that these activities would result in some minor, short-term effects such as sedimentation from soil disturbances associated with site grading and revegetation. The EIS also determined that these activities would provide long-term, beneficial effects to dispersed recreation on TVA lands. (TVA, 2011a)

3.22.3.3 Potential Environmental Effects

Activities under the proposed CE that could have environmental effects related to the development and maintenance of dispersed recreation sites include, but are not limited to:

- Installation of guardrails, structures, and signage
- Hardening and stabilization of sites
- Access improvements

Based on the previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, significant environmental effects would not result, absent extraordinary circumstances.

Vegetation: Short-term minor effects from vegetation removal or damage could occur from improvement or maintenance of dispersed recreation sites, depending on the type of activity conducted. (TVA, 2015d; TVA, 2011a)

Water Resources: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation. Increased sedimentation could result from improvement of recreation sites and installing guardrails or signage near waterways. Hardening of sites and creating or improving access roads could cause short-term, minor sedimentation effects. Increased runoff from areas where vegetation or other materials providing ground cover are removed could cause temporarily increased turbidity and siltation in receiving waters. (TVA, 2015d; TVA, 2011a)

Air Quality: Short-term, minor fugitive air emissions from vehicles or the mechanical equipment needed to complete a specific construction activity could occur from improvement activities such as the installation of guardrails and signage. (TVA, 2011a)

Soils: Short-term, minor effects could include increased erosion and mixing of surface layers of soil due to improvement, maintenance, hardening, or installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion resulting from these measures. (TVA, 2015d; TVA, 2011a)

Fish and Wildlife: Improvement or maintenance of dispersed recreation sites, depending on the type of activity conducted, could result in minor, short-term, localized adverse effects to wildlife from alterations of wildlife habitat and increased levels of human disturbance. (TVA, 2015d; TVA, 2011a)

Wetlands: Improvement or maintenance of dispersed recreation sites, depending on the type of activity and the location where the activity would be conducted, could result in minor, short-term, localized adverse effects to wetlands and increased levels of human disturbance to wildlife. Any such potential impacts would be appropriately mitigated. Short-term, adverse effects from vegetation loss, soil loss, or erosion could occur from improvement activities associated with the proposed CE; however, TVA would continue to comply with the Clean Water Act and Executive Order 11990, *Protection of Wetlands*, through its environmental review process. (TVA, 2015d; TVA, 2011a)

Socioeconomics: The improvement or maintenance of dispersed recreational sites could have minor beneficial effects to socioeconomics in the surrounding areas from increased visitation and recreational use. (TVA, 2015d; TVA, 2011a)

Recreation: During some improvement activities, such as trail or site maintenance, public access to the work areas may be limited or prohibited, resulting in short term, minor effects to public recreation. Improvement or maintenance of dispersed recreation sites would provide long-term, beneficial effects for the public by increasing recreation opportunities, increasing public safety, and improving recreational experiences. (TVA, 2015d; TVA, 2011a)

Solid Waste: Solid waste resulting from removal of debris and litter would be disposed of in approved landfills and would thus have minor effects. (TVA, 2015d; TVA, 2011a)

Summary: TVA EAs and EISs have shown that activities contemplated under the CE could have minor, localized short-term adverse effects on the natural resources within the Tennessee Valley, could have long-term beneficial effects to dispersed recreation opportunities within the Tennessee Valley region, and do not cause significant environmental effects. The spatial limit applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed would ensure that these actions do not result in significant effects.

3.22.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in nature, scope, and intensity of included activities to the proposed TVA CE.

Specifically, these other agency CEs include activities similar to those of TVA's proposed CE, including maintenance and repairs of facilities, grounds, trails, roads, and other existing structures, and installation of guardrails, signs, kiosks, or displays. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage public lands and other recreational resources; have missions, mandates, responsibilities, and authority to manage for recreational use and natural resource protection and conservation; and have extensive histories and experience with recreational resource programs.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Federal Transit Administration (FTA) CE 2 (23 C.F.R. § 771, 2014)

(2) Acquisition, construction, maintenance, rehabilitation, and improvement or limited expansion of standalone recreation, pedestrian, or bicycle facilities, such as: a multiuse pathway lane, trail, or pedestrian bridge; and transit plaza amenities.

In its “Guidance for Implementation of FTA’s Categorical Exclusions,” FTA states that the agency expects minor construction efforts related to the CE activities since “FTA project sponsors usually construct these types of facilities in urbanized areas where sensitive habitat is not impacted” (FTA, 2014). In addition, FTA expanded upon an existing CE in its 2012 Proposed Rule to include additional activities “i.e., acquisition, rehabilitation, improvement, and limited expansion” related to recreation, pedestrian, or bicycle facilities. FTA stated its CE was supported by “at least five FTA FONSI and in the established CE of three federal agencies that conduct actions of similar nature, scope, and intensity” (77 FR 15310, 2012). FTA received several comments on the proposed change. In the response, FTA clarified some terms, examples of activities that fit into the CE, and what to do if “sizeable swaths of habitat” are impacted. Only “maintenance” was added to the final language (78 FR 8964, 2013).

National Park Service CEs C3, C5 and C9 (DOI, 2004a)

(3) Routine maintenance and repairs to non-historic structures, facilities, utilities, grounds, and trails.

(5) Installation of signs, displays, kiosks, etc.

(9) Repair, resurfacing, striping, installation of traffic control devices, repair/replacement of guardrails, etc., on existing roads.

The NPS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Bureau of Land Management CEs G2 and G4 (DOI, 2008b)

(G2) Installation of routine signs, markers, culverts, ditches, waterbars, gates, or cattleguards on/or adjacent to roads and trails identified in any land use or transportation plan, or eligible for incorporation in such plan.

(G4) Placement of recreational, special designation, or information signs, visitor registers, kiosks, and portable sanitation devices.

The BLM reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Forest Service CEs d3, d5, and e1 (36 C.F.R. § 220, 2014)

(d3) Repair and maintenance of administrative sites. Examples include but are not limited to:

(i) Mowing lawns at a district office;

(ii) Replacing a roof or storage shed;

(iii) Painting a building; and

(iv) Applying registered pesticides for rodent or vegetation control.

(d5) Repair and maintenance of recreation sites and facilities. Examples include but are not limited to:

- (i) Applying registered herbicides to control poison ivy on infested sites in a campground;*
- (ii) Applying registered insecticides by compressed air sprayer to control insects at a recreation site complex;*
- (iii) Repaving a parking lot; and*
- (iv) Applying registered pesticides for rodent or vegetation control*

- (e1) Construction and reconstruction of trails. Examples include but are not limited to:*
 - (i) Constructing or reconstructing a trail to a scenic overlook and*
 - (ii) Reconstructing an existing trail to allow use by handicapped individuals*

The USFS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.22-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.22-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #22	NPS	BLM	USFS	FTA
Development and maintenance of dispersed recreation sites	X	X	X	X
Installation of guardrails and signage	X	X		
Hardening and stabilization of sites	X		X	
Access improvements	X	X	X	X

The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. All of the other federal agencies’ CEs include development and maintenance activities involving recreation sites, and access improvements. Installation of guardrails and signage and hardening and stabilization of sites are each included in the CEs of two other agencies. All of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.22.4 CE Documentation Requirement

As noted in Section 3.22.3.1, when applying current TVA CEs to dispersed recreation actions, TVA specialists complete a CEC in the TVA ENTRAC database to help ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances. Although TVA does not propose to promulgate documentation requirements to record CEs, TVA has determined that staff would continue complete a CEC in TVA’s ENTRAC database to document when the CE #22 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis and that the action would not have significant effects on the environment.

3.22.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and long-term beneficial effects depending on the resource area involved. Accordingly, through a deliberative process, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.23 CE 23 - PUBLIC USE AREAS

TVA proposes to revise its existing CE 5.2.23 to include examples of public use areas and to apply a general spatial limit.

Existing CE text: *Development of minor TVA public use areas and stream access points.*

Proposed CE text: *Development of ~~minor TVA~~ public use areas ~~and that generally result in the physical disturbance of no more than 10 acres, including, but not limited to, construction of parking areas, campgrounds, stream access points, and day use areas.~~*

3.23.1 Background and Substantiating Information for Revised CE:

TVA's Recreation program supports the agency's efforts to maximize the public benefits of TVA-managed public lands by maintaining, enhancing, and expanding recreational and educational opportunities for Valley stakeholders, while minimizing associated effects. TVA's proposed changes to this CE include removing the phrase "minor" and adding a spatial limit to actions of "10 acres in size or less." Based on its extensive experience with public use areas, TVA determined that most proposed activities that occur on less than 10 acres could be considered minor and would not result in significant effects.

TVA also proposes to add several examples of covered actions to the CE definition. The reference to "stream access points" (which may consist of an access road, parking area, picnic site and developed access to the stream) would be retained in the CE definition as an example of a type of public use area.

3.23.2 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.23 be documented in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances. Although documentation requirements for CEs will be not promulgated as part of TVA's NEPA procedures, TVA specialists would continue to be instructed to document the use of this proposed CE in the ENTRAC database. The CEC review gives consideration to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis and that the action would not have significant effects on the environment.

3.23.3 Conclusion

The revised text clarifies the CE and does not alter the activities associated with the CE nor create additional effects. The addition of a spatial limit further ensures that the CE would apply to only minor actions and not result in significant impacts. Thus, TVA has concluded that the activities that would be covered under the revised CE #23 would not individually or cumulatively cause significant effects.

3.24 CE 24 - USE OF TVA PROPERTY

TVA proposes to make minor revisions to existing CE 5.2.24 for clarification and to add an example.

Existing CE text: *Minor non-TVA activities on TVA property authorized under contract or license, permit, and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land.*

Proposed CE text: *Minor ~~non-TVA~~ activities conducted by non-TVA entities on TVA property to be authorized under contract, ~~or~~ license, permit, ~~and or~~ covenant agreements, including utility crossings, ~~encroachments~~, agricultural uses, recreational uses, rental of structures, and sales of miscellaneous structures and materials from TVA land.*

3.24.1 Background and Substantiating Information for Revised CE:

TVA manages over 170 agreements with private entities for commercial recreation (such as commercial campgrounds and marinas); manages 130 agreements with public agencies for public recreation (such as public parks, day use areas, boat launches, and swimming areas); and is responsible for over 80 public recreation areas throughout the Tennessee Valley region.

TVA proposes to replace the term “non-TVA” with “conducted by non-TVA entities” for clarification purposes. The new wording is intended to more clearly convey that the subject activities are not being implemented by TVA. TVA proposes to delete the reference to “encroachments” because these are unauthorized uses of TVA property. Adding “recreational uses” to the list of examples further clarifies the scope of this category of actions. TVA has reviewed and approved hundreds of licenses since 2002 using its ENTRAC system for licenses or permits for recreational events or uses. Such licenses are routinely issued under existing CE 5.2.24 to municipalities, companies, clubs, state agencies, or concessionaires for permission to conduct running, biking or swimming races, rowing club events, campground management and maintenance, community events, fishing tournaments, and a variety of other types of recreational uses on TVA lands.

3.24.2 CE Documentation Requirement

Currently, TVA requires documentation of the application of CE 5.2.24 in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances. TVA staff would continue to document the use of the proposed CE #24.

3.24.3 Conclusion

There are no new or different anticipated environmental effects associated with the proposed changes to the definition of the CE.

3.25 CE 25 - PROPERTY TRANSACTIONS

TVA proposes to revise the definition of current CE 5.2.25 to make clarifications and add additional examples of activities.

Existing CE text: *Purchase, sale, abandonment, or exchange of minor tracts of land, mineral rights, or landrights.*

Proposed CE text: *~~Purchase~~ Transfer, lease, or disposal (sale, abandonment or exchange) of (a) minor tracts of land, mineral rights, and ~~or~~ landrights, and (b) minor rights in ownership of permanent structures.*

After publication of the Proposed Rule in June 2017, TVA made minor revisions to the definition of this CE to clarify that the category covers only actions associated with “minor” property rights.

3.25.1 Background and Substantiating Information for Revised CE:

TVA NEPA staff reviewed the ENTRAC database and found 248 CECs for actions under existing CE 5.2.25. Some records indicate that the CE has not been used as intended in all instances. In numerous cases, property transactions have been associated with permitting actions under Section 26a of the TVA Act and evaluated as part of the permitting action, with existing CE 5.2.26 cited (see the discussion of CE #26 below). TVA proposes to delete “purchase” and add “Transfer, lease, or disposal” to expand the CE to include all transfers of property/rights/etc., rather than limit the CE to activities involving only purchases or sales (or monetary transactions). TVA proposes to add clarifying language and examples to the first portion of the CE’s definition to more clearly define the types of property interests that can be transferred under this CE. The addition of examples would not involve different or additional environmental effects.

Currently, TVA requires documentation of application of CE 5.2.25 in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances. TVA proposes that documenting the use of CE #25, as modified, would continue to be required.

TVA reviewed whether other federal agencies have established CEs for similar actions. The applicable CEs from these agencies are listed below. In its benchmarking exercise, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the activities other agencies have categorically excluded. The CEs from other federal agencies support TVA’s conclusion that activities under the revised CE would not result in significant effects to the human environment either individually or cumulatively.

DOE CE B1.24 (76 FR 63764, 2011)

Property transfers

Transfer, lease, disposition, or acquisition of interests in personal property (including, but not limited to, equipment and materials) or real property (including, but not limited

to, permanent structures and land), provided that under reasonably foreseeable uses (1) there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment and (2) the covered actions would not have the potential to cause a significant change in impacts from before the transfer, lease, disposition, or acquisition of interests.

U.S. Forest Service CE(d)(6) (36 C.F.R. § 220, 2014)

Acquisition of land or interest in land. Examples include but are not limited to:
(i) Accepting the donation of lands or interests in land to the NFS, and
(ii) Purchasing fee, conservation easement, reserved interest deed, or other interests in lands.

Department of Homeland Security CE C5 (DHS, 2014)

Determination that real property is excess to the needs of the Department and, in the case of acquired real property, the subsequent reporting of such determination to the General Services Administration or, in the case of lands withdrawn or otherwise reserved from the public domain, the subsequent filing of a notice of intent to relinquish with the Bureau of Land Management, Department of Interior.

Department of the Army CE (f)(3) (32 C.F.R. § 651, 2011)

Transfer of real property administrative control within the Army, to another military department, or to other federal agency, including the return of public domain lands to the Department of Interior, and reporting of property as excess and surplus to the GSA for disposal (REC required).

Bureau of Reclamation, CE D(7) (DOI, 2008b)

Withdrawal, termination, modification, or revocation where the land would be opened to discretionary land laws and where such future discretionary actions would be subject to the NEPA process, and disposal and sale of acquired lands where no major change in usage is anticipated.

3.25.2 Conclusion

The review of TVA's previous use of this CE and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the revised CE. The word change in the first half of the CE would not introduce new environmental effects and the second half of the revised CE covers actions that are purely administrative. Accordingly, TVA determined that the revised CE encompasses activities that do not have individual or cumulative significant effects on the human environment.

3.26 CE 26 - SECTION 26A PERMITTING APPROVALS

TVA proposes a minor revision to the definition of the existing CE 5.2.26 to include boat ramps as examples of common structures or facilities approved by TVA under Section 26a of the TVA Act.

Existing CE text: *Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities.*

Proposed CE text: *Approvals under Section 26a of the TVA of minor structures, boat docks and ramps, and shoreline facilities.*

3.26.1 Background and Substantiating Information for Revised CE:

Under [Section 26a of the TVA Act](#), TVA has the authority to regulate land use and development along its 11,000 miles of public shoreline. Annually, TVA receives and considers between 1,000 and 2,000 applications submitted by the public and non-TVA entities for permission under Section 26a to construct facilities or make alterations to the shoreline. The existing TVA CE 5.2.26 is by far the most frequently applied TVA CE; between 2002 and 2012, TVA annually completed an average of 1,650 CECs under CE 5.2.26.

Each request is considered by TVA permitting specialists and, if appropriate, the request is reviewed to determine whether the action falls under the scope of the existing CE 5.2.26. The majority of these “26a permit” requests are reviewed by TVA at this CE-level. Larger proposals or those requests that are parts of larger proposed actions along shorelines (e.g., residential developments, marinas, community parks, municipal or industrial water intakes) may be reviewed by an EA or, occasionally, an EIS.

The proposed revision to the definition of this CE is intended to acknowledge that boat ramps are also examples of common structures or facilities approved by TVA under Section 26a of the TVA Act. This is supported by TVA records in the ENTRAC database. TVA NEPA staff found in its review of the database that (since 2002) hundreds of boat ramps have been approved by TVA and reviewed in a CEC. Impacts associated from constructing these boat ramps have been confirmed in hundreds of CEC reviews to not have significant environmental impacts.

3.26.2 CE Documentation Requirement

Currently, TVA requires that application of CE 5.2.26 be documented in its ENTRAC system to help ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances. Although documentation requirements will not be established in TVA’s updated NEPA procedures, TVA specialists would continue to complete CECs in the ENTRAC system to review 26a permit requests. In addition to ensuring compliance under NEPA, TVA permitting staff utilize the ENTRAC database for record keeping and tracking TVA 26a permitting actions.

3.26.3 Conclusion

The revised text clarifies the CE and does not change the scope of the category of actions. Therefore, TVA has concluded that the activities that would be covered under the revised CE would not individually or cumulatively cause significant effects.

3.27 CE 27 - TVA SHORELINE ACTIONS

TVA proposes a new CE for TVA actions along shorelines similar to those that fall under current CE 5.2.26.

3.27.1 Proposed Categorical Exclusion Text

Installation of minor shoreline structures or facilities, boat docks and ramps, and actions to stabilize shoreline (generally up to 1/2 mile in length) by TVA.

After publication of the Proposed Rule in June 2017, TVA received a comment that the proposed CE definition had a grammatical flaw. The individual pointed out that replacing “and bank stabilization” with “and actions to stabilize shoreline” would improve the definition. TVA has made the suggested revision.

3.27.2 Background

TVA manages the natural resources of the Tennessee Valley for the benefit of the region and the nation. The Tennessee River system, developed by TVA, is a network of dams and reservoirs that generates power, controls flooding, protects shoreline resources, provides recreational opportunities, and boosts the regional and national economies. As noted above, TVA is responsible for the management of 293,000 acres of public land and 11,000 miles of reservoir shoreline in the TVA region. The Tennessee River watershed encompasses more than 41,000 square miles across 125 counties in portions of seven states. In carrying out its management responsibilities, TVA’s congressional mandate guides the Agency to consider the effects of its activities on economic development, public recreational use, wildlife preservation, cultural resources, and other values.

As noted above, TVA has the authority to regulate land use and development along its 11,000 miles of reservoir shoreline. Many of these shoreline areas are classified as sensitive resources, as they contain cultural and archaeological resources. The status of archaeological survey of lands adjacent to TVA reservoirs varies across the Valley; however, over 11,500 archaeological sites have been recorded as of 2011. (TVA, 2011a) Federal law mandates that TVA protect these resources. Many of these sites, and additional sites managed by TVA, have other resource values, such as developed recreational areas that are heavily used by the public.

TVA is one of a few federal agencies with such a large land base and clear mandates to manage land, water, and cultural resources. It carries out its management responsibilities through the following:

- A Natural Resources program with a long history of implementing these types of projects.
- A network of regional watershed offices to handle questions about the use of TVA-managed land.
- Extensive outreach to community for gathering public comments on requests for private or public use of TVA lands.
- Riparian restoration efforts to help control erosion and pollution.

- The work of the [TVA Cultural Resources](#) staff to protect archaeological and historic sites on TVA land.
- Integration of natural and cultural resources management. For instance, TVA frequently uses shoreline stabilization to protect cultural sites or burial areas from continued erosion and sloughing into reservoirs or rivers.

The proposed CE is intended to reflect specific activities conducted by TVA that address activities to stabilize and maintain streambanks and reservoir shorelines and construction of minor structures, facilities, docks and ramps to improve water access. Such actions currently align with TVA's Natural Resources Plan, its shoreline stabilization program, other TVA plans, policies, and procedures, and federal regulations. The types of actions addressed in this proposed CE, particularly shoreline and streambank stabilization, are also sometimes necessary for the maintenance of generating facilities and transmission infrastructure.

Since 1983, TVA specialists have considered these types of TVA activities to fall under two current TVA CEs: CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*) or TVA CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*). Generally, applying CE 5.2.1 for such actions has been problematic because of the CE's broad scope, and applying CE 5.6.26 has been problematic because the CE is intended to be applied to granting permission to non-TVA entities to access reservoirs adjoining their property and shoreline stabilization. Commonly, TVA specialists have applied CE 5.2.26 for any shoreline stabilization project, even though Section 26a of the TVA Act applies to approvals by TVA of non-agency actions. By creating a new CE that specifies that such shoreline/streambank actions are implemented by TVA, it will be apparent to TVA specialists which CE is the best fit for their proposed action.

Generally, whether implemented by TVA or by other parties, the environmental impacts of such shoreline or streambank actions would be similar. TVA's extensive documentation of reviewing and approving thousands of Section 26a permit requests as well as its own shoreline actions supports the creation of this proposed CE. Examples of minor structures that are commonly installed along TVA shorelines include docks, piers, boat slips or boathouses, and decks. Commercial marinas, community docks, barge terminals, utility crossings, bridges, culverts, roads, wastewater discharges, municipal or industrial water intakes, and sewage outfalls are also examples of projects occurring along shorelines or streams. While the vast majority of these structures or appurtenances are proposed and constructed by non-TVA entities, TVA occasionally proposes such actions for its own management or operational needs.

The language of the proposed CEs was developed to identify activities with limited environmental effects. The length of shoreline/streambank stabilization projects would be generally limited to less than 1/2 mile (2,640 linear feet). TVA identified 1/2 mile as a suitable limited based on a review of TVA's ENTRAC database and other NEPA reviews. In ENTRAC, there are more than 800 separate actions reviewed by TVA since 2002 that involve shoreline or streambank stabilization or the installation of riprap. Of the 822 projects in ENTRAC (at the time of the review), the description of 344 projects included a distance for the length of stabilization/riprap to be installed as part of the action. TVA reviewed and approved 14 projects with a distance of 1/2 mile or greater in linear feet by completing a CEC. Of these 344 projects,

the average length of stabilization/riprap was 487 feet. TVA's database included 39 projects that involved installation of greater than 1,000 feet. TVA records include over two dozen TVA EAs with FONSIIs that addressed shoreline or streambank stabilization and/or installation of riprap materials in the scope of the review, with an average length of 7,938 feet of riprap proposed per project.

3.27.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff reviewed its records for supporting information, including: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.27.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in hundreds of activities similar to those that would fall under proposed CE #27. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Since 2002, TVA has documented more than 1,300 proposed actions either proposed by an applicant or by TVA that involved shoreline, streambank, and riverbank stabilization projects. An additional 43 activities along shorelines or streambanks include berm and dike construction, fish attractor installation, revegetation of shorelines, and water control structure replacement.

TVA has also reviewed the actions of TVA business units that are focused on land and shoreline management, and noted these units applied to existing CEs over 4,000 times. As noted above, most of these CECs used existing TVA CE 5.2.1 (*Routine operation maintenance, and minor upgrading of existing TVA facilities*) and CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*). Examples of CECs for activities relevant to the proposed CE include:

- *CEC 32591: Boone Dam Forebay, Boat Dock (for inspection of construction activities), (5/21/2015), CE 5.2.1*
- *CEC 27100: Raccoon Creek WMA shoreline stabilization, (12/22/2014), CE 5.2.1*
- *CEC 29803: Gin Creek - Replacement of Water Control Structures, (9/4/2014), CE 5.2.1*
- *CEC 22476: South East Dike Stability Improvements, (7/21/2010), CE 5.2.1*
- *CEC 8989: 26a-164609-Chickamauga- XCR-155 - Proposed Rip-Rap, Fixed/Floating Covered Boat Slips, Water Intake, Underground Utilities(Water), Electric Service, Excavation, Fish Attractor, (2/18/2005), CE 5.2.26*
- *CEC 8679: Worell - Riprap Bank Stabilization, (1/19/2005), CE 5.2.26*
- *CEC 3269: Watts Bar Fossil Plant Shoreline Stabilization, (11/8/2004), CE 5.2.1*

- *CEC 7795: Watershed Demo project-repair flood damage cattle exclusion fence, (9/28/2004), CE 5.2.21*
- *CEC 5622: Repairs to Fishing Berm Below Guntersville Dam, (1/9/2004), CE 5.2.1*
- *CEC 5446: Shoreline improvement project-bank stabilization-TWRA in partnership with TVA-Boone Res., (12/12/2003), CE 5.2.26*
- *CEC 4492: Tellico Dam - Repair of Shoreline Erosion at Saddle Dam No. 2, (8/25/2003), CE 5.2.1*
- *CEC 3102: Generic dike repair, (3/31/2003), CE 5.2.1*
- *CEC 1785: Concrete Shoreline Retaining Wall Renovation, (10/17/2002), CE 5.2.24*
- *CEC 1713: Riprap Shoreline Stabilization, (10/10/2002), CE 5.2.26*
- *CEC 32087: Riverbank Stabilization I, 100 ft (Watts Bar Nuclear), (3/15/2015)*
- *CEC 31768: Bank stabilization, protection of cultural site 2,600 feet, (4/17/2015)*
- *CEC 32767: Shoreline stabilization for protection of multiple cultural sites, 3,800 feet (4/27/2016)*
- *CEC 27913: Three Mile Creek / Byrd Creek Shoreline Stabilization (2,718 feet at 13 sites), (7/30/2013), CE 5.2.26*
- *CEC 5500: Critically Eroded Shoreline Section 26a (4,995 feet), (12/5/2003), CE 5.2.26*
- *CEC 2690: TVA Rip Rap Project Site 40RH14/15 (4,000 feet), (2/20/2003), CE 5.2.26*
- *CEC 5658: Riprap on private property (3,500 feet), (1/15/2004), CE 5.2.26*
- *CEC 5507: Critically Eroded Stabilization Anderton (2,900 feet), (12/3/2003), CE 5.2.26*
- *CEC 12028: Chickamauga XTCR-102 Ledford Island Stabilization (2,600 feet), (3/1/2006), CE 5.2.26*
- *CEC 17515: Freeman Acres Stabilization (up to 2,500 feet), (1/30/2008), CE 5.2.26*
- *CEC 8356: Cavender Stabilization (9 locations, 6,815 feet), (11/22/2004), 5.2.26*
- *CEC 12612: Archaeological Site Stabilization on Wheeler (4,750 feet), (4/5/2006), 5.2.26*
- *CEC 22587: Wilson Hydro-modernization Stabilization (2,600 feet), (10/8/2010), 5.2.26*
- *CEC 9632: NRCS Stream Stabilizations (6 locations, 2,960 feet), (6/7/2005), 5.2.26*

3.27.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below.

As noted above, TVA records include over two dozen TVA EAs with FONSI that addressed shoreline or streambank stabilization and/or installation of riprap materials in the scope of the review, with an average length of 7,938 feet of riprap proposed per project.

However, TVA NEPA staff did not identify an EA or EIS relating to a TVA proposal to install minor shoreline structures or facilities, boat docks or ramps for TVA use. TVA staff applied either existing CE 5.2.26 to TVA actions (noted above) or applied a different existing CE, including existing CE 5.2.23 (*Development of minor TVA public use areas and stream access*

points.). Numerous examples, however, were found regarding TVA actions to stabilize shoreline or stream banks and relevant examples are listed in Table 3.27-1.

Table 3.27-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ ROD Issued
Duck River Bank Stabilization River Mile 176.8 EA (about 100 feet of riprap)	Marshall County, TN	8/18/2015
Natural Resource Plan EIS	TVA-wide	9/15/2011
Proposed Blennerhassett Island Erosion Control and Streambank Restoration Project, Section 26a approval for riprap at French Broad River Mile 125 EA (1,000 feet)	Madison County, NC	10/30/2001
Shoreline Management Initiative EIS	TVA-wide	6/4/1999
Section 26a approval for riprap at Huntsville-Madison County Marina and port authority - Ditto landing Marina EA (1,850 feet)	Madison County, AL	12/22/1997
Generic EA, Clean Water Initiative	TVA-wide	5/16/1997
Section 26a Approval for Riprap at Ross's landing Plaza EA (1,800 feet)	Hamilton County, TN	4/23/1997
Forrest Crossing Development EA (3,100 feet)	Decatur County, TN	4/25/2003
Moccasin Bend / Chattanooga Streambank Stabilization (River Mile 457.2 to 463.1) - 31,000 linear feet	Chattanooga, TN	2/22/2010
Hardin Bottoms Stabilization EA (30,624 linear feet of stabilization)	Perry County, TN	3/6/2009
Private Marina, Boat Ramp, Dredge and Riprap EA (Watts Bar, River Mile 583.3) - 4,000 linear feet of riprap	Loudon County, TN	8/19/2011

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Generic EA, TVA Clean Water Initiative (CWI) and FONSI: TVA completed this programmatic EA in order to expedite its CWI activities for improving the beneficial uses of water resources in specific watersheds and communities across the Tennessee Valley region. The EA was designed to address a group of activities that do not have, either individually or cumulatively, a significant effect on the quality of the human environment. The intent of the EA was to create a CE for those activities and thereby expedite the environmental review process for such activities. Proposed activities included implementation of agricultural BMPs, streambank and streambed restoration through bioengineering and structure placement, planting native woody and herbaceous vegetation on streambanks and reservoir shorelines, and solid waste cleanup and disposal. The EA found that these activities would not have significant adverse environmental effects. (TVA, 1997a) This EA is directly relevant to the activities included in this CE, including activities to restore, enhance, and maintain wetland, riparian, or aquatic habitats, construction of small water control structures; revegetation actions using native materials;

installation of fences to restrict livestock; and development of limited access for routine maintenance and management purposes.

Moccasin Bend Streambank Stabilization EA and FONSI: This EA evaluated a U.S. National Park Service proposal to stabilize a 5.9-mile section of the Tennessee River Bank within the Moccasin Bend National Archaeological District near Chattanooga, Tennessee. The District is one of the most significant archaeological sites in the Southeast and is a National Historic Landmark. This action required approval by TVA under Section 26a of the TVA Act. This portion of the river experienced bank erosion and sloughing, which jeopardized the integrity of cultural resources. Stabilization included a combination of techniques, including full riprap protection, partial riprap protection, and bioengineering. The EA determined the preferred alternative would reduce sediment run-off into the river, resulting in net long-term benefits to archaeological sites, water quality, aquatic and terrestrial wildlife habitat, and visual resources. (TVA, 2010b) This EA is directly relevant to the proposed CE.

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts (TVA, 2011b). This EIS is directly relevant to the proposed CE because it evaluated action alternatives that included activities such as stabilizing up to 8 miles of critically eroding shoreline per year; conducting various levels of water resource and aquatic ecology improvement programs, which would include both watershed management activities and direct measures such as installation of fish attractors; current or increased wetland management and protection practices, which would include invasive species removal, restoration of hydrologic functions, and restoration of native wetland species; and protecting archaeological sites of up to 1.3 tributary shoreline miles or 2.1 mainstem shoreline miles per year. (TVA, 2011a)

The EIS addressed the potential for some activities (particularly bank stabilization activities associated with both cultural and water resource management) to directly affect aquatic habitats and communities. These activities would be carefully planned and implemented to minimize adverse effects and would result in long-term beneficial, although fairly localized, impacts. TVA determined that wetland management and protection practices would result in a positive effect on wetlands on TVA lands, and no direct or indirect adverse effects on wetlands would result. TVA also determined that direct, positive, beneficial changes in aquatic ecology due to the implementation of water resource improvement programs would be realized across the Valley. TVA determined that the management of cultural resources would reduce adverse effects and promote the protection and preservation of resources in a manner that benefits the public. (TVA, 2011a)

3.27.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include, but are not limited to:

- Streambank and shoreline stabilization to protect natural and cultural resources
- Construction of small water access structures, including docks or boat ramps
- Development of limited access for routine maintenance and management purposes

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, such activities would not result in significant environmental effects.

Vegetation: As intended by the proposed CE, minor revegetation activities would enhance native vegetation along streambanks and reservoirs, and help to repair any minor, short-term disturbance from equipment used for shoreline construction, debris cleanup, or installation of fences, gates, and signs (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Water Resources: Activities included in the proposed CE are often intended to benefit water resources. Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from work conducted along the shoreline. Increased sedimentation could result from installing shoreline structures, facilities, or stabilization measures; installing small water control structures, berms, or dikes; creating riparian buffers; installing fencing near waterways; and creating or improving access roads could cause short-term, minor effects. However, over the long term, many shoreline, streambank, and streambed stabilization activities would result in beneficial effects that include reduced suspended solids and turbidity and reduced sediment accumulation. (TVA, 1997a; TVA, 2011a).

Air Quality: Short-term, minor indirect fugitive air emissions from the mechanical equipment needed to complete a specific construction activity could occur from the proposed CEs. (TVA, 2011a)

Cultural and Archaeological Resources: Overall, streambank and shoreline stabilization activities should have beneficial effects on archaeological resources (TVA, 1997a; TVA, 2010b; TVA, 2011a). Riprap placed along the shoreline cover exposed sites, reduce erosion of sites of sites into reservoir, and protect sites from future erosion or disturbance. The long-term stabilization benefits outweigh the short-term disturbance of a cultural resource (TVA, 2011a). Additionally, installation of minor facilities or structures along shoreline or streambanks could have minor adverse effects on archaeological resources. However, sites would be reviewed prior to work to ensure resources are not present or to avoid or minimize effects. (TVA, 2010b; TVA, 2011a).

Soils: Short-term, minor indirect effects could include increased erosion and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from these measures, as intended by proposed CE. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Fish and Wildlife: Many of the activities of the proposed CE are intended to benefit aquatic and riparian species. Increased shoreline stabilization could result in minor, short-term, localized indirect adverse effects to wildlife from alterations of wildlife habitat, and increased levels of human disturbance (TVA, 2011a). Some impacts to benthic fauna may occur (e.g., short term turbidity or increase in displaced or suspended solids). Activities associated with the proposed CE would most likely result in minor, long-term benefits to most wildlife by ensuring streambank stability and improving the quality of available habitat. Local populations of a few

wildlife species dependent on vertical or near-vertical dirt streambanks and shorelines would be adversely affected. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Wetlands and Riparian Habitat: Implementation of activities to stabilize shoreline or stream banks benefit riparian and aquatic habitat and would have long-term beneficial effects. Short-term, adverse indirect effects could occur from the other activities associated with the proposed CE, especially during initial construction phases, but these effects should be minor and temporary. Additionally, TVA would continue to comply with the Clean Water Act and Executive Order 11990 (*Protection of Wetlands*) through its environmental review process, and apply appropriate mitigation, if necessary. (TVA, 1997a; TVA, 2010b; TVA, 2011a)

Visual Resources: Some of the activities associated with the proposed CE would improve the aesthetic quality of the landscape and are visually beneficial. Short-term, minor, indirect, adverse visual effects may result from landscape disturbance and water turbidity during bank stabilization projects (TVA, 2010b; TVA, 1997a). Some shoreline and streambank stabilization measures (e.g., riprap) could have initial adverse visual effects, but these effects would decrease over time as the affected area naturalizes, and may be less adverse than the visual effects of erosion and sloughing in the absence of stabilization. Installation of facilities along shorelines could have minor effects on viewsheds by reducing the natural setting. (TVA, 2011a)

Recreation: During construction, public access to the work areas may be limited or prohibited, resulting in short term, minor indirect effects to public recreation (TVA, 2010b).

Summary: TVA EAs and EISs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects. Stabilization projects in particular would most likely have long-term beneficial effects for the natural resources within the Tennessee Valley. Minor activities along shorelines and streambanks do not cause significant environmental effects. The spatial limit applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed would ensure that these actions do not result in significant effects.

3.27.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CEs. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE. Specifically, these other agency CEs include activities similar to those of TVA's proposed CE, including stabilizing streambanks, construction of small water control structures, installation of fences, minor revegetation actions using native materials, and development of facilities or access structures. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage public lands; have missions, mandates, responsibilities, and authority to manage for natural and cultural resource protection and conservation; and have extensive histories and experience with natural and cultural resource programs.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for

TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Homeland Security CE D6 (DHS, 2014)

Maintenance of aquatic and riparian habitat in streams and ponds, using native materials or best natural resource management practices. Examples include, but are not limited to:

- (a) Installing or repairing gabions with stone from a nearby source,*
- (b) Adding brush for fish habitat,*
- (c) Stabilizing stream banks through bioengineering techniques, and,*
- (d) Removing and controlling exotic vegetation, not including the use of herbicides or non-native biological controls.*

According to DHS's administrative record, "The activities to construct aquatic and riparian habitat on Department managed property contemplated in this categorical exclusion would be of a small scale and limited to a single locality... Any potential for environmental impacts would likewise be of a small scale and confined to more localized impacts. As a result of these limitations and in consideration of the administrative record, the Panel determined that this categorical exclusion contemplated activities that would have no potential for significant effects to the human environment" (DHS, 2006). DHS supported the proposed CE by benchmarking to CEs of the U.S. Coast Guard (USCG) and the Federal Emergency Management Agency (FEMA), (44CFR10.8 (d) (2) (xi)); DOE's current CE (B1.20); as well as six EAs with FONSIIs from the U.S. Border Patrol for its land based activities. Based upon the agency's history of environmental analyses and the expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

U.S. Forest Service CEs e7, e18, and e19 (36 C.F.R. § 220, 2014)

(e7) Modification or maintenance of stream or lake aquatic habitat improvement structures using native materials or normal practices. Examples include but are not limited to:

- I. Reconstructing a gabion with stone from a nearby source;*
- II. Adding brush to lake fish beds; and*
- III. Cleaning and resurfacing a fish ladder at a hydroelectric dam.*

(e18) Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, valves, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practicable where valid existing rights or special use authorizations are not unilaterally altered or canceled. Examples include but are not limited to:

- (i) Repairing an existing water control structure that is no longer functioning properly with minimal dredging, excavation, or placement of fill, and does not involve releasing hazardous substances;*

- (ii) Installing a newly designed structure that replaces an existing culvert to improve aquatic organism passage and prevent resource and property damage where the road or trail maintenance level does not change;*
- (iii) Removing a culvert and installing a bridge to improve aquatic and/or terrestrial organism passage or prevent resource or property damage where the road or trail maintenance level does not change; and*
- (iv) Removing a small earthen and rock fill dam with a low hazard potential classification that is no longer needed.*

(e19) Removing and/or relocating debris and sediment following disturbance events (such as floods, hurricanes, tornados, mechanical/ engineering failures, etc.) to restore uplands, wetlands, or riparian systems to pre-disturbance conditions, to the extent practicable, such that site conditions will not impede or negatively alter natural processes. Examples include but are not limited to:

- (i) Removing an unstable debris jam on a river following a flood event and relocating it back in the floodplain and stream channel to restore water flow and local bank stability;*
- (ii) Clean-up and removal of infrastructure flood debris, such as, benches, tables, outhouses, concrete, culverts, and asphalt following a hurricane from a stream reach and adjacent wetland area; and*
- (iii) Stabilizing stream banks and associated stabilization structures to reduce erosion through bioengineering techniques following a flood event, including the use of living and nonliving plant materials in combination with natural and synthetic support materials, such as rocks, riprap, geo-textiles, for slope stabilization, erosion reduction, and vegetative establishment and establishment of appropriate plant communities (bank shaping and planting, brush mattresses, log, root wad, and boulder stabilization methods).*

These CEs address many activities occurring along shorelines or streambanks. TVA reviewed USFS's [administrative record](#) for CEs 18 and 19 (the administrative record for 7 was not readily available) to promote hydrologic, aquatic, and landscape restoration and recovery activities (USFS, 2016). Similar to TVA, USFS established their CEs based on, in part, its experience implementing similar actions, the experience of other agencies, and information provided by the public. According to USFS's record, CE 18 was substantiated based on "a review of past actions, information from professional staffs, experts, scientific analysis, a review of categorical exclusions implemented by other federal agencies, and the USFS's extensive experience with implementing projects that restore the flow of water into natural channels and floodplains, the USFS has concluded that this category of actions does not have individual or cumulative significant effects and therefore should be categorically excluded from documentation in an EA or EIS" (USFS, 2012b). USFS also conducted a review of 18 recent actions implementing activities associated with this proposed CE and determined that none predicted significant effects on the human environment before the project was implemented. Agency CEs reviewed by USFS included NRCS, National Marine Fisheries Service, Bureau of Land Management, and USCG. For CE 19, USFS reviewed 10 recent EAs or EISs associated with the CE, and compared the proposed CE to existing CEs by NRCS, BLM, FEMA, USCG, and DHS. (USFS, 2012b)

Department of Energy CE B1.20 (76 FR 63764, 2011)

Small-scale activities undertaken to protect cultural resources (such as fencing, labeling, and flagging) or to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders and minor diversion channels), or fisheries. Such activities would be conducted in accordance with an existing natural or cultural resource plan, if any.

DOE's CE B1.20 addresses activities occurring along shorelines or streambanks or occurring within the waterways. DOE's proposed rule discussed the rationale for the adopted changes to B1.20 based on DOE's experience only:

DOE proposes to add to the scope of this categorical exclusion by referencing activities taken to protect cultural resources and by including examples of those activities (fencing, labeling, or flagging). DOE's Power Marketing Administrations often engage in such activities for cultural and wildlife protection purposes, and these activities would not have the potential to cause significant impacts. DOE also proposes to include a condition in the categorical exclusion that the activities would be conducted in accordance with an existing natural or cultural resource plan, if any. (DOE, 2011a)

U.S. Fish & Wildlife Service (USFWS) CE B.3 (DOI, 2004b)

The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, instream, or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

- i. The installation of fences.*
- ii. The construction of small water control structures.*
- iii. The planting of seeds or seedlings and other minor revegetation actions.*
- iv. The construction of small berms or dikes.*
- v. The development of limited access for routine maintenance and management purposes.*

The USFWS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Natural Resources Conservation Service (NRCS) CEs 8, 9, 10, 11, 12, and 13 (7 C.F.R. § 650, 2015)

(8) Stabilizing stream banks and associated structures to reduce erosion through bioengineering techniques, (i.e. utilization of living and nonliving plant materials in combination with natural and synthetic support materials (such as rocks, rip-rap, geotextiles) for slope stabilization, erosion reduction, and vegetative establishment), such as establishment of appropriate plant communities (bank shaping and planting, brush mattresses, log, root wad, and boulder stabilization methods), following a natural disaster to restore pre-disaster conditions to the extent practicable.

(9) Repair or maintenance or of existing small structures or improvements (including structures and improvements utilized to restore disturbed or altered wetland, riparian, in stream, or native habitat conditions). Examples of such activities include the repair or

stabilization of existing stream crossings for livestock or human passage, levees, culverts, berms, and dikes, and associated appurtenances.

(10) Construction of small structures or improvements for the restoration of wetland, riparian, in stream, or native habitats. Examples of activities include: (1) installation of fences; and (2) construction of small berms, dikes, and associated water control structures.

(11) Implementation of actions that restore an ecosystem, fish and wildlife habitat, biotic community, or population of living resources to a determinable pre-impact condition.

(12) Repair or maintenance of existing constructed fish passageways, such as fish ladders, or spawning areas impacted by natural disasters or human alteration.

(13) Repair, maintenance, or addition of fish screens to existing structures.

The NRCS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Army Corps of Engineers CE 6(a) (33 C.F.R. § 325 Appendix B)

- (1) Fixed or floating small private piers, small docks, boat hoists and boathouses.*
- (4) Boat launching ramps.*

The USACE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.27-2 provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CEs.

Table 3.27-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #27	DHS	USFS	DOE	USFWS	NRCS	USACE
Streambank stabilization to protect natural and cultural resources	X	X	X		X	
Restore/enhance wetland, riparian, or aquatic habitat	X	X	X	X	X	
Construct small water control structures, berms, dikes, fish attractors		X		X	X	
Minor revegetation actions using native materials				X	X	
Removal of debris following human-caused or natural disturbance events		X				
Installation of fences, gates, and signs			X	X	X	

Proposed TVA CE #27	DHS	USFS	DOE	USFWS	NRCS	USACE
Development of limited access for routine maintenance and management purposes				X		
Installation of minor shoreline structures or facilities, boat docks and ramps						X

The federal agency CEs are comparable because they involve the same or similar minor activities as TVA’s proposed CE. The two USACE CEs address installation of the installation of boat ramps, piers, and docks. The DHS, NRCS, and USFS CEs include streambank stabilization activities. All of the federal agency CEs involve actions within or near wetland, riparian, or aquatic habitat. USFWS, NRCS, and USFS CEs include the construction of small water control structures, berms, dikes, or fish attractors. The USFWS and NRCS CEs include minor revegetation and the installation of fences to restrict livestock. The USFS CE No. 19 includes removing or relocating debris following human or natural disturbance in aquatic areas.

All of the activities included in TVA’s proposed CE would occur with similar timing and in a similar environmental context to those actions performed by the federal agencies listed in Table 3.27-2 and covered by those agencies’ CEs. For these particular CEs, the setting would occur near aquatic areas for TVA’s activities as well as for the other federal agencies.

TVA notes that all of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.27.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when this proposed CE is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE #27 is not applied when the action could have significant effects on the environment.

3.27.5 Conclusion

The review of TVA’s previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. TVA identified only minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CEs encompass activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in the ENTRAC for each application of these CEs to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by these CEs.

3.28 CE 28 - MODIFICATIONS TO LAND USE ALLOCATIONS IN TVA PLANS

TVA proposes a new CE to address minor changes to land use allocations in its land management plans.

3.28.1 Proposed Categorical Exclusion Text

Minor modifications to land use allocations outside of a normal land planning cycle to: rectify administrative errors; incorporate new information that is consistent with a previously approved decision included in the land use plan; or to implement TVA's shoreline or land management policies generally affecting no more than 10 acres.

After publication of the Proposed Rule in June 2017, TVA received comments regarding this proposed CE that indicated potential confusion by the public about covered actions. TVA revised the definition of the CE to clarify that the only modifications to land plans covered by the CE are changes to land use allocations. In addition, the CE would only apply to such allocation modifications that are proposed “outside of a normal planning cycle.” This clarification is added because TVA only considers minor allocation changes outside of a normal planning process under limited circumstances. TVA’s land plans and policies (e.g., NRP, Comprehensive Valleywide Land Plan, Land Policy, and Shoreline Management Policy) limit the types of revisions that can be made to land plans prior to development of the next plan for that reservoir. The new CE would apply to land use allocations outside of a normal planning cycle and would not apply to land planning efforts within the normal planning process.

Also, TVA made minor revisions to the scope of the CE. Upon further review of the CE, and after considering the public comments, TVA removed from the scope of the CE the amendments to land use allocations to a more restrictive or protective allocation (which were consistent with other TVA plans and policies). Such proposals are unusual and such proposals would not generally occur outside of the normal planning process. In addition, TVA added a spatial limitation of 10 acres to the final action covered by the CE, thereby limiting the amount of land affected by a land use allocation modification that occurs outside of a TVA planning cycle. The acreage limit is similar to the general limitation applied to other CEs in the final rule. TVA notes that the “shoreline or land management policies” referenced in the definition of this CE are those relating to the Shoreline Management Policy and TVA’s Land Policy.

3.28.2 Background

TVA prepares reservoir land management plans (Land Plans) to guide how TVA-managed public lands are used. Land Plans serve to guide resource management decisions, land use approvals, and private water use facility permitting. In the Land Plans, TVA public lands are divided into parcels and each parcel is allocated one of seven land use zones which designate allowable land uses to meet a variety of needs. TVA intends to manage its public land to provide multiple public benefits, including recreation, resource conservation and economic development.

TVA allocates its public lands into one of seven zone designations under a single-use parcel allocation methodology. The seven land use zone designations include:

- (1) Non-TVA shoreland,
- (2) Project operations,
- (3) Sensitive resource management,
- (4) Natural resource conservation,
- (5) Industrial,
- (6) Developed recreation, and
- (7) Shoreline access. (TVA, 2011a)

Land Plans support land and water program goals while balancing other competing and sometimes conflicting resource uses. By providing a clear statement of how TVA intends to manage land, and by identifying a specific use for each individual parcel of land, TVA aligns the use of public lands with current policies, such as its Shoreline Management Policy and Land Policy, as well as with its responsibilities under the TVA Act. Under TVA's land planning methodology, Land Plans focus on individual reservoirs or groups of reservoirs. Even though some Land Plans under this method may include multiple reservoirs (e.g., Mountain Reservoirs Land Management Plan), the planning is still performed on a reservoir-by-reservoir basis.

[TVA's Land Policy](#) governs the management of these public lands to maximize public enjoyment, flood control, navigation, power production, and economic growth. Hundreds of thousands of acres of public lands and waters are managed by TVA for recreation, cultural and natural resource protection. As the steward of these critically important resources, TVA has a duty to manage these public assets wisely for present and future generations.

After approval of Land Plans by TVA, future uses of TVA-managed lands on that reservoir must then be consistent with the land use allocations within that Land Plan. TVA policies limit the types of revisions that can be made to Land Plans prior to development of the next plan for that reservoir. Revisions to land use allocations in Land Plans can be made to correct administrative errors that occurred during the planning process. Further, land use allocation changes occurring outside of a normal planning cycle are to be made consistent with TVA's Land Policy. Specifically, the Land Policy provides, "TVA shall consider changing a land use designation outside of the normal planning process only for water-access purposes for industrial or commercial recreation operations on privately owned backlying land or to implement TVA's Shoreline Management Policy." Allocation changes for other purposes would occur during the normal land planning process. Updates to land plans within the normal land planning cycle, whether it be for a portion of a reservoir, an entire reservoir, or a group of reservoirs, involves the preparation of an EA or EIS.

Occasionally, TVA receives land use requests that warrant a land use allocation change outside of the land planning process that meet one of the above described criteria for an allocation change. The proposed CE would serve these types of land use allocation changes outside of the reservoir lands planning cycle. Changes to land use allocations would not necessarily result in site-specific actions; such actions implementing the land use decisions would be reviewed through an additional, project-specific NEPA review and effects would be appropriately addressed as part of that review.

TVA developed the [Natural Resource Plan](#) to guide its stewardship efforts and address TVA's management of biological, cultural and water resources, recreation facilities, reservoir lands planning, and public engagement. The NRP analyzes TVA's current activities, goals for improving current programs and beginning new ones, and the benefits associated with the implementation of programs in the resource areas. Further, as part of the NRP, TVA developed the Comprehensive Valleywide Land Plan. Under the Comprehensive Valleywide Land Plan, TVA will develop and update reservoir land management plans for a portion of a reservoir, an entire reservoir, or a group of reservoirs using the single-use parcel allocation methodology. These land planning efforts are considered to be within the reservoir lands planning cycle. Updates to Land Plans within the land planning cycle, whether it be for a portion of a reservoir, an entire reservoir, or a group of reservoirs, involves the preparation of an EIS or EA. The proposed CE would not apply to land planning efforts within the land planning cycle.

The proposed CE would address minor modifications to land use allocations in Land Plans outside of the land planning process to correct administrative errors. Examples of administrative errors include overlooking deeded rights or other legal instruments in existence or mapping errors. Allocation changes to correct administrative errors are not restricted to certain land use zones.

The proposed CE also addresses modifications to land use allocations, provided that they are consistent with other TVA plans and policies (e.g., Natural Resource Plan, Shoreline Management Policy and Land Policy). For example, such modifications to implement the Shoreline Management Policy under TVA's current land planning guidance would be limited to allocation changes from land use Zones 5 or 6 (Industrial or Commercial Recreation) to Zone 7 (Shoreline Access) to reflect changes in backlying property ownership. In most situations, allocation of parcels to Zone 7 would potentially allow for shoreline development that would result in minor soil disturbances to narrow corridors providing access to water use facilities such as a private or community dock. Additionally, construction of shoreline erosion-control structures could cause some soil disturbance.

Allocation changes of parcels to Zones 5 or 6 to support industrial or commercial recreation use would be consistent with the TVA Land Policy. Parcels changing to an allocation of Zones 5 or 6 affecting no more than 10 acres would have varying minor effects on the physical environment, depending on the proposed facilities. The greatest potential impacts to land resources could occur on those parcels allocated to Zone 5 where soil disturbances would be likely when facilities such as barge terminals, mooring facilities, water intake structures and water outfall structures are constructed to support backlying industrial facilities. Once these facilities are established, they often remain intact for long periods, and tracts of land may remain impacted. Soil disturbances in specific locations for commercial recreation facilities such as a marina, campground, or boat-launching ramp could occur on those parcels allocated to Zone 6 if such facilities are constructed. Conversely, large areas could be left unaffected for more dispersed recreation management when parcels are not under a land use agreement. All allocation changes would be consistent with previously approved plan decisions and objectives.

TVA proposes to add the proposed CE to address minor administrative land use plan changes and to provide TVA with the ability make land use allocations changes outside of the normal

land planning cycle that are allowable under TVA policies would reduce overall TVA planning costs. The language of the proposed CEs was developed to identify activities with limited environmental effects. As noted above, changes to land use allocations would not result in site-specific actions; such actions implementing the land use decisions would be reviewed through an additional, project-specific NEPA review and effects would be appropriately addressed as part of that review.

3.28.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that under normal circumstances the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.28.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for a documented use of CEs since 2002 resulted in few activities related to those proposed in proposed CE #28. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. For example, since 2002, TVA has documented approximately 30 activities requesting for deed modifications. Of these deed modifications, only one of the actions involved a change in a land use allocation. Historically, the reallocation of land use had been addressed in Land Plans, which require extensive NEPA documentation through an EA or EIS.

3.28.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.28-1.

Table 3.28-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ ROD Issued
Muscle Shoals Marine Services Section 26a Approval and Easement For Barge Fleeting Services at Tennessee River and Tennessee-Tombigbee Waterway EA	Pickwick Reservoir, Tishomingo County, Mississippi	8/2016
Natural Resource Plan EIS	TVA-wide	9/15/2011
Douglas-Nolichucky Tributary Reservoirs Land Management Plan EIS	Cocke, Greene, Hamblen, Jefferson, and Sevier Counties, TN	8/25/2010
Northeastern Tributary Reservoirs Land Management Plan EIS	Tennessee and Virginia	6/10/2010
Norris Reservoir Land Management Plan EA - Environmental Report and Revised FONSI to Recognize Deeded Access Rights for 16 Parcels on Norris Reservoir	Anderson, Campbell, Claiborne, Grainger, and Union Counties, TN	3/17/2010
Watts Bar Reservoir Land Management Plan EIS	Loudon, Meigs, Rhea, and Roane Counties, TN	2/8/2010
Mountain Reservoirs Land Management Plan EIS	Mountain Reservoirs (Chatuge, Hiwassee, Blue Ridge, Nottely, Ocoees 1, 2, and 3, Appalachia, and Fontana) in GA, NC, and TN	12/7/2009
Pickwick Reservoir Land Management Plan EIS	Lauderdale and Colbert Counties, AL; Tishomingo County, MS; and Hardin County, TN	9/10/2002
Guntersville Reservoir Land Management Plan EIS	Jackson and Marshall Counties, Alabama and Marion County, TN	1/18/2002
Norris Reservoir Land Management Plan EA	Anderson, Campbell, Claiborne, Grainger, and Union Counties, TN	8/7/2001
Bear Creek Reservoirs Land Management Plan EA	Franklin, Marion, and Winston Counties, AL	3/13/2001
Tellico Reservoir Land Management Plan EIS	Loudon County, TN	8/20/2000
Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley EIS	TVA-wide	6/4/1999
Boone Reservoir Land Use Plan EA	Sullivan and Washington Counties, TN	3/15/1999

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Muscle Shoals Marine Services Section 26a Approval and Easement For Barge Fleeting Services at Tennessee River and Tennessee-Tombigbee Waterway EA and FONSI: In 2016, TVA prepared an EA for a requested shoreline permit and easement to replace an existing license and to expand existing barge fleeting operations on Pickwick Reservoir. The existing license and expanded fleeting area that had been in use since 1989 were overlooked during

development of the 2002 Pickwick Reservoir Land Management Plan and some of the fleeting operation fronting shoreline property was erroneously allocated as Zone 4 (Natural Resource Conservation), rather to Zone 5 (Industrial) reflecting existing agreements and land use. TVA proposed to correct the land use allocation over about 4.0 acres to reflect agreements and uses in existence but overlooked when the parcel were planned. This EA is directly relevant to the proposed CE because it serves as an example of the types of environmental considerations associated with minor land use zone changes and how such changes are unlikely to result in significant environmental effects.

Norris Reservoir Land Management Plan (Norris Plan) EA and FONSI: In 2001, TVA prepared an EA and a comprehensive land management plan for 27,927 acres and 809 shoreline miles of TVA public land above the summer pool levels on Norris Reservoir. The EA documents the analysis of alternative uses of TVA public land and their effects on the surrounding environment. On March 17, 2010, TVA issued a Reevaluated FONSI for the Norris Plan to address the occurrence of deeded access rights of some backlying landowners. The FONSI determined that changing all or some of the allocations of 16 parcels on Norris Reservoir from Zone 6 (Developed Recreation) to Zone 7 (Residential Access) would not be a major federal action significantly affecting the environment and is adequately addressed in the potential environmental effects of TVA's action. TVA determined that the environmental and project goals of the Norris Plan would still be met and the previous FONSI remains valid. (TVA, 2010c) This EA is directly relevant to the proposed CE because it serves as an example of the types of environmental considerations associated with minor land use zone changes and how such changes are unlikely to result in significant environmental effects.

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts (TVA, 2011b). This EIS is directly relevant to the proposed CE because it evaluated action alternatives that included activities identical to the proposed CE, on a larger scale; such as:

- Establishes a Comprehensive Valleywide Land Plan, which establishes reservoir system-wide ranges in the proportion of land allocated to each land use zone.
- The Valleywide Plan will guide resource management and administration decisions on the approximately 293,000 acres of TVA managed property around 46 reservoirs.
- It will identify the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access
- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.

The EIS found that there would be no direct effects on the environment from reservoir planning. The proposed changes in the Comprehensive Valleywide Land Plan would result in minor effects on the environment. These effects could include increases in runoff, altered wildlife habitats, and localized increases in vehicle and boat traffic. Overall, the effects would be minimal, and prior to approving any proposal to use TVA land, TVA would conduct an appropriate site-specific environmental review (TVA, 2011a).

3.28.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CEs that could have environmental effects include:

- Modifications to land use allocations in a Land Plan to address administrative errors such as omissions of land, mapping errors, or misallocation resulting from failure to recognize deeded rights in existence or other legal instruments during the land planning process.
- Modifications to land use allocations in a land plan affecting no more than 10 acres for water access for industrial or commercial recreation operations on private backlying property, i.e., allocation changes to Industrial (Zone 5) or Commercial Recreation (Zone 6) typically associated with an industrial easement or commercial recreation easement request on TVA property.
- Modifications to land use allocations in a land plan to implement Shoreline Management Policy, i.e., allocation changes from Industrial (Zone 5) or Developed Recreation (Zone 6) to Shoreline Access (Zone 7).

Modifications to land use allocations in a land plan would not have any direct environmental effects. The modification of a land use allocation is an administrative decision, and therefore would not cause any changes to the physical environment. Indirectly, in cases when the allocation change is from a zone that allows for development (Zones 2, 5, 6 and 7) to a zone that does not allow for development (Zones 3 and 4), there could be long-term beneficial effects on the physical environment because changing to a zone that restricts development may enhance the physical environment for vegetation, wildlife, and water resources.

Allocation changes to Zones 5 or 6 affecting no more than 10 acres to support water access for industrial or commercial recreation operations would have varying minor effects on the physical environment depending on the proposed facilities. As noted above, the greatest potential impacts to land resources could occur on those parcels allocated to Zone 5 where soil disturbances would be likely when facilities such as barge terminals, mooring facilities, water intake structures and water outfall structures are constructed to support industrial facilities. Soil disturbances in specific locations for commercial recreation facilities such as a marina, campground, or boat-launching ramp could occur on those parcels allocated to Zone 6 if such facilities are constructed.

Allocation changes from Zones 5 or 6 to Zone 7 to implement the Shoreline Management Policy would have similar effects on the physical environment as each land use zone allows for development. Project- and site-specific environmental reviews would still occur when land use agreements or shoreline permits are requested on TVA public land. Modifications to land use plans to address minor errors or to incorporate new information that is consistent with a previously approved decision included in the plan would be an administrative action and have no environmental effects.

Summary: The proposed CE would have no direct environmental effects on the environment and would not cause significant indirect environmental effects.

3.28.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for land use plan changes similar to the actions included in TVA's proposed CEs. The following CEs currently in use by Department of the Interior agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE. These agencies' CEs are also relevant because, like TVA, the agencies manage public lands with missions, mandates, responsibilities, and authority to manage for natural and cultural resource protection and conservation and have extensive experience with natural and cultural resource programs.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Bureau of Land Management CE J1 (DOI, 2008b)

Maintaining land use plans in accordance with 43 CFR 1610.5-4.

According to BLM planning regulations, which define the scope of the CE, plan "maintenance" is limited to minor changes to data, mapping and should not result in expansion in the scope of resource uses or restrictions, or change the terms, conditions, and decisions of the approved plan. The BLM reviewed the environmental effects of such actions and substantiated that these activities do not individually or cumulatively result in significant environmental effects. In addition, TVA NEPA staff reviewed numerous BLM records of resource management plan maintenance actions and confirmed that such BLM actions are directly relevant to the activities in TVA's proposed CE.

National Park Service CE B1 (DOI, 2004a)

Changes or amendments to an approved plan, when such changes would cause no or only minimal environmental impact.

The NPS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Fish and Wildlife Service CE B9 (DOI, 2004b)

Minor changes in existing master plans, comprehensive conservation plans, or operations, when no or minor effects are anticipated. Examples could include minor changes in the type and location of compatible public use activities and land management practices.

The USFWS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.28-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.28-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #28	BLM	NPS	USFWS
Modifications to land use plans to address minor errors or to incorporate new information that is consistent with a previously approved decision included in the plan	X	X	X

The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CEs. The NPS, BLM, and USFWS CEs deal with modifications to approved plans, similar to proposed CE. The NPS and USFWS CEs limit the activities to “when no or minor effects are anticipated.” The BLM CE is less applicable to TVA’s CE because the BLM’s planning regulations specify that maintenance of plans is limited to corrections of facts, text, or data. TVA notes that all of these agency CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.28.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE #28 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE #28 is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.28.5 Conclusion

The review of TVA’s previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. These activities should not have any direct environmental effects on the environment. Accordingly, TVA determined that the proposed CEs encompass activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of these CEs to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by these CEs.

3.29 CE 29 - WETLANDS, RIPARIAN & AQUATIC ECOSYSTEM IMPROVEMENTS

TVA proposes to establish a CE for actions to improve wetland, riparian, and aquatic ecosystems.

3.29.1 Proposed Categorical Exclusion Text

Actions to restore and enhance wetlands, riparian and aquatic ecosystems that generally involve physical disturbance of no more than 10 acres, including, but not limited to, construction of small water control structures; revegetation actions using native materials; construction of small berms, dikes, and fish attractors; removal of debris and sediment following natural or human-caused disturbance events; installation of silt fences; construction of limited access routes for purposes of routine maintenance and management; and reintroduction or supplementation of native, formerly native, or established species into suitable habitat within their historic or established range.

After the publication of the Proposed Rule in June 2017, TVA staff had additional discussion about the 125-acre limitation identified in the proposed CE. After this deliberation, TVA decided to revise the acreage limitation for this CE because of the sensitive nature of these ecosystems and to more accurately reflect past TVA experience in implementing these types of projects. Although the CE addresses actions that are intended to benefit these ecosystems, TVA's subject matter experts determined that 10 acres was a more appropriate limit that more accurately reflects past TVA experience and would ensure the actions would not have significant impacts.

3.29.2 Background

As described above, TVA manages the natural resources of the Tennessee Valley for the benefit of the region and the nation. TVA is responsible for the management of 293,000 acres of public land and 11,000 miles of public shoreline in the TVA region. The Tennessee River watershed encompasses more than 41,000 square miles across 125 counties in portions of seven states. TVA also manages 157 natural areas throughout the Tennessee Valley region that occupy approximately 16,000 acres. These areas protect some of the most biologically diverse and sensitive habitats occurring on TVA-managed lands, including unique wetlands, riparian areas, and aquatic ecosystems. TVA also manages populations of threatened and endangered species on TVA-managed lands in accordance with the ESA and plays a leadership role regionally in protection and management of several species.

TVA's biological resource management programs focus on protecting and enhancing biological resources of the Tennessee Valley region. This is accomplished through continued evaluation of biological resources, which allows TVA to prioritize and then preserve sensitive resources (e.g., threatened and endangered species) and unique resources (e.g., old growth bottomland hardwood stands), as well as conserve renewable resources (e.g., forests and native warm season grasses) in a sustainable manner to support diverse habitats for wildlife populations.

The proposed CE would allow TVA to more efficiently consider and carry out projects to maintain or restore the natural functions of wetland, riparian, and aquatic ecosystems, which is

an objective aligning to TVA's Natural Resources Plan, other TVA plans, policies, and procedures, and federal regulations.

The definition of the proposed CE includes numerous examples of actions of the category, many of which are commonly implemented by TVA. Examples of site-specific enhancements for aquatic animals includes installation of fish attractors (typically recycled Christmas trees or manmade structures with PVC pipe secured in a 5-gallon bucket of concrete, sunken in various water depths and locations in reservoirs to provide cover where none exists); creation of vernal pools for habitat; wetland restoration or creation; clearing and removing debris from natural or human-cause events disturbing habitat or ecosystems; reestablishing wetland or riparian areas by planting native plant species; and implementing and supporting conservation efforts to reestablish or supplement native species into suitable habitat within their historic or established range.

TVA proposes to include in the definition of the proposed CE #29 a limit so that covered actions would not generally involve physical disturbance of more than 10 acres. As noted above, this limitation was lowered after the Proposed Rule was published upon further consideration by TVA. The 10-acre limitation is based on TVA's past experience in implementing projects in these types of ecosystems. It is important to note that the limit would not generally apply to conservation actions to reintroduce or supplement aquatic species because the subject species could disperse from release sites.

3.29.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff consulted with its biological and natural resource management specialists and reviewed past conservation actions and related NEPA documents. TVA also reviewed for comparison established CEs of other federal agencies. Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.29.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in hundreds of activities similar to those proposed in the proposed CE. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. For example, since 2002, TVA has reviewed in CECs 43 activities include berm and dike construction, fish attractor installation, revegetation along shorelines or riparian areas, and water control structure replacement.

TVA has also reviewed the actions of TVA business units that are focused on land and shoreline management, and noted these units applied to existing CEs over 4,000 times. Most of these CECs cited to TVA CE 5.2.1 (*Routine operation maintenance, and minor upgrading of existing TVA facilities*) or CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*). While many of these CECs did not address actions proposed for natural resource management purposes, the actions took place in wetland, riparian, and aquatic ecosystems. Examples of CECs for activities relevant to the proposed CE include:

- CEC 32089: *Category 3 Section 26a – Reef Ball Fish Attractor Installation – TWRA, (3/13/2015), CE 5.2.26*
- CEC 31865: *Samuel Davis' Farm – Stream Riparian Forest Buffer Establishment, (3/10/2015), CE 5.2.28*
- CEC 27100: *Raccoon Creek WMA shoreline stabilization, (12/22/2014), CE 5.2.1*
- CEC 29803: *Gin Creek - Replacement of Water Control Structures (Category III Action), (9/4/2014), CE 5.2.1*
- CEC 17224: *Nottely, Riparian Buffer Stabilization, Union County, (11/28/2011), CE 5.2.26*
- CEC 22476: *South East Dike Stability Improvements, (7/21/2010), CE 5.2.1*
- CEC 8989: *Section 26a-164609-Chickamauga- XCR-155 - Proposed Rip-Rap, Fixed/Floating Covered Boat Slips, Water Intake, Underground Utilities (Water), Electric Service, Excavation, Fish Attractor, (2/18/2005), CE 5.2.26*
- CEC 8679: *Worell - Riprap Bank Stabilization, (1/19/2005), CE 5.2.26*
- CEC 3269: *Watts Bar Fossil Plant Shoreline Stabilization, (11/8/2004), CE 5.2.1*
- CEC 7795: *Watershed Demo project-repair flood damage cattle exclusion fence, (9/28/2004), CE 5.2.21*
- CEC 5622: *Repairs to Fishing Berm Below Guntersville Dam, (1/9/2004), CE 5.2.1*
- CEC 5446: *Shoreline improvement project-bank stabilization-TWRA in partnership with TVA-Boone Res., (12/12/2003), CE 5.2.26*
- CEC 4492: *Tellico Dam, Shoreline Erosion at Saddle Dam No. 2, (8/25/2003), CE 5.2.1*
- CEC 17351: *Wetland Encroachment Restoration, (1/14/2008), CE 5.2.24*
- CEC 5614: *Guntersville Dike Levee – Shoreline Stabilization and Riprap Replacement, (1/27/2004), CE 5.2.1*
- CEC 32426: *Section 26a, Reef Ball Fish Attractor Installation – TWRA, (5/28/2015), CE 5.2.26*
- CEC 33165: *Fish Attractor and Spawning Area, (10/20/2015), CE 5.2.1*
- CEC 33426: *Section, Reef Ball Fish Attractor Installation, (11/09/2015), CE 5.2.26*
- CEC 33839: *Section 26a Action – Concrete Reef Ball Fish Attractor Installation, (2/24/2016), CE 5.2.26*
- CEC 34594: *Section 26a, Reef Ball Fish Attractor Installation (TWRA), (5/19/2016), CE 5.2.26*
- CEC 35083: *26a Category 3 – Reef Ball Fish Attractor Installation – Tellico Reservoir - TWRA, (8/23/2016), CE 5.2.26*
- CEC 26055: *Invasive Vegetation Removal, Tornado Damage, (3/19/2012), CE 5.2.24*
- CEC 9773: *Removal of Big Creek Retention Dike, (5/17/2005), CE 5.2.1*
- CEC 3492: *Beaver Dam Removal – Siebold Creek, (4/17/2003), CE 5.2.24*
- CEC 3489: *Beaver Dam Removal – Baker's Chapel Rd., (4/17/2003), CE 5.2.24*
- CEC 3488: *Beaver Dam Removal – Pump Springs, (4/17/2003), CE 5.2.24*
- CEC 1702: *Removal of Trees in Downstream Channel, (3/6/2003), CE5.2.1*
- CEC 15260: *Doakes Creek – Access Improvement, (6/25/2007), CE 5.2.23*
- CEC 34534: *Aquatic Plant Management, John Knox Center, Watts Bar Reservoir (3 acres), (12/06/2016)*

The following are examples of CECs completed for actions in which TVA partnered on habitat restoration projects (note that those projects falling under CE 5.2.28 were based on TVA's Clean Water Initiative programmatic EA, described below):

- *CEC 35239: Stream Bank Restoration/Stabilization and Riparian Buffer Corridor Establishment – Clinch River, (12/01/2016), CE 5.2.28*
- *CEC 34476: Riparian Buffer Establishment – Big Creek, Macon County, NC, (5/10/2016), CE5.2.28*
- *CEC34475: Riparian Buffer Establishment – Ellijay and North Prong Ellijay Creeks, Macon County, NC, (5/11/2016), CE5.2.28*
- *CEC34474: Riparian Buffer Establishment – Norton Prong Creek, Macon County, NC, (5/10/2016), CE5.2.28*
- *CEC34472: Riparian Buffer Establishment – Bumgarner Branch, Jackson County, NC, (5/06/2016), CE5.2.28*
- *CEC 31865: Samuel Davis' Farm – Stream Riparian Forest Buffer Establishment, (3/10/2015), CE5.2.28*
- *CEC 31595: Johnson Farm Riparian Forest Buffer Establishment, (1/16/2015), CE5.2.28*
- *CEC31369: Gilmore's Farm – Stream Riparian Forest Buffer Establishment, (11/03/2014), CE5.2.28*
- *CEC31367: Farmer's Farm – Stream Riparian Forest Buffer Establishment, (11/13/2014), CE5.2.28*
- *CEC31358: Taylor Farm Riparian Forest Buffer Establishment, (11/18/2014), CE5.2.28*
- *CEC 34799: Enhanced Stream Bank Protection Utilizing Grouted Rock Riprap and High Peak Stone Dike, (9/28/2016), CE 5.2.26*
- *CEC 29803: Gin Creek Replacement of Water Control Structures, (9/04/2014), CE 5.2.1*
- *CEC 34735: Recovery/Reintroduction of Freshwater Mussels – Bear Creek Watershed, (6/30/2016), CE 5.2.21*
- *CEC 32761: Stream Enhancement – Livestock Exclusion Fencing and Alternate Livestock Watering System, (7/08/2015), CE 5.2.28*
- *CEC 32677: Stream Enhancement – Alternate Livestock Watering System – Trey Stewart Farm, (7/08/2015), CE 5.2.28*
- *CEC 32355: Stream Buffer Establishment and Alternate Livestock Watering System, (6/16/2015), CE 5.2.28*
- *CEC 32350: Stream Buffer Establishment and Alternate Livestock Watering System, (6/16/2015), CE 5.2.28*
- *CEC 32069: Alternative Livestock Watering System, (3/10/2015), CE 5.2.28*

3.29.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and EISs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in the following table.

Table 3.29-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ ROD Issued
Raccoon Creek Waterfowl Pond (Unit 4) EA	Jackson County, AL	11/2/2017
Sicklefin Redhorse Conservation Activities (re-introduction, stocking of historic range) EA	Various locations in western North Carolina	9/16/2016
Boone Dam Seepage Remediation EA (shoreline revegetation, hydro-seeding)	Sullivan and Washington Counties, TN	1/7/2016
South Holston Dam Reservation Habitat Enhancement Project (Wetland/Salamander habitat) EA	Sullivan County, TN	3/31/2016
Duck River Bank Stabilization River Mile 176.8 EA	Marshall County, TN	8/18/2015
Natural Resource Plan EIS	TVA-wide	9/15/2011
Moccasin Bend Streambank Stabilization EA	Chattanooga, Hamilton County, TN	2/22/2010
Proposed Blennerhassett Island Erosion Control and Streambank Restoration Project, Section 26a approval for riprap at French Broad River Mile 125 EA	Madison County, NC	10/30/2001
Shoreline Management Initiative EIS	TVA-wide	6/4/1999
Section 26a approval for riprap at Huntsville-Madison County Marina and port authority - Ditto landing Marina EA	Madison County, AL	12/22/1997
Generic EA, Clean Water Initiative	TVA-wide	5/16/1997
Section 26a Approval for Riprap at Ross's landing Plaza EA	Hamilton County, TN	4/23/1997

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Generic EA, TVA Clean Water Initiative (CWI) and FONSI: TVA completed this programmatic EA in order to expedite its CWI activities for improving the beneficial uses of water resources in specific watersheds and communities across the Tennessee Valley. The EA was designed to address a group of activities that do not have, either individually or cumulatively, a significant effect on the quality of the human environment. The intent of the EA was to create a CE for those activities and thereby expedite the environmental review process for such activities. Proposed activities included implementation of agricultural BMPs, streambank and streambed restoration through bioengineering and structure placement, planting native woody and herbaceous vegetation on streambanks and reservoir shorelines, and solid waste cleanup and disposal. The EA found that these activities would not have significant adverse environmental effects. (TVA, 1997a) This EA is directly relevant to the activities included in the proposed CE, including activities to restore, enhance, and maintain wetland, riparian, or aquatic habitats, construction of small water control structures; revegetation actions using native materials; installation of fences to restrict livestock; and development of limited access for routine maintenance and management purposes.

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts (TVA, 2011b). This EIS is directly relevant to the

proposed CE because it evaluated action alternatives that included activities such as stabilizing up to 8 miles of critically eroding shoreline per year; conducting various levels of water resource and aquatic ecology improvement programs, which would include both watershed management activities and direct measures such as installation of fish attractors; current or increased wetland management and protection practices, which would include invasive species removal, restoration of hydrologic functions, and restoration of native wetland species, as well as protection of archaeological sites along shoreline. (TVA, 2011a)

As noted above, TVA determined that implementation of the NRP would have beneficial effects on the natural and human environment and no significant adverse effects. TVA noted that goal of programs and measures like those mentioned above is to benefit aquatic and riparian conditions in the watersheds where they are applied and protect cultural resources. There is potential for some activities (particularly bank stabilization activities associated with both cultural and water resource management) to directly affect riparian and aquatic habitats and communities. These activities would be carefully planned and implemented to minimize adverse effects and would result in long-term beneficial, although fairly localized, impacts. TVA determined that wetland management and protection practices would result in a positive effect on wetlands on TVA lands, and generally no direct or indirect adverse effects on wetlands would result. TVA also determined that direct, positive, beneficial changes in aquatic ecology due to the implementation of water resource improvement programs would be realized across the Valley. (TVA, 2011a)

3.29.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CEs that could have environmental effects include, but are not limited to:

- Streambank and shoreline stabilization to protect natural resources
- Restoration/enhancement of wetland, riparian, or aquatic habitat
- Construction of small water control structures, berms, dikes, or fish attractors
- Minor revegetation actions using native materials
- Debris removal following human-caused or natural disturbance event

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects absent extraordinary circumstances.

Vegetation: Actions would generally benefit vegetation. As intended by the proposed CE, revegetation activities could enhance native vegetation along streambanks and reservoirs. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Water Resources: Activities included in the proposed CE are intended to benefit water resources. Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation. Increased sedimentation could result from installing shoreline stabilization measures and aquatic habitat enhancements such as fish attractors; installing small water control structures, berms, or dikes; creating riparian buffers; installing fencing near waterways; and creating or improving access roads could cause short-term, minor effects. However, over the long term, shoreline, streambank, and streambed stabilization and restoration activities would

likely result in beneficial effects that would include reduced suspended solids and turbidity, resulting in reduced sediment accumulation. Installation of fences to restrict livestock would most likely reduce wetland, riparian, streambank and shoreline erosion and the levels of agricultural pollutants entering waterways, causing long-term beneficial effects on water quality from the reduced amounts of sediment and pollutant levels. (TVA, 1997a; TVA, 2011a).

Air Quality: Short-term, minor indirect fugitive air emissions from any mechanical equipment needed to complete a specific construction activity could occur from the proposed CE. (TVA, 2011a)

Cultural and Archaeological Resources: Overall, riparian, wetland, streambank and shoreline stabilization activities should have beneficial effects on archaeological resources (TVA, 1997a; TVA, 2010b; TVA, 2011a). Shoreline plantings could have beneficial and adverse effects on cultural resources, since planting of larger plants with sizable root balls requires more ground disturbance than smaller bare root plants or seeding. The long-term stabilization benefits of plantings outweigh the short-term disturbance of a cultural resource (TVA, 2011a). Additionally, installation of fencing, gates, or signage could have minor adverse effects on archaeological resources. However, if the fencing, gates, or signage causes reduces soil erosion, there would be long-term beneficial effects (TVA, 2010b; TVA, 2011a).

Soils: Short-term, minor indirect effects could include increased erosion and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils would benefit from reduced erosion and stabilization resulting from these measures. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Fish and Wildlife: The activities of the proposed CE are intended to benefit aquatic and riparian species, particularly actions to reintroduce or supplement aquatic species populations. Reintroductions may result in minor disturbances to other species but such impacts would be minor and temporary as species and habitats quickly return to pre-disturbance conditions. Increased shoreline stabilization could result in minor, short-term, localized indirect adverse effects to wildlife from alterations of wildlife habitat, and increased levels of human disturbance (TVA, 2011a). Activities associated with the proposed CE would be likely to provide minor, long-term benefits to wildlife by ensuring streambank stability and improving the quality of available habitat (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Wetlands and Riparian Habitat: Implementation of activities to restore/enhance wetlands, riparian, and aquatic habitat would have long-term beneficial effects on wetlands and riparian habitat. Short-term, adverse indirect effects could occur from the other activities associated with the proposed CEs, especially during initial construction phases, but these effects should be minor and temporary, and should result in an overall positive effect on the habitat. Additionally, TVA would continue to comply with the Clean Water Act and Executive Order 11990, *Protection of Wetlands*, through its environmental review process. (TVA, 1997a; TVA, 2010b; TVA, 2011a)

Visual Resources: Most of the activities associated with the proposed CEs would improve the aesthetic quality of the landscape and are visually beneficial. Short-term, minor, indirect, adverse visual effects may result from landscape disturbance and water turbidity during bank

stabilization projects, or the noticeable presence of stakes, flow deflectors, matting, and other materials adjacent to or within streambeds (TVA, 2010b; TVA, 1997a). Some riparian restoration measures could have initial adverse visual effects, but these effects would decrease over time as the surrounding area naturalizes, and may be less adverse than the visual effects of erosion and sloughing in the absence of stabilization. (TVA, 2011a)

Recreation: During construction, public access to the work areas may be limited or prohibited, resulting in short term, minor indirect effects to public recreation (TVA, 2010b).

Summary: TVA EAs and EISs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and but would most likely have long-term beneficial effects for the natural resources within the Tennessee Valley and do not cause significant environmental effects. In addition, the spatial limit applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when such actions are proposed would ensure that these actions do not result in significant effects.

3.29.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE, including maintenance of aquatic and riparian habitat in streams, stabilizing streambanks, construction of small water control structures, installation of fences, minor revegetation actions using native materials, removal of debris following disaster events, and development of limited access for routine maintenance. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed CE. These agencies' CEs are relevant to TVA activities because these agencies, like TVA, manage public lands and have missions, mandates, responsibilities, and authority to manage for natural and cultural resource protection and conservation. The agencies also have extensive experience with implementing natural and cultural resource programs.

TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CEs would not result in significant effects to the human environment either individually or cumulatively.

Department of Homeland Security CE D6 (DHS, 2014)

Maintenance of aquatic and riparian habitat in streams and ponds, using native materials or best natural resource management practices. Examples include, but are not limited to:

- (a) Installing or repairing gabions with stone from a nearby source,*
- (b) Adding brush for fish habitat,*
- (c) Stabilizing stream banks through bioengineering techniques, and,*
- (d) Removing and controlling exotic vegetation, not including the use of herbicides or non-native biological controls.*

TVA reviewed DHS's administrative record for this CE. According to DHS's record, "The activities to construct aquatic and riparian habitat on Department managed property contemplated in this categorical exclusion would be of a small scale and limited to a single locality...Any potential for environmental impacts would likewise be of a small scale and confined to more localized impacts. As a result of these limitations and in consideration of the administrative record, the Panel determined that this categorical exclusion contemplated activities that would have no potential for significant effects to the human environment" (DHS, 2006). DHS supported the proposed CE by benchmarking to legacy CEs from the U.S. Coast Guard, the Federal Emergency Management Agency (44CFR10.8 (d) (2) (xi)), and DOE's current CE (B1.20); and by referencing six EAs with FONSIIs from the U.S. Border Patrol for its land based activities. Based upon the agency's history of environmental analyses and the expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

U.S. Forest Service CEs e7, e18, and e19 (36 C.F.R. § 220, 2014)

(e7) Modification or maintenance of stream or lake aquatic habitat improvement structures using native materials or normal practices. Examples include but are not limited to: ...

IV. Reconstructing a gabion with stone from a nearby source;

V. Adding brush to lake fish beds; and

VI. Cleaning and resurfacing a fish ladder at a hydroelectric dam.

(e18) Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, valves, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practicable where valid existing rights or special use authorizations are not unilaterally altered or canceled. Examples include but are not limited to:

(i) Repairing an existing water control structure that is no longer functioning properly with minimal dredging, excavation, or placement of fill, and does not involve releasing hazardous substances;

(ii) Installing a newly designed structure that replaces an existing culvert to improve aquatic organism passage and prevent resource and property damage where the road or trail maintenance level does not change;

(iii) Removing a culvert and installing a bridge to improve aquatic and/or terrestrial organism passage or prevent resource or property damage where the road or trail maintenance level does not change; and

(iv) Removing a small earthen and rock fill dam with a low hazard potential classification that is no longer needed.

(e19) Removing and/or relocating debris and sediment following disturbance events (such as floods, hurricanes, tornados, mechanical/ engineering failures, etc.) to restore uplands, wetlands, or riparian systems to pre-disturbance conditions, to the extent practicable, such that site conditions will not impede or negatively alter natural processes. Examples include but are not limited to:

(i) Removing an unstable debris jam on a river following a flood event and relocating it back in the floodplain and stream channel to restore water flow and local bank stability;

- (ii) Clean-up and removal of infrastructure flood debris, such as, benches, tables, outhouses, concrete, culverts, and asphalt following a hurricane from a stream reach and adjacent wetland area; and*
- (iii) Stabilizing stream banks and associated stabilization structures to reduce erosion through bioengineering techniques following a flood event, including the use of living and nonliving plant materials in combination with natural and synthetic support materials, such as rocks, riprap, geo-textiles, for slope stabilization, erosion reduction, and vegetative establishment and establishment of appropriate plant communities (bank shaping and planting, brush mattresses, log, root wad, and boulder stabilization methods).*

TVA reviewed USFS's [administrative record](#) for CEs 18 and 19 to promote hydrologic, aquatic, and landscape restoration and recovery activities (the record for 7 was not readily available). Similar to TVA, USFS established their CEs based on, in part, its experience implementing similar actions, the experience of other agencies, and information provided by the public. According to USFS's record, CE 18 was substantiated based on "a review of past actions, information from professional staffs, experts, scientific analysis, a review of categorical exclusions implemented by other federal agencies, and the USFS's extensive experience with implementing projects that restore the flow of water into natural channels and floodplains, the USFS has concluded that this category of actions does not have individual or cumulative significant effects and therefore should be categorically excluded from documentation in an EA or EIS" (USFS, 2012b). USFS also conducted a review of 18 recent actions implementing activities associated with this proposed CE and determined that none predicted significant effects on the human environment before the project was implemented. Agency CEs reviewed by USFS included NRCS, National Marine Fisheries Service, Bureau of Land Management, and USCG. For CE 19, USFS reviewed 10 recent EAs or EISs associated with the CE, and compared the proposed CE to existing CEs by NRCS, BLM, FEMA, USCG, and DHS. (USFS, 2012b)

Department of Energy CE B1.20 (76 FR 63764, 2011)

Small-scale activities undertaken to protect cultural resources (such as fencing, labeling, and flagging) or to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders and minor diversion channels), or fisheries. Such activities would be conducted in accordance with an existing natural or cultural resource plan, if any.

DOE's proposed rule discussed the rationale for the adopted changes to B1.20 based on DOE's experience only:

DOE proposes to add to the scope of this categorical exclusion by referencing activities taken to protect cultural resources and by including examples of those activities (fencing, labeling, or flagging). DOE's Power Marketing Administrations often engage in such activities for cultural and wildlife protection purposes, and these activities would not have the potential to cause significant impacts. DOE also proposes to include a condition in the categorical exclusion that the activities would be conducted in accordance with an existing natural or cultural resource plan, if any. (DOE, 2011a)

There were no comments on the proposed scope change in the Final Rule.

U.S. Fish & Wildlife Service CE B.3 (DOI, 2004b)

The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, instream, or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

- i. The installation of fences.*
- ii. The construction of small water control structures.*
- iii. The planting of seeds or seedlings and other minor revegetation actions.*
- iv. The construction of small berms or dikes.*
- v. The development of limited access for routine maintenance and management purposes.*

The USFWS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Natural Resources Conservation Service CEs 8, 9, 10, 11, 12, and 13 (7 C.F.R. § 650, 2015)

(8) Stabilizing stream banks and associated structures to reduce erosion through bioengineering techniques, (i.e. utilization of living and nonliving plant materials in combination with natural and synthetic support materials (such as rocks, rip-rap, geotextiles) for slope stabilization, erosion reduction, and vegetative establishment), such as establishment of appropriate plant communities (bank shaping and planting, brush mattresses, log, root wad, and boulder stabilization methods), following a natural disaster to restore pre-disaster conditions to the extent practicable.

(9) Repair or maintenance or of existing small structures or improvements (including structures and improvements utilized to restore disturbed or altered wetland, riparian, in stream, or native habitat conditions). Examples of such activities include the repair or stabilization of existing stream crossings for livestock or human passage, levees, culverts, berms, and dikes, and associated appurtenances.

(10) Construction of small structures or improvements for the restoration of wetland, riparian, in stream, or native habitats. Examples of activities include: (1) installation of fences; and (2) construction of small berms, dikes, and associated water control structures.

(11) Implementation of actions that restore an ecosystem, fish and wildlife habitat, biotic community, or population of living resources to a determinable pre-impact condition.

(12) Repair or maintenance of existing constructed fish passageways, such as fish ladders, or spawning areas impacted by natural disasters or human alteration.

(13) Repair, maintenance, or addition of fish screens to existing structures.

The NRCS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.29-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.29-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #29	DHS	USFS	DOE	USFWS	NRCS
Streambank stabilization to protect natural and cultural resources	X	X	X		X
Restore/enhance wetland, riparian, or aquatic habitat	X	X	X	X	X
Construct small water control structures, berms, dikes, fish attractors		X		X	X
Minor revegetation actions using native materials				X	X
Removal of debris following human-caused or natural disturbance events		X			
Installation of fences, gates, and signs			X	X	X

These CEs are comparable because they involve the same or similar activities as TVA’s proposed CEs. The DHS, NRCS, and USFS CEs include streambank stabilization activities. All of the federal agency CEs involve restoration or enhancement of wetland, riparian, or aquatic habitat. USFWS, NRCS, and USFS CEs include activities regarding construction of small water control structures, berms, dikes, or fish attractors. The USFWS and NRCS CEs include activities with minor revegetation and the installation of fences to restrict livestock. The USFS CE No. 19 includes activities regarding removing or relocating debris following human or natural disturbance in aquatic areas.

Activities included in TVA’s proposed CEs would generally occur with similar timing and in a similar environmental context (i.e., near aquatic areas) to those actions performed by the other federal agencies.

3.29.4 CE Documentation Requirement

Although TVA does not propose to promulgate documentation requirements to record CEs, TVA has determined that staff would complete a CEC in TVA’s ENTRAC database to document when CE #29 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE #29 is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.29.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. TVA identified only minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CEs encompass activities that would not result in individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in the ENTRAC for each application of these CEs to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by these CEs.

3.30 CE 30 - LAND MANAGEMENT & STEWARDSHIP

TVA proposes to establish a new CE for actions to restore and enhance terrestrial ecosystems.

3.30.1 Proposed Categorical Exclusion Text

Actions to maintain, restore or enhance terrestrial ecosystems that generally involve physical disturbance of no more than 125 acres, including, but not limited to, establishment and maintenance of non-invasive vegetation; bush hogging; prescribed fires; installation of nesting and roosting structures, fencing, and cave gates; and reintroduction or supplementation of native, formerly native, or established species into suitable habitat within their historic or established range.

3.30.2 Background

Similar to objectives to improve riparian, wetland and aquatic ecosystems, the management, restoration and enhancement of terrestrial ecosystems are central objectives of many of TVA's environmental stewardship activities. Of the approximately 293,000 acres of land managed by TVA, more than 181,000 acres set aside for natural resource management with the intention of preserving natural wildlife habitats, protecting endangered plant and animal species and enhancing the biodiversity of the Tennessee Valley region. Included in these natural resource management areas are 157 designated Natural Areas (approximately 16,000 acres), wherein some of the most biologically diverse and sensitive habitats occurring on TVA-managed lands are protected. The majority of Natural Areas are established to protect terrestrial habitats. TVA also manages populations of threatened and endangered species on TVA-managed lands in accordance with ESA and plays a leadership role regionally in protection and management of several species.

The management of important terrestrial and aquatic habitats is guided by TVA's NRP. Consistent with the NRP, TVA programs actively identify assess resource conditions and identify needs for restoring and improving terrestrial habitat. Annually, TVA manages vegetation on hundreds of acres primarily to improve wildlife habitat, establish desired vegetation, and to restore areas disturbed by uses such as campsites, rights-of-way, roads, and trails.

Staff noted that the current list of TVA CEs excludes many of the most common and minor natural resource management activities. Revising CE #30, and others pertaining to natural or cultural resource management, would make the implementation of these program activities more efficient. CEs that clearly articulate natural resource program actions would improve clarity for resource staff and improve transparency and consistency.

The definition of the proposed CEs includes numerous examples of actions regularly implemented by TVA. The most common actions that improve terrestrial habitats include establishing and maintaining non-invasive vegetation; bushhogging; prescribed fires; installation of nesting structures to establish new habitat; installation of fencing and cave gates to enclose and protect sensitive habitats; and conservation actions for the reintroduction or supplementation of native, formerly native, or established species into suitable habitat within their historic or established range.

Vegetation treatments commonly involve planting native seed, bare root stock, cuttings and clumps of vegetation, and mulching. Often, TVA specialists establish native or non-native vegetation in designated areas to increase carrying capacity for some wildlife species (usually in coordination with state or private organizations to improve habitat for certain game species). Common vegetation removal treatments involve hand digging and pulling of weeds, herbicide applications, crushing, pruning, thinning, mowing, and in other ways, cutting back vegetation so that it can be crushed, chipped, or burned in place, or hauled away for disposal. Prescribed fire is also used to maintain and enhance certain plant communities.

Other types of terrestrial habitat projects are targeted to improve habitat for specific species. For example, TVA is conducting forest management efforts at the Blowing Wind Habitat Protect Area at Sauta Cave National Wildlife Refuge in Jackson County, Alabama, to improve habitat for federally listed Indiana bat and Price's potato bean through mulching, tree canopy thinning and targeted herbicide application.

TVA also actively manages colonies of endangered cave roosting bats by monitoring and installing gates at caves to reduce human disturbance. TVA is also conducting a pilot study to assess use of artificial roost structures by rare bats on TVA-managed lands. Other examples of habitat improvements actions include:

- Installation of a pedestrian bridge/walkway to reduce impacts of trail users to sensitive habitat in a popular Natural Area.
- Restoration of glade and barren habitats by incorporating tree mulching and prescribed fire to reduce woody vegetation.
- Creation of monarch butterfly habitat areas on several acres of TVA dam reservation.

Over the last five years, TVA has conducted prescribed burning on about 750-1000 acres annually. TVA partners with other agencies and organizations to help accomplish some of their burn objectives; partners include the Alabama Department of Conservation and Natural Resources, Alabama Forestry Commission, Tennessee Department of Forestry, Tennessee Wildlife Resources Agency, various universities and local fire departments. Prescribed burns are conducted only after developing burn plans, consideration of proper fire conditions, and obtaining applicable permits. TVA prescribed burns are limited in scope, relative to other federal land management agencies.

TVA also proposes to include in the definition of the proposed CE #29 a limit so that covered actions would not generally involve physical disturbance of no more than 125 acres, based in part on TVA experience. Although TVA projects of this nature would rarely be so sizeable (e.g., TVA staff review of CECs involving prescribed burning showed that such activities conducted under existing CEs ranged from 4 to 51 acres, with an average of approximately 24 acres), the 125-acre limit reflects the potential for significant impacts resulting from such activities and is consistent with the 125-acre limit applied in other proposed CEs. It is important to note that the spatial limit would not generally apply to actions to reintroduce or supplement species because the subject species could disperse beyond that area.

The types of activities included in the proposed CEs are routine and are regularly conducted using proven techniques, best management practices, and established TVA procedures. For instance, the methods for selection of vegetation to remove or establish are prescribed in established TVA procedures, handbooks, and policies. As discussed below, previous TVA NEPA analyses, including a programmatic review of natural resource management, have shown that these activities have no significant adverse environmental effects and have many beneficial effects.

3.30.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; other relevant TVA NEPA records; and the comparison with CEs established by other agencies. Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.30.3.1 TVA Experience with Relevant Existing CEs

TVA reviewed the ENTRAC database for documented uses of CEs since 2002 for terrestrial habitat actions and identified numerous activities similar to those proposed in CE #30 (as well as CEs #31 and 32). Since 2002, TVA has documented hundreds of individual activities involving terrestrial habitat improvement or enhancement. Most frequently, TVA staff identified three existing TVA CEs as applicable to their proposal: TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.21 (*Minor research, development, and joint demonstration projects*); or CE 5.2.24 (*Minor non-TVA activities on TVA property authorized under contract or license, permit and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land*). Examples of CECs for activities relevant to the proposed CE include:

- *CEC 32119: Prescribed Burn – Marbut Bend, Wheeler Reservoir. 20 acres. (8/28/2015), CE 5.2.1*
- *CEC 32117: Prescribed burn - Bishop agricultural tract, to maintain early successional habitat. 30 acres. (8/28/2015), CE 5.2.1*
- *CEC 30012: Prescribed burn – TVA 260 Interchange Park Drive Lenoir City, TN. Cooperative agreement with TVA & TWRA to enhance wildlife habitat on Thief Neck Island thru selective thinning of trees and putting in fire breaks, and burning the island. 51 acres. (4/27/2015), CE 5.2.1*
- *CEC 30797: Charleston Cypress Stand Observation Platform and Invasive Plant Control. (12/2/2014), CE 5.2.23*
- *CEC 30028: Prescribed burn for maintenance of wildlife habitat and non-native species control. To maintain early successional habitat while reducing the amount of non-native species found on the area. (2/27/2014) (3/26/2014), CE 5.2.1*
- *CEC 20074: Half-way Town – Controlled Burn. Prescribed/control burn with the Tennessee Department of Forestry. 40 acres. (3/19/2009), CE 5.2.21*

- *CEC 10606: Watauga Dam Habitat Food Plot (with the National Wild Turkey Federation). (8/30/2005), CE 5.2.21*
- *CEC 6546: Controlled burn on areas of the Gallatin Fossil Plant Reservation. Tennessee Wildlife Resource Agency, to facilitate wildlife activity and growth. 20 acres and 30 acres. (3/30/2004), CE 5.2.1*
- *CEC 3643: Wildlife Habitat Improvement Project. (5/28/2003), CE 5.2.21*
- *CEC 3209: Ag. Tract reforestation. (4/4/2003), CE 5.2.24*
- *CEC 1560: Kudzu elimination. (9/10/2002), CE 5.2.1*
- *CEC 32118: Young Lane tract prescribed burn to maintain early successional habitat (20 acres), (8/28/2015), CE 5.2.1*
- *CEC 18027: Guntersville Dam-North Warm Season Grass Establishment and Maintenance. 25 acres. (5/05/2008), CE 5.2.21*
- *CEC 33458: Stewardship Enhancement Partnership Project – Invasive Plant Control. (12/03/2015), CE 5.2.21*
- *CEC 32394: Worthington Cemetery Invasive Control and Birding Opportunity Enhancement. (5/27/2015), CE 5.2.1*
- *CEC 30783: Hugh B. Day Bridge Fisherman Access and Wildlife Enhancement. (2/24/2015), CE 5.2.1*
- *CEC 33961: Land Use Permit Establish Native Vegetation. (2/04/2016), CE 5.2.24*
- *CEC 33701: Reservation Bluff Cemetery Vegetation Removal. (2/22/2016), CE 5.2.1*
- *CEC 30396: Muscle Shoals Reservation – Trail Network Vegetation Management. (5/29/2014), CE 5.2.1*
- *CEC 29671: Replanting/Re-vegetation on Upper Bear Creek, Turkey Creek Habitat Protection Area. 2 acres. (1/16/2014), CE 5.2.11*
- *CEC 28316: Re-vegetation of Encroachment Area. 1 acre. (5/13/2013), CE 5.2.11*
- *CEC 26385: Kentucky Dewatering Vegetation Removal – multiple sites. 43.6 acres, 29.5 acres, and 30 acres. (6/09/2008), CE 5.2.1*
- *CEC 35346: Prescribed Burn – Jennings Bluff Habitat Protection Area. 50 acres. (10/26/2016), CE 5.2.1*
- *CEC 34271: Artificial Bat Roost Installation – multiple sites. (4/19/2016), CE 5.2.21*
- *CEC 30718: Blythe Ferry Cave Gate Perimeter Fence Enhancement Project. (9/02/2014), CE 5.2.11*
- *CEC 26105: Replacement of Cave Fence, Nickajack. (4/17/2012), CE 5.2.1*
- *CEC 5371: Replacement of Fence at Hambrick’s Cave. (12/05/2003), CE 5.2.1*
- *CEC 5370: Key Cave Replacement of Storm-damaged Fence. (12/05/2003), CE 5.2.1*
- *CEC 29823: Replant Area Adjacent to Existing Wetlands – Acquired by TVA by Maintain-Gain Policy. (3/27/2014), CE 5.2.27*
- *CEC 29746: Replanting on Wheeler Reservoir Associated with XWR-48PT. 0.5 acres. (2/21/2014), CE 5.2.11*

3.30.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were

prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.30-1.

Table 3.30-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ROD Issued
South Holston Dam Reservation Habitat Enhancement Project EA	Sullivan County, TN	3/31/2016
Sauta Cave (Blowing Wind Cave) Habitat Enhancement Project EA	Jackson County, Alabama	7/10/2014
Natural Resource Plan EIS	TVA-wide	9/15/2011
Boone Reservoir Resource Management Plan and EA	Sullivan and Washington Counties, TN	8/13/2002
Lower Watts Bar Reservoir Resource Management Plan and EA	Meigs and Rhea Counties, TN	11/1/2000
Lower Flint River Management Unit, Wheeler Reservoir, Resources Management Plan and EA	Madison County, AL	7/28/2000
Norris Reservoir Resource Management Plan and EA	Campbell County, TN	1/13/2000
Lower Sequatchie River Resource Management Plan, Nickajack and Guntersville Reservoirs EA	Marion County, TN	9/17/1999
Phillips Wildlife Demonstration and Wetland Restoration Project, Guntersville Reservoir, and grant to the Alabama Waterfowl Association EA	Jackson County, AL	11/09/2001
Land Between the Lakes Wildlife Viewing Area EA	Golden Pond, KY	6/1995
Davis Creek Unit Management Plan, Norris Reservoir, Resource Management Plan and EA	Campbell County, TN	1/13/2000

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Natural Resource Plan EIS and ROD: As noted above, the NRP and associated EIS guides TVA natural resource stewardship efforts. The EIS completed in 2011 serves as a programmatic review of these efforts and addressed management of biological, cultural, and water resources; recreation; reservoir lands planning; and associated public engagement over the next 20 years. This EIS evaluated action alternatives that included terrestrial habitat management activities such as:

- Improving habitat on up to 20,000 acres of TVA-managed lands per year through partnership efforts;
- Managing tree hazards and tree cutting/vegetation damage; and
- Conducting small-scale vegetation (tree removal) operations associated with storm or insect damages and forest wildlife habitat enhancements.

The EIS found that the potential for adverse impacts from these activities is small, even at the large scale of the most management-intensive alternative. Impacts could include sedimentation from grading and revegetation activities, localized reductions of non-target species, and localized temporary closure of areas to public access. Also, depending upon the types of forest management projects implemented, the resulting effects would include an improved overall

forest structure and increased diversity of herbaceous and woody vegetation present. (TVA, 2011a)

Boone Management Unit, Boone Reservoir, Resource Management Plan and EA: The management plan for the Boone Reservoir Management Unit considered three major components: public use management, natural resources management, and resource maintenance and protection. Stakeholders provided input requesting improved wildlife viewing opportunities. Creating or enhancing existing habitat was considered in the management alternatives. Some of the activities considered in the EA included use of prescribed fire; the use of chemical, mechanical, and manual control for invasive species removal and for habitat improvement and maintenance; the removal of diseased or dead timber stands, and the installation of nest structures. All of these activities are directly relevant to the proposed CE. In its FONSI, TVA concluded that there could be some minor, short-term, localized, adverse effects to air quality, soils, recreation, and water resources, but overall there would be minor, long-term, beneficial effects to the resources in the Boone Management Unit. (TVA, 2002a)

Davis Creek Management Unit, Norris Reservoir, Resource Management Plan and EA: The Davis Creek Management Unit plan contained nearly identical goals and management alternatives as the Boone Management Unit. Thus, this EA is also directly relevant to proposed CE. The analysis also had nearly identical findings as those for the Boone Management Unit, concluding that there could be some minor, short-term, localized, adverse effects to air quality, soils, recreation, and water resources, but overall there would be long-term, beneficial effects to the resources in the Boone Management Unit. (TVA, 2000b; TVA, 2002a)

3.30.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE to restore and enhance terrestrial habitat that could have environmental effects include, but are not limited to, establishment and maintenance of native vegetation, prescribed fires, establishment of food plots (with non-invasive vegetation), bush hogging, and installation of nesting structures and fencing).

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Vegetation: Many activities under the proposed CE are intended to restore and enhance native vegetation. Restoration and enhancement of terrestrial habitat could result in long-term, beneficial effects from the establishment of native vegetation and improved ecosystem function. Actions improving forest habitat could result in long-term, beneficial effects such as improved forest health and improved ecosystem function. These activities could result in minor, short-term effects to existing vegetation from burns and associated fire line construction, vegetation removal or installation of nesting structures and fencing. Direct impacts would occur to vegetation when bushhogging or vegetation management actions are implemented (e.g., when establishing wildlife habitat food plots) but would generally be limited in scope. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Water Resources: Increased sedimentation or runoff could result from restoration and enhancement of terrestrial habitat, forest management, and invasive species treatments, causing short-term, minor effects to water quality. During the process of improving habitat and conducting forest management, burned areas, bare soil, and herbicide use may generate pollutants, but any negative effects would be minor and short term. Increased runoff from areas where vegetation or other materials providing ground cover are removed could cause temporarily increased turbidity, and siltation in receiving waters. The size limitations for activities (generally up to 125 acres) would restrict the amount of land being disturbed and limit effects to the water resources adjacent to the project area. Over the longer term, restoration and enhancement of terrestrial habitat and forest management activities could result in beneficial effects that would include reduced suspended solids and turbidity, resulting in reduced sediment accumulation. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Air Quality: Short-term, minor localized effects to air quality from mechanical equipment and prescribed fires could occur from the proposed CEs; however, these emissions would be temporary and have negligible effects on local air quality. Prescribed fires would be conducted in accordance with local air quality regulations and with consideration of local weather conditions. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Cultural and Archaeological Resources: Activities that cause ground disturbance, such as disking, road building, prescribed fire, fence or nest structure installation could result in minor adverse effects to cultural resources if activities affected the defining character of a historic property, or occurred in an area where unknown cultural resources existed. Over the long-term, restoration, revegetation, and forest management could enhance cultural resources by providing soil stability. Actions would be subject to review to identify impacts to cultural resources. TVA's action would be in compliance with the National Historic Preservation Act. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Soils: Short-term, minor effects could include increased erosion, runoff, and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from these measures. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Fish and Wildlife: Many activities under the proposed CE are intended to manage, restore and enhance terrestrial habitat. Habitat improvement measures and ecological restoration actions result in long-term, beneficial effects to wildlife habitat from the establishment of native vegetation and improved ecosystem function. Actions occurring in forested habitat could result in long-term, beneficial effects to wildlife habitat from improved forest health and improved ecosystem function. Over the long-term, restoration, revegetation, and forest management could support water quality and fish habitat by providing soil stability. The establishment of food plots in certain locations would benefit wildlife species by increasing available nutrition for wildlife, particularly desired wildlife species. Overall, the proposed CE would provide long-term beneficial effects to fisheries, wildlife, and wildlife habitat. Restoration and enhancement of terrestrial habitat, forest management, and invasive species treatments could result in minor, short-term, localized adverse effects to wildlife from alterations of wildlife habitat, and from increased levels of human disturbance. Increased sedimentation or runoff could result from

restoration and enhancement of terrestrial habitat, forest management, and vegetation treatments, causing short-term, minor adverse effects to water quality and fish habitat. Reintroduction of species would have beneficial effects to those species but can result in minor disruption to habitat and behavior patterns to other species present in the area. The size limitations for activities (generally up to 125 acres) and the use of BMPs would restrict the amount of land and habitat being disturbed and limit erosion or runoff to aquatic habitat adjacent to the project area. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Visual Resources: Most of the activities associated with the proposed CE would improve the aesthetic quality of the landscape and are visually beneficial. Short-term, minor, adverse visual effects may result from landscape disturbance and prescribed fire. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Recreation: During restoration and enhancement of terrestrial habitat, forest management, and vegetation establishment actions, public access to the work areas may be limited or prohibited, resulting in short term, minor effects to public recreation. Long-term, beneficial effects from improved habitat conditions could lead to increased recreation opportunities including birdwatching, wildlife viewing, and hunting. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Summary: TVA EAs and EISs have shown that activities contemplated under the CE could have minor, localized short-term adverse effects and long-term beneficial effects for the natural resources, recreation, and cultural resources within the Tennessee Valley and do not cause significant environmental effects. Further, the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when certain actions are proposed would ensure that actions do not result in significant effects.

3.30.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. TVA identified several CEs currently in use by other agencies that are similar in the nature, scope, and intensity of included activities to the proposed TVA CE. These agencies', like TVA, have land and resource management responsibilities and conduct many of the same types of action. For instance, TVA shares with the Department of the Interior and its bureaus and the U.S. Department of Agriculture and its agencies similar missions, mandates, responsibilities, and authority to manage for natural resource protection and conservation, and have extensive experience with natural resource programs. Several of the CEs also pertain to other proposed TVA CEs, including those pertaining to wetland, riparian, and aquatic ecosystems and forest management; these CEs are also cited in those sections of this document.

Based on this review, TVA found that its activities would typically be similar in size and scope and would occur under similar resource conditions as the actions other agencies have categorically excluded. Similar environmental impacts would be expected as well. The CEs from other federal agencies provide additional support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Bureau of Land Management CEs A1, A3, C4, C8, C9, and I (DOI, 2008b)

- (A1) Modification of existing fences to provide improved wildlife ingress and egress.*
- (A3) Construction of perches, nesting platforms, islands, and similar structures for wildlife use.*
- (C4) Pre-commercial thinning and brush control using small mechanical devices.*
- (C8) Salvaging dead or dying trees not to exceed 250 acres, requiring no more than 0.5 mile of temporary road construction. Such activities:*
- (a) May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
 - (b) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
 - (c) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.*
 - (d) For this CX, a dying tree is defined as a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgment of an experienced forest professional or someone technically trained for the work, is likely to die within a few years. Examples include, but are not limited to:
 - (i) Harvesting a portion of a stand damaged by a wind or ice event.*
 - (ii) Harvesting fire damaged trees.**
- (C9) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than 0.5 miles of temporary road construction. Such activities:*
- (a) May include removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease; and*
 - (b) May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
 - (c) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to*

- standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (d) *Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract. Examples include, but are not limited to:*
- a) *Felling and harvesting trees infested with mountain pine beetles and immediately adjacent uninfested trees to control expanding spot infestations; and*
 - b) *Removing or destroying trees infested or infected with a new exotic insect or disease, such as emerald ash borer, Asian longhorned beetle, or sudden oak death pathogen.*

(I) Emergency Stabilization. Planned actions in response to wildfires, floods, weather events, earthquakes, or landslips that threaten public health or safety, property, and/or natural and cultural resources, and that are necessary to repair or improve lands unlikely to recover to a management-approved condition as a result of the event. Such activities shall be limited to: repair and installation of essential erosion control structures; replacement or repair of existing culverts, roads, trails, fences, and minor facilities; construction of protection fences; planting, seeding, and mulching; and removal of hazard trees, rocks, soil, and other mobile debris from, on, or along roads, trails, campgrounds, and watercourses. These activities:

- (1) Shall be completed within one year following the event;*
- (2) Shall not include the use of herbicides or pesticides;*
- (3) Shall not include the construction of new roads or other new permanent infrastructure;*
- (4) Shall not exceed 4,200 acres; and*
- (5) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (6) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment by artificial or natural means, or vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract*

An administrative record documenting BLM's substantiation of CEs A1, A3, and C4 was not readily available for TVA to review. To support its promulgation of CE C8 and C9, BLM

primarily relied on the established CE e13 and e14 of the Forest Service, described below, to justify the new CE (Forest Service supported these CEs in their [Notice of Final Rule](#) in 2003). BLM found that these activities do not individually or cumulatively result in significant environmental effects and has implemented them since 2008.

Department of the Interior [CE \(I\)](#) (43 C.F.R. § 46, 2014)

Post-fire rehabilitation activities not to exceed 4,200 acres (such as tree planting, fence replacement, habitat restoration, heritage site restoration, repair of roads and trails, and repair of damage to minor facilities such as campgrounds) to repair or improve lands unlikely to recover to a management approved condition from wildland fire damage, or to repair or replace minor facilities damaged by fire. Such activities must comply with the following (Refer to the ESM Series for additional, required guidance.):

- (1) Shall be conducted consistent with bureau and Departmental procedures and applicable land and resource management plans;*
- (2) Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure; and*
- (3) Shall be completed within three years following a wildland fire.*

An administrative record documenting DOI's substantiation of these CEs was not readily available for TVA to review. However, DOI reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Fish & Wildlife Service [CE B.3](#) (DOI, 2004b)

The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, instream, or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

- i. The installation of fences.*
- ii. The construction of small water control structures.*
- iii. The planting of seeds or seedlings and other minor revegetation actions.*
- iv. The construction of small berms or dikes.*
- v. The development of limited access for routine maintenance and management purposes.*

TVA notes that the CE would apply to stream bank actions and the installation of fences, which are similar to actions addressed in the proposed CE #33.

Natural Resources Conservation Service [CE 1, 7, 9, 10 and 11](#) (7 C.F.R. § 650, 2015)

(1) Planting appropriate herbaceous and woody vegetation, which does not include noxious weeds or invasive plants, on disturbed sites to restore and maintain the sites' ecological functions and services.

(7) Removing storm debris and sediment following a natural disaster where there is a continuing and eminent threat to public health or safety, property, and natural and

cultural resources and removal is necessary to restore lands to pre-disaster conditions to the extent practicable. Excavation will not exceed the pre-disaster condition;

(9) Repair or maintenance or of existing small structures or improvements (including structures and improvements utilized to restore disturbed or altered wetland, riparian, in stream, or native habitat conditions). Examples of such activities include the repair or stabilization of existing stream crossings for livestock or human passage, levees, culverts, berms, and dikes, and associated appurtenances.

(10) Construction of small structures or improvements for the restoration of wetland, riparian, in stream, or native habitats. Examples of activities include: (1) installation of fences; and (2) construction of small berms, dikes, and associated water control structures.

(11) Restoring an ecosystem, fish and wildlife habitat, biotic community, or population of living resources to a determinable pre-impact condition;

The NRCS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Forest Service CEs d3, e5, e6, e11, e13, and e14 (36 C.F.R. § 220, 2014)

(d3) Repair and maintenance of administrative sites. Examples include but are not limited to:

- (i) Mowing lawns at a district office;*
- (ii) Replacing a roof or storage shed;*
- (iii) Painting a building; and*
- (iv) Applying registered pesticides for rodent or vegetation control.*

(e5) Regeneration of an area to native tree species, including site preparation that does not involve the use of herbicides or result in vegetation type conversion. Examples include but are not limited to:

- (i) Planting seedlings of superior trees in a progeny test site to evaluate genetic worth, and*
- (ii) Planting trees or mechanical seed dispersal of native tree species following a fire, flood, or landslide.*

(e6) Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction. Examples include but are not limited to:

- (i) Girdling trees to create snags;*
- (ii) Thinning or brush control to improve growth or to reduce fire hazard including the opening of an existing road to a dense timber stand;*
- (iii) Prescribed burning to control understory hardwoods in stands of southern pine; and*

(iv) Prescribed burning to reduce natural fuel build-up and improve plant vigor.

(e11) Post-fire rehabilitation activities, not to exceed 4,200 acres (such as tree planting, fence replacement, habitat restoration, heritage site restoration, repair of roads and trails, and repair of damage to minor facilities such as campgrounds), to repair or improve lands unlikely to recover to a management approved condition from wildland fire damage, or to repair or replace minor facilities damaged by fire. Such activities:

- (i) Shall be conducted consistent with Agency and Departmental procedures and applicable land and resource management plans;*
- (ii) Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure; and*
- (iii) Shall be completed within 3 years following a wildland fire.*

(e13) Salvage of dead and/or dying trees not to exceed 250 acres, requiring no more than 1/2 mile of temporary road construction. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing. Examples include, but are not limited to:

- (i) Harvest of a portion of a stand damaged by a wind or ice event and construction of a short temporary road to access the damaged trees, and*
- (ii) Harvest of fire-damaged trees.*

(e14) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than 1/2 mile of temporary road construction, including removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing. Examples include, but are not limited to:

- (i) Felling and harvest of trees infested with southern pine beetles and immediately adjacent uninfested trees to control expanding spot infestations, and*
- (ii) Removal and/or destruction of infested trees affected by a new exotic insect or disease, such as emerald ash borer, Asian long horned beetle, and sudden oak death pathogen.*

The TVA reviewed the Notice of Final Rule by USFS for CEs e13 and e14 and note that the finding that such actions would not have significant impacts was predicated on data representing the expert judgment of the responsible officials and specialists after reviewing 154 projects reviewed.

Comparability of CEs

Table 3.30-2 provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CEs.

Table 3.30-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #30	DOI	BLM	USFWS	NRCS	USFS
Restoration and enhancement of terrestrial habitat:	X	X	X	X	X
Establishment and maintenance of native vegetation	X	X	X	X	X
Prescribed fires	X	X			X
Establishment of food plots		X			
Bush hogging		X			
Installation of nesting structures		X			
Fencing	X	X	X	X	

The other agency CEs are comparable because they involve the same or similar activities as TVA's proposed CEs. Each of the CEs generally address restoration of ecosystems and native habitats. The BLM and USFS CEs include tree and brush clearing and thinning similar to the proposed CE. The BLM CE includes construction of fences and nest structures, similar to the proposed CE, and the NRCS, USFS, and DOI CEs cover native plant revegetation activities. Note that both DOI agencies and USFS have similar CEs for post-fire rehabilitation actions; these types of actions are uncommon for TVA. While some of the other agency CEs contain area limitations that are larger than the 150 acres TVA proposes, TVA specialists believe a larger area limit is not appropriate due to the typical scale of land management actions and the configuration of TVA-managed lands. These lands are frequently fairly narrow areas which only extend a few hundred yards from the shoreline. All of the activities included in TVA's proposed CE would occur with similar settings and are likely to have similar environmental effects to those actions performed by the federal agencies.

3.30.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #30 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE #30 is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.30.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term effects, and long-term beneficial effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.31 CE 31 - FOREST MANAGEMENT

TVA proposes to establish a new CE for certain forest management and rehabilitation activities.

3.31.1 Proposed Categorical Exclusion Text

The following forest management activities:

- a. Actions to manipulate species composition and age class, including, but not limited to, harvesting or thinning of live trees and other timber stand improvement actions (e.g., prescribed burns, non-commercial removal, chemical control), generally covering up to 125 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction;*
- b. Actions to salvage dead and/or dying trees including, but not limited to, harvesting of trees to control insects or disease or address storm damage (including removal of affected trees and adjacent live, unaffected trees as determined necessary to control the spread of insects or disease), generally covering up to 250 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction; and*
- c. Actions to regenerate forest stands, including, but not limited to, planting of native tree species upon site preparation, generally covering up to 125 acres and requiring no more than 1 mile of temporary or seasonal permanent road construction.*

3.31.2 Background

TVA manages approximately 293,000 acres of land, pursuant to the TVA Act, including more than 181,000 acres managed for natural resource management and preservation of natural wildlife habitats, protection of sensitive species and enhancing the region's biodiversity. TVA has an extensive history of forest management. In its early years, TVA specialists worked with landowners and communities throughout the region to replant and restore lands damaged by poor practices and to improve forest management to develop local economies. Until the late 1990s, TVA had an active forestry program and performed routine forest management actions including timber harvest.

Forest management is an important component of TVA's natural resources management programs. According to the NRP, timber harvesting and forest management actions continue to be important activities to promote forest health and improve wildlife habitat.

The most common forest management actions conducted by TVA includes tree thinning or the removal of live, dead, dying or damaged trees when needed to restore appropriate structure or species composition. The types of activities included in the proposed CEs are routinely implemented by TVA forestry specialists. Forest management actions are prescribed in TVA handbooks, including its best management practices guidance for conducting silvicultural activities to address potential environmental issues and reduce the potential for adverse environmental impacts. The actions align with TVA's NRP, other TVA plans, policies, and procedures, and federal regulations.

Review of previous TVA NEPA analyses show that activities implemented by TVA's Natural Resources staff would not result in significant adverse environmental effects. The language of the proposed CE includes spatial limits on the size of the management action and the extent of associated road construction based in part on TVA experience and in comparison with the limits applied in other federal agency CEs. For instance, TVA staff review of CECs involving prescribed burning showed that such activities conducted under existing CEs ranged from 4 to 51 acres, with an average of approximately 24 acres. The size limitations were chosen to reflect the scale of TVA's recent forest management actions, to restrict the amount of land being disturbed, and to limit effects to the resources on and surrounding the project area. They were also chosen to account for the configuration of TVA-managed lands, which consists largely of relatively narrow areas that only extend a few hundred yards from a reservoir shoreline. Note, two of the acreage limits are consistent with other limits TVA proposes for CEs addressing other land-disturbing activities.

3.31.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA reviewed its NEPA records for previous actions, including those documented in TVA's ENTRAC database, and compared CEs established by other agencies. As described below, based on this information and analysis, TVA finds that the activities covered by the proposed CE would not under normal circumstances individually or cumulatively have a significant effect on the quality of the human environment.

3.31.3.1 TVA Experience with Relevant Existing CEs

TVA identified a few activities similar to those of the proposed CE when it reviewed the ENTRAC database for documented uses of CEs since 2002. Previous application of TVA CEs to such activities indicates that these activities were found to have no potential to produce significant harm to the quality of the human environment. For example, since 2002, TVA has documented dozens of individual activities involving forest management. The CEs used for most of these actions were existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.21 (*Minor research, development, and joint demonstration projects*); and CE 5.2.24 (*Minor non-TVA activities on TVA property authorized under contract or license, permit and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land*). Existing CE 5.2.24 was used because TVA routinely enters into contracts with companies for the removal and sale of timber.

Examples of CECs for forest management activities relevant to the proposed CE include:

- *CEC 30012: Cooperative agreement with TVA & TWRA to enhance wildlife habitat on Thief Neck Island thru selective thinning of trees and putting in fire breaks, and burning the island. 51 acres. (4/27/2015), CE 5.2.1*
- *CEC 12117: Pine orchard thinning of 86 acres, (2/21/2006), CE 5.2.24*
- *CEC 26709: Davis Mill salvage and access improvements*
- *CEC 18666: Timber Salvage Short Creek (8/7/2008), CE 5.2.24*
- *CEC 18064: Timber Salvage Panther Creek (6/26/2008), CE 5.2.24*

- CEC 18040: Timber Salvage - 3.4 acres (3/25/2011), CE 5.2.1
- CEC 17667: Timber contract (Kentucky Reservoir), (2/27/2008), CE 5.2.24
- CEC 11859: Timber Salvage Buckhorn Creek - 7 acres (2/2/2006), CE 5.2.24
- CEC 11581: Cypress Creek Timber Salvage Storm Damage (120 acres) (12/30/2005), CE 5.2.24
- CEC 10900: Pine beetle storm damage salvage (9/26/2005), CE 5.2.24
- CEC 5942: Storm damage timber salvage (Shamrock), 25 acres (2/23/2004), CE 5.2.24
- CEC 5001: Trace Creek timber salvage (~10 acres) (10/15/2003), CE 5.2.24
- CECs 4379 (2 acres), 4249 (3 acres), 4155 (3 acres), and 4121 (2 acres): Timber salvage storm damage (7/2003), CE 5.2.24
- CEC 584: River Ridge Timber Salvage (thinning) (1/31/2003), CE 5.2.24
- CEC 30028: Prescribed burn for maintenance of wildlife habitat and non-native species control. To maintain early successional habitat while reducing the amount of non-native species found on the area (3/26/2014), CE 5.2.1
- CEC 29815: Muscle Shoals Redevelopment – Improve Marketability of Areas 2A and 2B By Mechanical Removal of Undergrowth. 40 acres. (4/14/2014), CE 5.2.1
- CEC 6546: Controlled burn on areas of the Gallatin Fossil Plant Reservation. Tennessee Wildlife Resource Agency, to facilitate wildlife activity and growth. 20 acres and 30 acres. (3/30/2004), CE 5.2.1

3.31.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.31-1.

Table 3.31-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ROD Issued
Bacon Bend Peninsula (Timber Harvest) Habitat Improvement EA	Monroe County, TN	10/25/2016
Natural Resource Plan EIS	TVA-wide	9/15/2011
Boone Reservoir Resource Management Plan and EA	Sullivan and Washington Counties, TN	8/13/2002
Lower Watts Bar Reservoir Resource Management Plan and EA	Meigs and Rhea Counties, TN	11/1/2000
Lower Flint River Management Unit, Wheeler Reservoir, Resources Management Plan and EA	Madison County, AL	7/28/2000
Davis Creek Management Unit (Norris Reservoir) Resource Management Plan and EA	Campbell County, TN	1/13/2000
Lower Sequatchie River Resource Management Plan, Nickajack and Guntersville Reservoirs EA	Marion County, TN	9/17/1999

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Boone Management Unit, Boone Reservoir, Resource Management Plan and EA: The management plan for the Boone Management Unit considered three major components: public use management, natural resources management, and resource maintenance and protection. Stakeholders provided input requesting improved wildlife viewing opportunities. Creating or enhancing existing habitat was considered in the management alternatives. Some of the activities considered in the EA included use of prescribed fire; the use of chemical, mechanical, and manual control for invasive species removal and for habitat improvement and maintenance; and the removal of diseased or dead timber stands. All of these activities are directly relevant to proposed CE. In its FONSI, TVA concluded that there could be some minor, short-term, localized, adverse effects to air quality, soils, recreation, and water resources, but overall there would be minor, long-term, beneficial effects to the resources in the Boone Management Unit. (This Plan was updated in 2010 by TVA's Northeastern Tributary Reservoirs Land Management Plan). (TVA, 2002a)

Bacon Bend Habitat Peninsula Habitat Improvement EA and FONSI: This EA evaluated various levels of timber harvests on approximately 60 acres of upland forest on Tellico Reservoir in east Tennessee, with the goals of reducing overall basal area, removing planted loblolly pine, and promoting variance in age class in the area dominated by mature upland hardwoods. The project includes construction of an access road (1000 feet long) and employing the shelterwood harvesting method. In the EA, TVA affirmed that the project area did not include habitat of sensitive terrestrial, aquatic and plant species nor sensitive cultural resources. Minor disturbances from road construction and from activities conducted during the project period were analyzed (e.g., noise from equipment, temporary disruption to recreation). No adverse or potentially significant impacts were identified and the beneficial impacts of the habitat improvement actions were discussed. (TVA, 2016a)

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts. As noted above, the NRP recognizes timber harvesting and forest management actions as important activities to promote forest health. (TVA, 2011b) This EIS is directly relevant to the proposed CE because it evaluated action alternatives that included activities such as:

- Improving habitat on up to 20,000 acres of TVA-managed lands per year through partnership efforts;
- Managing tree hazards and tree cutting/vegetation damage;
- Conducting small-scale vegetation (tree removal) operations associated with storm or insect damages and forest wildlife habitat enhancements; and
- Conducting invasive plant management on up to 40,000 acres of TVA-managed lands per year.

The EIS found that the potential for adverse impacts from these activities are generally small, even at the significant scale of the most management-intensive plan alternative. Forest management impacts could include disturbance of soils and sedimentation from grading and revegetation activities, localized reductions of non-target species, and localized closure of areas to public access. Also, depending upon the types of forest management projects implemented, the resulting effects could include changes in the overall forest structure and benefits to the type of herbaceous and woody vegetation present. (TVA, 2011a)

3.31.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CEs that could have environmental effects include, but are not limited to:

- Harvesting trees and other timber stand improvement activities, generally up to 125 acres, and requiring no more than 1 mile of temporary or seasonal permanent road construction
- Salvaging dead and/or dying trees generally up to 250 acres and 1 mile of road construction
- Regeneration of an area to native tree species, generally up to 125 acres

TVA has found that several environmental resources may be affected by such activities, as summarized below, but would not have significant effects.

Vegetation: Activities under the proposed CE are intended to restore and enhance forest health. Forest management actions may result in long-term, beneficial effects from the establishment of improved ecosystem function. Forest management actions could result in long-term, beneficial effects such as improved forest health, creation of varied seral states of vegetation, and improved ecosystem function. Actions may improve overall basal area (density) and promote variation in age classes of timber (e.g., in areas dominated by mature upland hardwoods). (TVA, 2016) Forest management activities could result in minor, short-term effects to existing vegetation from timber harvest or the construction of temporary roads. The size limitations for forest management actions vary based on the condition of timber being removed and would restrict the amount of land being disturbed and limit effects to the vegetation resources on and surrounding the project area. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Water Resources: Increased sedimentation or runoff could result from forest management activities, causing short-term, minor effects to water quality. Increased runoff from areas where vegetation or other materials providing ground cover are removed could cause temporarily increased turbidity, and siltation in receiving waters. The size limitations for forest management actions including road construction would restrict the amount of land being disturbed and limit effects to the water resources adjacent to the project area. Forest management activities would also utilize applicable best management practices. Over the longer term, forest management activities could result in beneficial effects that would include reduced suspended solids and turbidity, resulting in reduced sediment accumulation. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Air Quality: Short-term, minor localized effects to air quality from mechanical equipment could occur from the proposed CEs; however, these emissions would have negligible effects on local air quality. Prescribed fires would be conducted in accordance with local air quality regulations and with consideration of local weather conditions. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Cultural and Archaeological Resources: Activities that cause ground disturbance, such as road building or timber removal could result in effects to cultural resources if activities affected the character of a historic property, or occurred in an area where unknown cultural resources existed. The presence of such resources may present extraordinary circumstances that necessitate

additional environmental review. TVA would ensure compliance with the National Historic Preservation Act to resolve such impacts. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Soils: Short-term, minor effects could include increased erosion, runoff, and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from these measures. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Fish and Wildlife: Many activities under the proposed CE are intended to restore and enhance forest habitat. Forest management actions are designed to result in long-term, beneficial effects to wildlife habitat from improved forest health, creation of varied seral states of vegetation, and improved ecosystem function. Long-term, forest management could support water quality and fish habitat by providing soil stability and filtering runoff. Overall, the proposed CEs would provide long-term beneficial effects to wildlife and wildlife habitat. Short-term, actions may result in minor, temporary, or localized adverse effects to wildlife from increased levels of human disturbance and conversion of wildlife habitat (i.e., habitat loss from the construction of temporary roads). The size limitations for forest management activities, up to 250 acres and 1 mile of road construction would restrict the amount of land and habitat being disturbed. TVA has entered into a programmatic agreement with the U.S. Fish and Wildlife Service to address potential impacts of common activities, including forest management actions, to protected bat species. TVA review any action with the potential impacts to federally-listed species to determine if an extraordinary circumstance exists. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Visual Resources: Short-term, minor, adverse visual effects would result from many forest management activities. Many of the activities associated with the proposed CE would result in a long-term improvement in the aesthetic quality of the landscape. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Recreation: During forest management activities, public access to the work areas may be limited or prohibited, resulting in short term, minor effects to public recreation. Long-term, beneficial effects from improved habitat conditions could lead to increased recreation opportunities including birdwatching, other wildlife viewing, and hunting. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Summary: TVA EAs and EISs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and long-term beneficial effects for the natural resources, recreation, and cultural resources within the Tennessee Valley. However, when limitations apply and standard TVA practices are employed, such actions would not cause significant adverse environmental effects. Further, the review for extraordinary circumstances conducted by TVA when actions are proposed would ensure that actions do not result in significant effects.

3.31.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed CE. Specifically,

these other agency CEs include forest management activities, including tree thinning and removal, road construction, and use of fire, and invasive plant species management. They include prescribed fires as part of forestry, wildland fire, rangeland, and vegetation management programs, and vegetation treatments for fuels reduction, ecosystem enhancement, and invasive species control. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, have land and natural resource management responsibilities. Like TVA, the Department of the Interior and its bureaus, the Department of Agriculture and its agencies have missions, mandates, responsibilities, and authority to manage natural resources and have extensive experience with natural resource programs.

The activities included in the other agencies' CEs are similar in nature and may be similar in scope under similar resource conditions and with similar environmental effects. TVA notes, however, that its forest management actions are usually much smaller in scale than those conducted by USFS or BLM. The CEs from other federal agencies provide additional support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

U.S. Forest Service CEs e11, e13, and e14 (36 C.F.R. § 220, 2014)

(e11) Post-fire rehabilitation activities, not to exceed 4,200 acres (such as tree planting, fence replacement, habitat restoration, heritage site restoration, repair of roads and trails, and repair of damage to minor facilities such as campgrounds), to repair or improve lands unlikely to recover to a management approved condition from wildland fire damage, or to repair or replace minor facilities damaged by fire. Such activities:

- (iv) Shall be conducted consistent with Agency and Departmental procedures and applicable land and resource management plans;*
- (v) Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure; and*
- (vi) Shall be completed within 3 years following a wildland fire.*

(e13) Salvage of dead and/or dying trees not to exceed 250 acres, requiring no more than 1/2 mile of temporary road construction. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing. Examples include, but are not limited to:

- (iii) Harvest of a portion of a stand damaged by a wind or ice event and construction of a short temporary road to access the damaged trees, and*
- (iv) Harvest of fire-damaged trees.*

(e14) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than 1/2 mile of temporary road construction, including removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing. Examples include, but are not limited to:

- (iii) Felling and harvest of trees infested with southern pine beetles and immediately adjacent uninfested trees to control expanding spot infestations, and*

- (iv) *Removal and/or destruction of infested trees affected by a new exotic insect or disease, such as emerald ash borer, Asian long horned beetle, and sudden oak death pathogen.*

TVA reviewed the USFS's [notice](#) of the final CEs in the Federal Register (Volume 68, No. 145, Tuesday, July 29, 2003) and notes that the agency cited to its experience with over 150 projects across the county to support the CEs. USFS reviewed the environmental effects of these activities to substantiate that these activities do not individually or cumulatively result in significant environmental effects.

Bureau of Land Management CEs C2, C4, C8, C9, and I1 (DOI, 2008b)

(C2) Sale and removal of individual tree or small individual trees which are dead, diseased, injured, or which constitute a safety hazard, and where access for the removal requires no more than maintenance to existing roads.

(C4) Pre-commercial thinning and brush control using small mechanical devices.

(C8) Salvaging dead or dying trees not to exceed 250 acres, requiring no more than 0.5 mile of temporary road construction. Such activities:

- (e) May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
- (f) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (g) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.*
- (h) For this CX, a dying tree is defined as a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, and that in the judgment of an experienced forest professional or someone technically trained for the work, is likely to die within a few years. Examples include, but are not limited to:
 - (iii) Harvesting a portion of a stand damaged by a wind or ice event.*
 - (iv) Harvesting fire damaged trees.**

(C9) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than 0.5 miles of temporary road construction. Such activities:

- (e) *May include removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease; and*
- (f) *May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
- (g) *May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (h) *Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract. Examples include, but are not limited to:*
 - c) *Felling and harvesting trees infested with mountain pine beetles and immediately adjacent uninfested trees to control expanding spot infestations; and*
 - d) *Removing or destroying trees infested or infected with a new exotic insect or disease, such as emerald ash borer, Asian longhorned beetle, or sudden oak death pathogen.*

(II). Emergency Stabilization. Planned actions in response to wildfires, floods, weather events, earthquakes, or landslips that threaten public health or safety, property, and/or natural and cultural resources, and that are necessary to repair or improve lands unlikely to recover to a management-approved condition as a result of the event. Such activities shall be limited to: repair and installation of essential erosion control structures; replacement or repair of existing culverts, roads, trails, fences, and minor facilities; construction of protection fences; planting, seeding, and mulching; and removal of hazard trees, rocks, soil, and other mobile debris from, on, or along roads, trails, campgrounds, and watercourses. These activities:

- (1) Shall be completed within one year following the event;*
- (2) Shall not include the use of herbicides or pesticides;*
- (3) Shall not include the construction of new roads or other new permanent infrastructure;*
- (4) Shall not exceed 4,200 acres; and*
- (5) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*

- (6) *Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment by artificial or natural means, or vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract*

In its administrative record documenting the substantiation of CEs C4, C8, and C9, BLM relied substantially on the experiences and administrative record of the Forest Service documenting support for their CEs discussed above. In addition to benchmarking to the Forest Service, BLM's administrative record also discussed its own experiences with similar projects and reviewed the environmental effects of these activities to substantiate that they do not individually or cumulatively result in significant environmental effects.

TVA is not proposing to include post-fire rehabilitation actions as part of the proposed CE for forest management. However, TVA NEPA staff finds that the BLM CEs for such actions are similar in nature to forest management actions addressed under the proposed CE and that the BLM (and USFS) support of their CEs to be relevant to the general discussion about the potential significant effects associated with forest management actions. TVA does not have the experience to substantiate for TVA land management the high acreage limits included in BLM's CE D(10). TVA also notes that the ecosystem and management context for BLM differs from the TVA context and TVA proposes much lower acreage limitations in its proposed CEs.

TVA NEPA staff also reviewed BLM's administrative record for its proposal for establishing CE I(1) for emergency stabilization activities. BLM relied upon a subset of 213 projects involving emergency stabilization and related post-fire rehabilitation, collectively referred to as "emergency stabilization and rehabilitation" projects. BLM found that, "Predicted insignificant and significant impacts either did not occur or were mitigated. No unanticipated project-related treatment impacts were validated by either personal observation by the field staff associated with the project, field data collection through a monitoring program, or systematic evaluation of information received." (BLM, 2006)

BLM also reviewed a 2003 DOI and USFS CE on post-fire rehabilitation activities. BLM noted that the difference between post-fire rehabilitation activities and its proposed emergency stabilization CE was a matter of the funding source and of timing: a one-year response is required for emergency stabilization, while post-fire rehabilitation activities can take place within three years. BLM provided a rationale for using a CE for similar activities in the emergency stabilization context, stating that the measures in both cases are routine, and applied by the same skilled workforce as other categorically excluded activities. Based on the results of its data review and the assessment of applying similar treatments for post-fire rehabilitation to the emergency stabilization context, BLM recommended adoption of the proposed CE. (BLM, 2006)

DOI, Bureau of Indian Affairs CEs (11), (12), and (13) (80 FR 8098, 2015)

(11) Harvesting live trees not to exceed 70 acres, requiring no more than 0.5 mile of temporary road construction. Such activities:

- (a) Shall not include even-aged regeneration harvests or vegetation type conversions.*
- (b) May include incidental removal of trees for landings, skid trails, and road clearing.*
- (c) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BIA or Tribal transportation systems and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (d) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.*

Examples include, but are not limited to:

- (a) Removing individual trees for sawlogs, specialty products, or fuelwood.*
- (b) Commercial thinning of overstocked stands to achieve the desired stocking level to increase health and vigor.*

(12) Salvaging dead or dying trees not to exceed 250 acres, requiring no more than 0.5 mile of temporary road construction. Such activities:

- (a) May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
- (b) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BIA or Tribal transportation systems and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (c) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.*
- (d) For this CE, a dying tree is defined as a standing tree that has been severely damaged by forces such as fire, wind, ice, insects, or disease, such that in the judgment of an experienced forest professional or someone technically trained for the work, the tree is likely to die within a few years.*

Examples include, but are not limited to:

- (a) Harvesting a portion of a stand damaged by a wind or ice event.*
- (b) Harvesting fire damaged trees.*

(13) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than 0.5 miles of temporary road construction. Such activities:

- (a) May include removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease; and*
- (b) May include incidental removal of live or dead trees for landings, skid trails, and road clearing.*
- (c) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BIA or tribal transportation systems and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and*
- (d) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment, by artificial or natural means, of vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract.*

Examples include, but are not limited to:

- (a) Felling and harvesting trees infested with mountain pine beetles and immediately adjacent uninfested trees to control expanding spot infestations (a buffer); and*
- (b) Removing or destroying trees infested or infected with a new exotic insect or disease, such as emerald ash borer, Asian longhorned beetle, or sudden oak death pathogen.*

TVA NEPA staff reviewed BIA's proposal for establishing these three CEs. BIA based its CEs on similar CEs in use by the BLM and the U.S. Forest Service (FS) in 2014, and noted in its proposal that all three agencies have similar forest management practices, with similar effects. BIA reviewed the analyses prepared by BLM and the FS when those agencies developed their CEs. BIA's proposal states: "The BLM and FS found that the three categories of actions covered by the CEs do not individually or cumulatively have significant effects on the human environment. The BLM and FS findings were predicated on data representing the expert judgment of the responsible officials who made the original findings and determinations for the 154 USFS projects reviewed, the resource specialists who validated the predicted effects of the 154 reviewed activities after the projects were completed, and a belief that the profile of past timber harvest activities drawn from their database represented the agency's past practices and was indicative of their future activities." The BIA determined, based on its review of the Forest Service information and the review conducted by BLM, that BIA forestry activities would have

similar effects (i.e., no individually or cumulatively significant effects on the human environment). (79 FR 68287, 2014)

Comparability of CEs

Table 3.31-2 provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CEs.

Table 3.31-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #31	BIA	BLM	USFS
Forest management activities to manipulate composition and age class, including harvesting or thinning of live trees and other timber stand improvements (e.g., fire, non-commercial removal, chemical control), generally no more than 125 acres and requiring less than 1 mile of road construction	X	X	X
Salvage of dead and/or dying trees including, but not limited to, tree harvesting to control insects or disease or address storm damage (including removal of affected trees and adjacent live, unaffected trees as determined necessary to control the spread of insects or disease), generally no more than 250 acres and requiring less than 1 mile of road construction	X	X	X
Actions to regenerate forest stands, including, but not limited to, planting of native tree species upon site preparation, generally no more than 125 acres and requiring less than 1 mile of road construction	X	X	X

The other agency CEs are comparable because they involve the same or similar activities as TVA's proposed CE. The BLM, BIA, and USFS CEs include brush clearing and thinning, tree thinning, tree harvest, road construction for forestry activities, and the management of invasive plants similar to the proposed CE. As noted above, the BLM and BIA relied upon the USFS experience to establish forest management CEs resulting in the same or very similar definitions for the CEs. By benchmarking to these CEs, TVA's proposed CE would provide additional consistency among federal land management agencies.

In defining its proposed CE #31, TVA closely reviewed these agencies CEs and based its definition largely on them. For actions falling under (a) and (c) of the proposed CE #31, TVA proposes a spatial limit of 125 acres, which is smaller than those of the USFS, BLM, and BIA. Due to the typical scale of TVA forest management actions and the configuration of many TVA-managed lands, which are frequently fairly narrow areas which only extend a few hundred yards from the shoreline, TVA believes larger spatial limits are unnecessary. However, by proposing a 250-acre limit to actions falling under (b) of proposed CE #31 ("*Actions to salvage dead and/or dying trees...*"), TVA is benchmarking to acreage limits applied by the USFS (e13), BLM (C8) and BIA (CE 12) in their CEs. TVA proposes a 1 mile limit to new road construction to facilitate the forest management action, which differs from the limits in these CEs (1/2 mile). The proposed 1-mile limit is based on TVA's extensive experience constructing similar primitive roads for land management and transmission line construction/maintenance activities (and is consistent with the limit placed on those proposed CEs, as discussed above).

3.31.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #31 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.31.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. TVA's experience, expertise and best management practices in conducting forest management activities reduce the potential for such impacts. While forest management activities could have minor adverse short-term effects, the intent of such projects is to improve forest health, resulting in long-term beneficial effects. TVA has determined that the proposed CE encompass activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.32 CE 32 - INVASIVE PLANT MANAGEMENT

TVA proposes to establish a CE for actions to address invasive terrestrial plant species.

3.32.1 Proposed Categorical Exclusion Text

Actions to manage invasive plants including, but not limited to, chemical applications, mechanical removal, and manual treatments that generally do not physically disturb more than 125 acres of land.

3.32.2 Background

TVA manages approximately 293,000 acres of land to protect the integrated operation of the TVA reservoir and power systems, provide for public use and enjoyment, and support economic growth in the Valley. More than 181,000 acres under TVA's management have been set aside for natural resource management with the intention of preserving natural wildlife habitats, protecting endangered plant and animal species and enhancing the biodiversity of the Tennessee Valley region. Over the years, TVA has worked with both private and public partners to combat erosion, protect water quality, and restore native ecosystems throughout the Tennessee Valley. Consistent with the NRP, TVA continually conducts activities to reduce the impact of invasive species spread on terrestrial habitats.

TVA incorporates hand removal, crushing, pruning, thinning, mowing, and other techniques to manage invasive species of plants. Vegetative refuse is chipped or burned in place, or hauled away for disposal. Prescribed fire is also occasionally used to manage invasive plants.

TVA also routinely uses herbicides to treat invasive plants and other undesired vegetation. Where most manual treatments typically leave root systems intact and viable, herbicides kill the entire plant reducing the need to use heavy equipment, thereby decreasing disturbances to the environment and public. TVA uses EPA-approved herbicides and apply them by trained applicators in accordance with applicable state and federal laws. Typically, TVA uses selective low-volume backpack application for controlling vegetation. Herbicides are rarely applied by helicopters in inaccessible areas.

The types of activities included in the proposed CEs are routine. TVA regularly conducts these activities using proven techniques (best management practices) and established procedures. For instance, the methods for selection of vegetation to remove or establish are prescribed in established TVA procedures, handbooks, and policies. Previous TVA NEPA analyses have shown that these activities have no significant adverse environmental effects and have many beneficial effects.

In the past, TVA staff have relied on existing CEs to conduct such actions. Establishing the proposed CE would clarify the use of existing CEs for these common actions, which allows more efficient business practices. The definition of the proposed CE was developed to identify activities with limited environmental effects. Under proposed CE #32, treatment actions would generally not affect more than 125 acres of land. The limitation is based in part on TVA experience and is consistent with the spatial limits TVA proposes to establish for other categories

of actions which have effects on forests and vegetation (e.g., transmission CEs, CE #30 for habitat projects, and CE #31 for forest management actions). As discussed in Section 3.16 (for proposed CE #16), TVA experience reflects that actions effecting up to 125 acres of vegetation have been shown not to result in significant environmental impacts, absent extraordinary circumstances. The same limit would be applied to proposed CE #32 for consistency, though TVA notes that treatments to manage or eradicate invasive plant species are, overall, beneficial to the native ecosystems.

The proposed CE would not apply to the management of aquatic invasive plants.

3.32.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE does not individually or cumulatively have a significant effect on the quality of the human environment.

3.32.3.1 TVA Experience with Relevant Existing CEs

In its review of the ENTRAC database for similar actions completed by TVA since 2002, numerous actions were identified that provide support for the proposed CE. Previous application of TVA CEs to such activities indicates that these activities were found to have no potential to produce significant harm to the quality of the human environment.

Since 2002, TVA has documented dozens of individual activities involving management of invasive plants. Of the CECs identified, TVA staff most often cited the following three existing TVA CEs: CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.21 (*Minor research, development, and joint demonstration projects*); CE 5.2.24 (*Minor non-TVA activities on TVA property authorized under contract or license, permit and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land*); and CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*). Examples of CECs for activities relevant to the proposed CE include:

- *CEC 14903: Generic FPG Herbicide Application to Land. (11/04/2002), CE 5.2.1*
- *CEC 32555: Loyston / Hemlock Grove Invasive Control (chemical treatments of Autumn Olive on Norris Reservoir) (6/9/2015), CE 5.2.1*
- *CEC 13572: Invasive Species Control – Old First Quarters SWA. (9/28/2006)*
- *CEC 30797: Charleston Cypress Stand Observation Platform and Invasive Plant Control. (12/02/2014), CE 5.2.1*

- *CEC 30028: Prescribed burn for maintenance of wildlife habitat and non-native species control. To maintain early successional habitat while reducing the amount of non-native species found on the area. (3/26/2014), CE 5.2.1*
- *CEC 28022: Prescribed Burn – Bridgeforth Ag Tract. Prescribed burn of native grass field buffers along edges of TVA Agricultural Lease tract near Round Island Creek. 4 acres. (3/14/2013), CE 5.2.27*
- *CEC 20074: Half-way Town – Controlled Burn. Prescribed/control burn with the Tennessee Department of Forestry, 40 acres. (3/19/2009), CE 5.2.21*
- *CEC 13572: Invasive Species Control, Old First Quarters 53 acres. (9/28/2006), CE 5.2.21*
- *CEC 6546: Controlled burn on areas of the Gallatin Fossil Plant Reservation. Tennessee Wildlife Resource Agency, to facilitate wildlife activity and growth. 20 acres and 30 acres. (3/30/2004), CE 5.2.1*
- *CEC 3643: Wildlife Habitat Improvement Project. 5.6 acres (5/28/2003), CE 5.2.21*
- *CEC 3135: Invasive plant control – Big Sandy area. 1.5 acres (4/14/2003), CE 5.2.24*
- *CEC 3209: Ag. Tract reforestation. 15 acres. (4/04/2003), CE 5.2.24*
- *CEC 1560: Kudzu elimination. (9/10/2002), CE 5.2.1*
- *CEC 27015: Gunterville Levee Bank Herbicide Application (Aquatic). 1 acre. (8/30/2012), CE 5.2.1*
- *CEC 27007: Herbicide/Pesticide treatments along shorelines below TVA Dams. 1 acre. (10/24/2012), CE 5.2.1*
- *CEC 403: Herbicide Spraying of Cooling Tower Channel. (8/10/2012), CE 5.2.1*
- *CEC 33458: Stewardship Enhancement Partnership Project – Invasive Plant Control. (12/03/2015), CE 5.2.21*
- *CEC 32394: Worthington Cemetery Invasive Control and Birding Opportunity Enhancement. (5/27/2015), CE 5.2.23*
- *CEC 15056: Exotic removal in former LOP orchard. (2/12/2007), CE 5.2.27*
- *CEC 10193: Exotic plant removal/pine beetle renovation. (8/18/2005), CE 5.2.27*
- *CEC 29815: Muscle Shoals Redevelopment, Improve Marketability of Areas 2A and 2B By Mechanical Removal of Undergrowth. 40 acres. (4/14/2014), CE 5.2.1*
- *CEC 35346: Prescribed Burn – Jennings Bluff Habitat Protection Area. 50 acres. (10/26/2016), CE 5.2.1*
- *CEC 33598: Glades and Barrens Restoration Initiative Plot Study – Jennings Bluff Habitat Protection Area. 3 acres. (4/20/2016), CE 5.2.21*

3.32.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.32-1.

Table 3.32-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ ROD Issued
South Holston Dam Reservation Habitat Enhancement Project EA	Sullivan County, Tennessee	3/31/2016
Sauta Cave (Blowing Wind Cave) Habitat Enhancement Project EA	Jackson County, Alabama	7/10/2014
Natural Resource Plan EIS	TVA-wide	9/15/2011
Boone Reservoir Resource Management Plan and EA	Sullivan and Washington Counties, TN	8/13/2002
Lower Watts Bar Reservoir Resource Management Plan and EA	Meigs and Rhea Counties, TN	11/1/2000
Lower Flint River Management Unit, Wheeler Reservoir, Resources Management Plan and EA	Madison County, AL	7/28/2000
Norris Reservoir Resource Management Plan and EA	Campbell County, TN	1/13/2000
Lower Sequatchie River Resource Management Plan, Nickajack and Guntersville Reservoirs EA	Marion County, TN	9/17/1999
Generic EA, Clean Water Initiative	TVA-wide	5/16/1997
Putnam-Cumberland, Tennessee – Improve Power Supply Project EA (chemical and mechanical ROW maintenance)	Cumberland County, TN	11/13/2013
Union-Tupelo No.3 161-kV Transmission Line (chemical and mechanical ROW maintenance)	Lee and Union Counties, MS	10/09/2014
Selmer-West Adamsville 161-kV Transmission Line and Switching Station (chemical and mechanical ROW maintenance)	McNairy County, TN	1/06/2015
South Pittsburg 161-kV Delivery Point (chemical and mechanical ROW maintenance)	Marion County, TN	1/06/2015
Muscle Shoals Outdoor Education and Recreation Area Improvements EA	Colbert County, AL	3/18/2015

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Boone Management Unit, Boone Reservoir, Resource Management Plan and EA: The management plan for the Boone Management Unit considered three major components: public use management, natural resources management, and resource maintenance and protection. Stakeholders provided input requesting improved wildlife viewing opportunities. Creating or enhancing existing habitat was considered in the management alternatives. Some of the activities considered in the EA included use of prescribed fire and the use of chemical, mechanical, and manual control for invasive species removal and for habitat improvement and maintenance. All of these activities are directly relevant to the proposed CE. In its FONSI, TVA concluded that there could be some minor, short-term, localized, adverse effects to air quality, soils, recreation, and water resources, but overall there would be minor, long-term, beneficial effects to the resources in the Boone Management Unit. (TVA, 2002a)

Davis Creek Management Unit, Norris Reservoir, Resource Management Plan and EA: The Davis Creek Management Unit plan contained nearly identical goals and management alternatives as the Boone Management Unit and relevant to proposed CE. The analysis also had nearly identical findings as those for the Boone Management Unit, concluding that there could be some minor, short-term, localized, adverse effects to air quality, soils, recreation, and water resources, but overall there would be long-term, beneficial effects to the resources in the Boone Management Unit. (TVA, 2000b; TVA, 2002a)

Natural Resource Plan EIS and ROD: This EIS is directly relevant to the proposed CE because it evaluated action alternatives that included activities conducting nonnative invasive plant management on up to 40,000 acres of TVA-managed lands per year. The EIS found that the potential for adverse impacts from these activities is small, even at the significant scale of the most management-intensive alternative. These impacts could include sedimentation from grading and revegetation activities, localized reductions of nontarget species, and localized closure of areas to public access. Also, depending upon the types of plant management projects implemented, the resulting effects could include changes in the overall forest structure and benefits to the type of herbaceous and woody vegetation present. Managing invasive plants would likely have the beneficial effect of their control and the rehabilitation of the infested area. (TVA, 2011a)

Included in Table 3.32-1 are several EAs completed by TVA for transmission line construction or maintenance activities. TVA relies upon the mechanical clearing and the use of herbicides as primary methods to control vegetation along its transmission line network. When analyzing the construction and/or maintenance of transmission lines, TVA commonly includes herbicide use and other vegetation management methods in the scope of the proposed action. Vegetation management actions to manage TVA transmission lines are similar in nature and scope to the actions that are commonly employed to manage or eliminate invasive plant species. TVA's extensive history of vegetation management along its transmission lines support the determination that establishing a CE for managing invasive plant species is appropriate.

3.32.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, invasive plant management activities under the proposed CEs that could have environmental effects include, but are not limited to:

- Herbicide applications
- Mechanical and manual treatments
- Prescribed fire

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Vegetation: Many activities under the proposed CE are intended to restore and enhance native vegetation and control or eradicate invasive vegetation species. The actions would result in long-term, beneficial effects from the establishment of native vegetation and improved ecosystem function. The size limitations for treatments of invasive and exotic species would generally be

125 acres, which would restrict the amount of land being disturbed and limit effects to the vegetation surrounding the project area. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Water Resources: Extensive invasive species treatments can increase sedimentation or runoff causing short-term, minor impacts to water quality. When treating vegetation, prescribed burns and herbicide applications may generate pollutants, but any negative effects would be minor and temporary. Increased runoff from areas where vegetation is removed could cause temporarily increased turbidity and siltation in receiving waters. Size limitation would restrict the amount of land being disturbed and limit effects to water resources adjacent to treatment areas. Over the longer term, restoration and enhancement of terrestrial habitat and desired vegetation could result in beneficial effects that would include increased species diversity and reduced sedimentation. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Air Quality: Short-term, minor localized effects to air quality from mechanical equipment and prescribed fires could occur from the proposed CEs; however, such emissions have negligible effects on local air quality given precautions taken and the limited scope of such treatments. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Cultural and Archaeological Resources: Activities that cause ground disturbance, such as disking, road building, prescribed fire, fence or nest structure installation could result in minor adverse effects to cultural resources if activities affected the character of a historic property, or occurred in an area where unknown cultural resources existed. Over the long-term, restoration and revegetation by desired species could support cultural resources by providing soil stability. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Soils: Short-term, minor effects could include increased erosion, runoff, and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from these measures. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Fish and Wildlife: Many activities under the proposed CEs are intended to restore and enhance terrestrial habitat. Habitat improvement measures and invasive species treatments could result in long-term, beneficial effects to wildlife habitat by establishing native vegetation and improving ecosystem function. Overall, the proposed CEs would provide long-term beneficial effects to fisheries, wildlife, and wildlife habitat. Restoration and enhancement of terrestrial habitat, forest management, and invasive species treatments could result in minor, short-term, localized adverse effects to wildlife from alterations of wildlife habitat, and from increased levels of human disturbance. Restoration and enhancement of terrestrial habitat could result in minor, short-term, adverse effects to wildlife from habitat loss from initial treatments, burns, or installation of nesting structures and fencing. The size limitation for actions would restrict the amount of land and habitat being disturbed and limit erosion or runoff to aquatic habitat adjacent to the project area. (TVA, 2002a; TVA, 2000b; TVA, 2011a)

Visual Resources: Most of the activities associated with the proposed CEs would improve the aesthetic quality of the landscape and are visually beneficial. Short-term, minor, adverse visual effects may result from landscape disturbance and prescribed fire. Prescribed fires would be

conducted in accordance with local air quality regulations and with consideration of local weather conditions. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Recreation: During invasive species management activities, public access to the work areas may be limited or prohibited, resulting in short term, minor effects to public recreation. Long-term, beneficial effects from improved habitat conditions could lead to increased recreation opportunities including birdwatching, other wildlife viewing, and hunting. (TVA, 2000b; TVA, 2002a; TVA, 2011a)

Summary: TVA EAs and EISs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and long-term beneficial effects for the natural resources, recreation, and cultural resources within the Tennessee Valley and do not cause significant environmental effects. Further, the spatial limit applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when certain actions are proposed would ensure that actions do not result in significant effects.

3.32.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The most directly relevant CEs applicable to the proposed CE are established by the Forest Service and pertain to herbicide use for maintenance actions at facilities or administrative sites.

U.S. Forest Service CEs d3 and d5 (36 C.F.R. § 220, 2014)

(d3) Repair and maintenance of administrative sites. Examples include but are not limited to:

- (i) Mowing lawns at a district office;*
- (ii) Replacing a roof or storage shed;*
- (iii) Painting a building; and*
- (iv) Applying registered pesticides for rodent or vegetation control.*

(d5) Repair and maintenance of recreation sites and facilities. Examples include but are not limited to:

- (i) Applying registered herbicides to control poison ivy on infested sites in a campground;*
- (ii) Applying registered insecticides by compressed air sprayer to control insects at a recreation site complex;*
- (iii) Repaving a parking lot; and*
- (iv) Applying registered pesticides for rodent or vegetation control.*

The USFS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. The CEs provide support for TVA's conclusion that including herbicide use under the proposed CEs would not result in significant effects to the human environment either individually or cumulatively.

As discussed under Sections 3.29, 3.30 and 3.31 above (for proposed CEs 29, 30 and 31), other federal agencies have established numerous CEs for ecosystem enhancement activities, including habitat improvement actions, revegetation methods, forest management (including tree thinning and removal, road construction, and use of fire), and invasive plant management. They include prescribed fires as part of forestry, wildland fire, rangeland, and vegetation management programs, and vegetation treatments for fuels reduction, and invasive species control.

TVA did not identify CEs of other agencies pertaining to invasive plant species management, although as previously discussed, numerous CEs have been established by other agencies pertaining to vegetation management and ecosystem enhancement. Though not explicitly relating to management or eradication of invasive plants, the benchmarked CEs described in the sections above for proposed CEs #29, 30, and 31 further support the proposed #32 due to the related objectives and similar types of disturbance to the environment that would generally occur. In many cases, actions covered under proposed CEs #29, 30 and 31 (and under established CEs of other agencies) may have greater potential to result in significant environmental effects than actions proposed by TVA to manage invasive plants including, but not limited to, chemical applications, mechanical removal, and manual treatments, particularly when applying a spatial limit of 125 acres.

3.32.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #32 would be applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.32.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to actions to manage invasive and/or exotic plants (including, but not limited to, chemical applications, mechanical removal, and manual treatments) that generally do not physically disturb more than 125 acres of land. These activities could have minor adverse short-term effects but would generally result in long-term beneficial effects and improvements to the ecosystem. TVA would apply a spatial limit to covered actions to reduce the potential for significant environmental impacts. Accordingly, TVA determined that the proposed CEs encompass activities that do not have individual or cumulative significant effects on the human environment. In addition, TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure that extraordinary circumstances do not exist that could result in significant environmental effects.

3.33 CE 33 - CULTURAL RESOURCES PROTECTION

TVA proposes to establish a new CE for actions to protect cultural resources.

3.33.1 Proposed Categorical Exclusion Text

Actions to protect cultural resources including, but not limited to, fencing, gating, signing, and bank stabilization (generally up to 1/2 mile in length when along stream banks or reservoir shoreline).

3.33.2 Background

The Tennessee River watershed encompasses more than 41,000 square miles across 125 counties in portions of seven states. In carrying out its management responsibilities, TVA must consider the effects of its activities cultural resources. Under [Section 26a of the TVA Act](#), TVA has the authority to regulate land use and development along its 11,000 miles of public shoreline. Many of these shoreline areas, as well as other lands managed by TVA, are classified as sensitive resources, as they contain cultural and archaeological resources. The status of archaeological survey of lands adjacent to TVA reservoirs varies across the Valley; over 11,500 archaeological sites have been recorded as of 2011. (TVA, 2011a) Federal law mandates that TVA protect these resources. Many of these sites, and additional sites managed by TVA, have other resource values, such as developed recreational areas that are heavily used by the public.

TVA's cultural resource management responsibilities are carried out by a staff of cultural and historic resource specialists who implement programs to protect archaeological and historic sites on TVA land. Their efforts are integrated with all TVA business units, particularly the natural resource, shoreline permitting programs, and transmission projects. Cultural resource protection objectives align with TVA's NRP and other TVA plans, policies, and procedures, and federal regulations. TVA cultural resources staff are also responsible for verifying that proposed TVA activities or requests by other stakeholders would not adversely affect cultural resources. The staff works closely with the State Historic Preservation Offices and federally-recognized Native American tribes to ensure compliance with the National Historic Preservation Act.

The proposed CE addresses minor activities that TVA frequently undertakes to stabilize and protect cultural resources. Actions include installing fencing or gates to enclose or restrict access to sensitive cultural resources and placing signage for educational purposes. Access control measures (e.g., boulders, ballards, guard rail, fence, gates, rebar fence, trenches) are maintained or constructed to balance public use, public safety, and conservation of resources. Other protection measures include placement of materials (e.g., riprap, stones) to cover exposed resources and/or stabilize shoreline or streambanks to control erosion which threaten cultural resources. The proposed CE would allow TVA to more efficiently consider and carry out projects to achieve its responsibilities to protect these resources.

In the past, activities under the proposed CE have been primarily categorized under TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities.*); CE 5.2.11 (*Property protection, law enforcement, and other legal activities*); or, most frequently, TVA CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks,*

and shoreline facilities), when actions were proposed along stream or reservoir shoreline. Creating a new CE specific to cultural resource protection actions provides clarity for TVA specialists and makes clearer the intent and context of the proposed action.

TVA proposes to limit the length of stabilization actions, consistent with proposed CE #27 above for TVA shoreline actions. TVA has internally reviewed past actions and associated NEPA reviews to determine an appropriate limit and determined that there is sufficient experience to support a determination that 1/2-mile of stabilization would not result in significant environmental impacts. The majority of past projects and likely future actions involve stabilization of less than 1/2-mile in length. Of the hundreds of stabilization actions for which TVA completed a CEC (primarily completed when considering a Section 26a permit), more than 30 involved stabilizing more than 1/2 mile of shoreline or streambanks. In addition, TVA also has completed more than 30 EAs for actions involving extensive shoreline stabilization; almost half of these actions included stabilizing more than 1/2-mile of shoreline or streambanks.

3.33.3 Substantiating Information for Proposed CEs

To substantiate the proposed CE, TVA relies upon extensive experience in conducting minor actions to protect cultural and other sensitive resources, including those involving fencing, gating, or signing areas, and hundreds of actions involving shoreline or streambank stabilization. CEs established by other agencies serve as a benchmark which further supports the proposed CE. Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.33.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in hundreds of activities similar to those proposed in CE #33. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002, TVA has documented more than 1,300 individual activities involving shoreline, streambank, and riverbank stabilization projects including the use of riprap. Several additional activities include revegetation along shorelines. TVA has completed over 200 activities involving the installation, modification, or repair of signs, gates, and fences. Although these activities usually were implemented for other resource objectives, the scope of the action and potential impacts are similar to those conducted to protect cultural resources. Therefore, these CEC records are supporting information relevant to the proposed CE.

TVA reviewed its ENTRAC database for relevant actions and, as noted above, identified numerous actions that have been categorically excluded under existing CE 5.2.1 (*Routine operation maintenance, and minor upgrading of existing TVA facilities*) and CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*). Examples of CECs for actions relevant to the protection of cultural resources and/or fencing, gating, signing and bank stabilization include the following:

- CEC 22476: South East Dike Stability Improvements, (7/21/2010), CE 5.2.1
- CEC 8679: Worell - Riprap Bank Stabilization, (1/19/2005), CE 5.2.26
- CEC 3269: Watts Bar Fossil Plant Shoreline Stabilization, (11/8/2004), CE 5.2.1
- CEC 7795: Watershed Demo project-repair flood damage cattle exclusion fence, (9/28/2004), CE 5.2.21
- CEC 1785: Concrete Shoreline Retaining Wall Renovation, (10/17/2002), CE 5.2.24
- CEC 1713: Riprap Shoreline Stabilization (600 ft of riprap), (10/10/2002), CE 5.2.26
- CEC 1340: XCR 129PT Burial Site Stabilization (100 ft of riprap), (8/19/2002), CE 5.2.26
- CEC 32087: Riverbank Stabilization 1,100 ft (Watts Bar Nuclear), (3/15/2015)
- CEC 31768: Bank stabilization, protection of cultural site 2,600 feet, (4/17/2015)
- CEC 32767: Shoreline stabilization for protection of multiple cultural sites, 3,800 feet (4/27/2016)
- CEC 5500: Critically Eroded Shoreline Section 26a (4,995 feet), (12/5/2003), CE 5.2.26
- CEC 2690: TVA Rip Rap Project Site 40RH14/15 (4,000 feet), (2/20/2003), CE 5.2.26
- CEC 5658: Riprap on private property (3,500 feet), (1/15/2004), CE 5.2.26
- CEC 5507: Critically Eroded Stabilization Anderton (2,900 feet), (12/3/2003), CE 5.2.26
- CEC 12028: Chickamauga XTCR-102 Ledford Island Stabilization (2,600 feet), 3/1/2006, CE 5.2.26
- CEC 17515: Freeman Acres Stabilization (up to 2,500 feet), (1/30/2008), CE 5.2.26
- CEC 8356: Cavender Stabilization (9 locations, 6,815 feet), (11/22/2004), 5.2.26
- CEC 12612: Archaeological Site Stabilization on Wheeler (4,750 feet), (4/5/2006), 5.2.26
- CEC 22587: Wilson HydroModernization Stabilization (2,600 feet), (10/8/2010), 5.2.26
- CEC 9632: NRCS Stream Stabilizations (6 locations, 2,960 feet), (6/7/2005), 5.2.26
- CEC 31759: Reburial of previously disturbed cultural resources (Watts Bar Reservoir), 12/17/2014, CE 5.2.1
- CEC 33465: Partnership with tribe for reburial of cultural resources on TVA land (Clinch River, Anderson County, TN), 10/7/2015, CE 5.2.24

3.33.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff also reviewed previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below and further support the proposed CE.

Table 3.33-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ROD Issued
Duck River Bank Stabilization River Mile 176.8 EA	Marshall County, TN	8/18/2015
Natural Resource Plan EIS	TVA-wide	9/15/2011
Moccasin Bend Streambank Stabilization EA	Chattanooga, Hamilton County, TN	2/22/2010
Proposed Blennerhassett Island Erosion Control and Streambank Restoration Project, Section 26a approval for riprap at French Broad River Mile 125 EA	Madison County, NC	10/30/2001
Shoreline Management Initiative EIS	TVA-wide	6/4/1999

Title	Location	Date FONSI/ ROD Issued
Section 26a approval for riprap at Huntsville-Madison County Marina and Port Authority - Ditto landing Marina EA	Madison County, AL	12/22/1997
Generic EA, Clean Water Initiative	TVA-wide	5/16/1997
Section 26a Approval for Riprap at Ross's Landing Plaza EA	Hamilton County, TN	4/23/1997

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Moccasin Bend Streambank Stabilization EA and FONSI: This EA evaluated a National Park Service proposal to stabilize a 5.9-mile section of the Tennessee River Bank within the Moccasin Bend National Archaeological District near Chattanooga, Tennessee. The District is one of the most significant archaeological sites in the Southeast and is a National Historic Landmark. This action required approval by TVA under Section 26a of the TVA Act. This portion of the river experienced bank erosion and sloughing, which jeopardized the integrity of cultural resources. Stabilization included a combination of techniques, including full riprap protection, partial riprap protection, and bioengineering. The EA determined the preferred alternative would reduce sediment run-off into the river, resulting in net long-term benefits to archaeological sites, water quality, aquatic and terrestrial wildlife habitat, and visual resources. (TVA, 2010b) This EA is directly relevant to the proposed CE.

Generic EA, TVA Clean Water Initiative (CWI) and FONSI: TVA completed this programmatic EA in order to expedite its CWI activities for improving the beneficial uses of water resources in specific watersheds and communities across the Tennessee Valley. The EA was designed to address a group of activities that do not have, either individually or cumulatively, a significant effect on the quality of the human environment. The intent of the EA was to create a CE for those activities and thereby expedite the environmental review process for such activities. Proposed activities included implementation of agricultural BMPs, streambank and streambed restoration through bioengineering and structure placement, planting native woody and herbaceous vegetation on streambanks and reservoir shorelines, and solid waste cleanup and disposal. The EA found that these activities would not have significant adverse environmental effects. (TVA, 1997a) This EA is relevant to the activities included in the proposed CE, including activities to install stabilization structures, installation of fences to limit access; and development of limited access for routine maintenance and management purposes.

Natural Resource Plan EIS and ROD: In 2011, TVA developed its NRP and associated EIS to guide its natural resource stewardship efforts. The NRP addresses TVA's management of biological, cultural, and water resources; recreation; reservoir lands planning; and associated public engagement over the next 20 years. The goal of the plan is to integrate the objectives of these resource areas, provide for the optimum public benefit, and balance conflicting resource uses. (TVA, 2011b). This EIS is directly relevant to the proposed CE because it evaluated action alternatives that included activities such as stabilizing up to 8 miles of critically eroding shoreline per year and protecting archaeological sites of up to 1.3 tributary shoreline miles or 2.1 mainstem shoreline miles per year. (TVA, 2011a)

3.33.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CEs that could have environmental effects include, but are not limited to:

- Streambank and shoreline stabilization to protect natural and cultural resources
- Installation of fences, gates, and signs
- Development of limited access for routine maintenance and management purposes

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Water Resources: While activities included in the proposed CE are intended to protect cultural resources, some activities to stabilize shoreline or streambanks would also benefit water resources. Short-term, minor effects from disturbing these areas could include increased suspended solids, turbidity, and sedimentation. Increased sedimentation could result from installing shoreline stabilization measures or installing fencing near waterways. However, over the long term, shoreline, streambank, and streambed stabilization and restoration activities could most likely result in beneficial effects that would include reduced suspended solids and turbidity, resulting in reduced sediment accumulation. (TVA, 1997a; TVA, 2011a).

Air Quality: Short-term, minor indirect fugitive air emissions from the mechanical equipment needed to complete a specific construction activity could occur from the proposed CE. (TVA, 2011a)

Cultural and Archaeological Resources: Overall, streambank and shoreline stabilization activities would be expected to have beneficial effects on archaeological resources (TVA, 1997a; TVA, 2010b; TVA, 2011a). Shoreline plantings could have beneficial and adverse effects on cultural resources, since planting of larger plants with sizable root balls requires more ground disturbance than smaller bare root plants or seeding. Riprap placed along the shoreline cover exposed sites, reduce erosion of sites of sites into reservoir, and protect sites from future erosion or disturbance. The long-term stabilization benefits of plantings outweigh the short-term disturbance of a cultural resource (TVA, 2011a). Additionally, installation of fencing, gates, or signage could have minor adverse effects on archaeological resources. However, if the fencing, gates, or signage reduces disturbances that may result in soil erosion, there would be long-term beneficial effects (TVA, 2010b; TVA, 2011a).

Soils: Short-term, minor indirect effects could include increased erosion and mixing of surface layers of soil due to installation of the measures addressed by the proposed CE. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from these measures, as intended by proposed CEs. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Fish and Wildlife: Increased shoreline stabilization could result in minor, short-term, localized indirect adverse effects to wildlife from alterations of wildlife habitat, and increased levels of human disturbance (TVA, 2011a). Activities associated with the proposed CE occurring along shorelines or streambanks would most likely result in minor, long-term benefits to most wildlife

by ensuring streambank stability and improving the quality of available habitat. Local populations of a few wildlife species dependent on vertical or near-vertical dirt streambanks and shorelines would be adversely affected. (TVA, 1997a; TVA, 2010b; TVA, 2011a).

Wetlands and Riparian Habitat: Short-term, adverse indirect effects could occur from the activities associated with the proposed CE if occurring within or near wetland or riparian habitat but these effects should be minor and temporary. Additionally, TVA would continue to comply with the Clean Water Act and Executive Order 11990, *Protection of Wetlands*, through its environmental review process, and appropriate mitigation may be applied. (TVA, 1997a; TVA, 2010b; TVA, 2011a)

Visual Resources: Short-term, minor, indirect, adverse visual effects may result from landscape disturbance and water turbidity during bank stabilization projects (TVA, 2010b; TVA, 1997a). Some shoreline and streambank stabilization measures (e.g., riprap) could have initial adverse visual effects, but these effects would decrease over time as the affected area naturalizes, and may be less adverse than the visual effects of erosion and sloughing in the absence of stabilization. Installation of signage, fences, and gates could have minor effects on viewsheds by reducing the natural setting. (TVA, 2011a)

Recreation: During construction, public access to the work areas may be limited or prohibited, resulting in short term, minor indirect effects to public recreation (TVA, 2010b).

Summary: TVA EAs and EISs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and but would most likely have long-term beneficial effects for the natural resources within the Tennessee Valley and do not cause significant environmental effects. Further, the spatial limit applied to certain actions covered by the proposed CE and TVA's review for extraordinary circumstances would ensure that proposed actions do not result in significant effects.

3.33.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar in nature, scope and intensity to those included in TVA's proposed CEs. TVA identified several existing CEs of other agencies that are relevant to TVA activities. These agencies, like TVA, manage public lands and have mandates and responsibilities to manage for cultural resource protection and conservation, and they have extensive experience with cultural resource programs. Activities included in other agencies' CEs would likely be similar in size and scope and with similar environmental effects to the actions of proposed CE #33. Thus, the CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CEs would not result in significant effects to the human environment either individually or cumulatively.

Department of Homeland Security, Coast Guard CE L43 (DHS, 2006)

Natural and cultural resource management and research activities that are in accordance with inter-agency agreements and which are designed to improve or upgrade the USCG's ability to manage those resources.

TVA notes that this CE is broadly defined and would reasonably be interpreted to include those actions of proposed CE #33.

Department of Energy CE B1.20 (76 FR 63764, 2011)

Small-scale activities undertaken to protect cultural resources (such as fencing, labeling, and flagging) or to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders and minor diversion channels), or fisheries. Such activities would be conducted in accordance with an existing natural or cultural resource plan, if any.

DOE's proposed rule discussed the rationale for the adopted changes to B1.20 based on its experience:

DOE proposes to add to the scope of this categorical exclusion by referencing activities taken to protect cultural resources and by including examples of those activities (fencing, labeling, or flagging). DOE's Power Marketing Administrations often engage in such activities for cultural and wildlife protection purposes, and these activities would not have the potential to cause significant impacts. DOE also proposes to include a condition in the categorical exclusion that the activities would be conducted in accordance with an existing natural or cultural resource plan, if any. (DOE, 2011a)

U.S. Fish & Wildlife Service CE B.3 (DOI, 2004b)

The construction of new, or the addition of, small structures or improvements, including structures and improvements for the restoration of wetland, riparian, instream, or native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included.

- i. The installation of fences.*
- ii. The construction of small water control structures.*
- iii. The planting of seeds or seedlings and other minor revegetation actions.*
- iv. The construction of small berms or dikes.*
- v. The development of limited access for routine maintenance and management purposes.*

TVA notes that the CE would apply to streambank actions and the installation of fences, which are similar to actions addressed in the proposed CE #33.

Natural Resources Conservation Service CEs 8, 9, 10 (7 C.F.R. § 650, 2015)

(8) Stabilizing stream banks and associated structures to reduce erosion through bioengineering techniques, (i.e. utilization of living and nonliving plant materials in combination with natural and synthetic support materials (such as rocks, rip-rap, geotextiles) for slope stabilization, erosion reduction, and vegetative establishment), such as establishment of appropriate plant communities (bank shaping and planting, brush mattresses, log, root wad, and boulder stabilization methods), following a natural disaster to restore pre-disaster conditions to the extent practicable.

(9) Repair or maintenance or of existing small structures or improvements (including structures and improvements utilized to restore disturbed or altered wetland, riparian, in stream, or native habitat conditions). Examples of such activities include the repair or stabilization of existing stream crossings for livestock or human passage, levees, culverts, berms, and dikes, and associated appurtenances.

(10) Construction of small structures or improvements for the restoration of wetland, riparian, in stream, or native habitats. Examples of activities include: (1) installation of fences; and (2) construction of small berms, dikes, and associated water control structures.

TVA notes that covered actions are for restoration purposes. However, the actions are similar in nature to those of proposed CE #33. NRCS found that such actions do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.33-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.33-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #33	DHS	DOE	USFWS	NRCS
Streambank stabilization to protect natural and cultural resources	X	X	X	X
Installation of fences, gates, and signs	X	X	X	X

As noted above, the federal agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. The DHS CE is broadly defined and could be reasonably applied to actions of the proposed CE #33. The DOE, USFWS, and NRCS CEs include streambank stabilization activities, although they emphasize biostabilization instead of the use of riprap. They also include activities regarding construction of small water control structures, berms, dikes, or fish attractors. The USFWS and NRCS CEs include revegetation and the installation of fences, which are similar in nature to measures taken to protect any resource by enclosure. The USFWS CE B.3v covers the development of limited access for routine maintenance and management purposes.

All of the activities included in TVA’s proposed CEs would occur within a similar environmental context to those actions performed by the federal agencies listed in the table and covered by those agencies’ CEs. For these particular CEs, the setting would occur near aquatic areas for TVA’s activities as well as for the other federal agencies.

3.33.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a

review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.33.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. TVA identified only minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in the ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.34 CE 34 - REBURIALS OF REMAINS & OBJECTS

TVA proposes to establish a new CE for actions pertaining to the reburial of Native American human remains and funerary objects on TVA land. Actions would be subject to the requirements of the Native American Grave Protection and Repatriation Act (NAGPRA).

3.34.1 Proposed Categorical Exclusion Text

Reburial of human remains and funerary objects under the Native American Graves Protection and Repatriation Act that are inadvertently discovered or intentionally excavated on TVA land.

After publishing the Proposed Rule in June 2017, TVA received public comments that indicated confusion regarding the scope of this proposed CE. The proposed CE addresses actions relating to the reburial of human remains and funerary objects after the NAGPRA process has been completed. TVA NEPA staff worked with the TVA NAGPRA officer to revise the text to clarify that such actions would be subject to NAGPRA requirements. The new text in this CE definition reflects terms specifically defined by NAGPRA, and a new timeframe limitation was added. Only reburial of objects or remains recovered after November 16, 1990 (the date NAGPRA was enacted) would be covered under the proposed CE because such reburials are most likely to be small-scale and involve minimal disturbance to the environment.

3.34.2 Background

TVA manages over 11,500 archaeological sites on or adjacent to its reservoir and power properties. Native American human remains and funerary objects are found in a large number of these archaeological sites. As a federal agency, TVA is responsible for protecting these resources pursuant to various laws and regulations, including NAGPRA. NAGPRA places two important responsibilities on federal agencies. It requires federal agencies and museums to inventory Native American human remains, funerary objects, sacred objects and objects of cultural patrimony in their control or possession and repatriate those items to a lineal descendant or affiliated Native American Tribe, and it establishes regulations and procedures for the intentional excavation or inadvertent discovery of Native American remains and associated objects on federal or tribal lands.

Human remains and funerary objects are also removed from their primary resting place through shoreline erosion and unauthorized excavation. NAGPRA and its implementing regulations address the process where control of Native American human remains and funerary objects are passed from TVA to a lineal descendant or a federally recognized Tribe or Tribes.

The proposed CE addresses actions relating to the reburial of human remains and funerary objects after the NAGPRA process has been completed. Reburial of Native American human remains and funerary objects is not addressed in NAGPRA. It is, however, a logical next step after control of NAGPRA items has shifted from TVA to a lineal descendant or a federally recognized Tribe or Tribes. TVA has had formal government-to-government consultation workshops with federally recognized Native American tribes in 2002, 2007, 2012, 2014 and 2017. TVA's Native American stake-holders have been consistent in their request that human remains and funerary objects be returned to the ground in a spot near the original burial location.

A TVA-action triggering NEPA and falling under the proposed CE would occur only if, by agreement with the stake-holders, it is determined that the action would occur on TVA property.

Typically, according to TVA NAGPRA program procedures, a TVA cultural resources specialist or tribal liaison would coordinate with the Native American stake holder to determine if reburial on land owned or controlled by TVA is preferred. If so, a suitable reburial location on TVA land is found. Considerations made to locate a suitable site include whether: the items can be returned to the same location or within view of the location; whether any undisturbed archaeological deposits would be disturbed by reburial; whether the site is secure; or how the reburial location may be accessed to conduct the reburial. TVA staff review the applicable land use plan to verify whether reburial is a suitable use of the location and to ensure that the area has not been zoned for a function that could lead to further disturbance of the human remains and funerary object.

Under TVA's procedures, once stake holders agree with the location, TVA staff complete a CEC review, which under TVA procedures would be confidential given the sensitive nature of the action (if the results of the CEC indicate that the area has environmental concerns, TVA staff will take reasonable effort to identify a suitable alternative reburial location).

Typical ground-disturbing actions undertaken as part of the reburial process are very limited in scope. Generally, TVA staff may clear vegetation, clear a small pathway, and/or excavate an appropriate pit for reburial. The size and depth of the pit is determined by the size of the items and the wishes of the lineal descendant or tribe. After the burial, the site is reclaimed and the location is recorded to ensure that future TVA land actions do not disturb the remains or objects. (TVA, 2015g)

As a result of the government-to-government consultation between TVA and federally recognized Native American tribes, and continued shoreline erosion and unauthorized excavations, TVA anticipates that an increasing number of these actions will be occurring in the future.

3.34.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE #34 could be categorically excluded, TVA NEPA staff reviewed past documentation of NEPA reviews to verify that such actions are minor and would not result in significant environmental effects. TVA reviewed relevant existing CEC in the ENTRAC database and searched for relevant EA or EIS records and for similar CEs established by other agencies.

3.34.3.1 TVA Experience with Relevant Existing CEs and EAs

TVA found three examples of reburial actions that support our finding that such actions are minor and would not result in significant effects:

- *CEC 31759: Reburial of previously disturbed cultural resources (Watts Bar Reservoir), 12/17/2014, CE 5.2.1*
- *CEC 33465: Partnership with tribe for reburial of cultural resources on TVA land (Clinch River, Anderson County, TN), 10/7/2015, CE 5.2.24*

- *CEC 34546: Reinterment of remains/artifacts on TVA land, Nickajack Reservoir (2'x2' hole dug by hand tools), 4/18/2016, CE 5.2.11*

In the past, TVA staff have cited three different existing CEs when completing the CEC review of the proposed action: CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*); CE 5.2.11 (*Property protection, law enforcement, and other legal activities*); and CE 5.2.24 (*Minor non-TVA activities on TVA property authorized under contract or license, permit and covenant agreements, including utility crossings, encroachments, agricultural uses, rental of structures, and sale of miscellaneous structures and materials from TVA land*). This inconsistent approach may reflect that none of TVA's existing CEs explicitly list this type of activity in the definition of the CE. Establishing a specific CE for these burial actions would reduce the potential for inconsistencies.

TVA NEPA staff reviewed its NEPA records and found no record of an EA or EIS level review of the reburial of remains or funerary objects. This can be attributed to the very minor scope of the activities that are involved as well as the fact that such actions have been relatively uncommon, as the TVA Cultural resources staff have continued coordination and policy development. TVA NEPA staff reviewed the categorical exclusions of other agencies. No similar CEs of other agencies were identified on which to benchmark TVA's proposed CE.

3.34.3.2 Potential Environmental Effects

As indicated in the text of the proposed CE and in the description of TVA practices above, activities under the proposed CE that could have environmental effects are generally limited to the limited removal of vegetation in order to establish a clearing for a burial pit and for accessing the burial pit location. Generally, minor, short term effects to vegetation and soils could occur from surface disturbing activities. In addition, digging the pit itself would result in a small disturbance to the location of the site and soils.

By following TVA procedures for identifying appropriate burial locations, potential disturbance to cultural resources, rare plants or wildlife, wetlands, or other sensitive resources would be avoided. None of the previous TVA reviews of burial actions identified any potential for significant environmental effects associated with the actions.

3.34.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.34.5 Conclusion

Upon consideration of the minor actions that would be included under the proposed CE, as well as a review of TVA's previous use and review of relevant CEs, TVA has determined that such actions are limited in scope and scale and would not individually or cumulatively result in significant effects. TVA identified only minor, temporary and localized adverse effects may

result from reburial actions. TVA procedures and coordination with affected stakeholders would ensure that appropriate locations for burials are thoroughly reviewed. In addition, TVA specialists would complete a CEC in the ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.35 CE 35 - WELLS

TVA proposes to establish a new CE for certain actions relating to wells.

3.35.1 Proposed Categorical Exclusion Text

Installation or modification (but not expansion) of low-volume groundwater withdrawal wells (provided that there would be no drawdown other than in the immediate vicinity of the pumping well and that there is no potential for long-term decline of the water table or degradation of the aquifer), or plugging of groundwater or other wells at the end of their operating life. Site characterization must verify a low potential for seismicity, subsidence, and contamination of freshwater aquifers.

After publishing the Proposed Rule in June 2017, TVA received numerous comments expressing concern that the proposed CE was defined so broadly that the CE covered installation of large water supply wells that may impact municipal water supplies. In proposing the CE, TVA had no intention to include such large, high-volume withdrawal wells with the potential to have such impacts within the scope of this CE. TVA's intent was to identify a category applying only to small, local water supply wells that provide potable water at a campsite or facility. TVA has revised the proposed CE to ensure that its scope only includes small-scale actions. As revised, the CE would include the installation or modification of only small, low-volume wells, subject to several limitations (these limitations are based largely on a DOE CE (B1.18), as addressed below in Section 3.35.3).

TVA also removed from the definition the "abandonment" of groundwater or other wells in response to one public comment. The commenter believed that including the term in the proposed CE would allow TVA to "walk away" and abandon a problematic well, without any remediation. The intent of these plugging actions would be to *avoid and mitigate* potential environmental issues related to abandoned wells, not to "abandon" them in a problematic state. Deleting the term avoids any confusion regarding the intent and scope of the covered action.

3.35.2 Background

TVA routinely installs small-volume groundwater withdrawal wells to support a variety of operations. Generally, actions associated with wells occur at existing TVA facilities. The most common type of wells drilled and utilized by TVA is used for monitoring water quality at TVA facilities. Other common types of wells include wells for sources of water at recreation sites or other small facilities. The proposed CE would include the installation of new groundwater wells in addition to the plugging or abandonment of existing wells of any type.

Typically, installation of a well involves digging, drilling, boring and/or driving into the ground to a desired depth to access subsurface resources such as groundwater in underground aquifers or to sample soils. Drilling activities involve the transport and set up of drill rigs for subsurface drilling and well installation and may include minor clearing for access roads and the well location. (Note, such equipment is also used for preliminary siting studies for new facilities and the condition of various infrastructure; soil borings of this type, conducted for the purpose of site studies, is an action of proposed CE #13, discussed above). Borings to establish wells may be performed using either truck or track-mounted drill rigs. Equipment could include drilling rigs

with all-terrain vehicles, four-wheel drive trucks, process water trucks and air rotary rigs. Water from the drilling/boring may be discharged to the ground, a tank, or a water body, consistent with standards required by State regulations and best management practices employed by TVA to ensure activities are conducted safely and do not contaminate water resources.

TVA also has experience in plugging wells that are no longer in service or pose a threat to public safety or to ground water resources. Wells are typically plugged by backfilling the shaft with soil and bentonite clay to ensure surface water does not enter the well and that site is stable. Often, this involves the use of grout injected into the well to fill the shaft. Actions to install new water monitoring wells also involve the plugging and abandonment of previously used wells, so multiple wells may be addressed by one project.

The proposed CE is not intended to apply to installation of large-volume water supply wells or wells for oil or gas exploration or production, but the CE may be applied to plugging or abandoning such wells.

The proposed CE was revised to identify several limits to the scope of covered actions. New wells must be small-volume, not drawdown the water table, or degrade an aquifer, and must have low potential for seismicity, subsidence, and contamination of freshwater aquifers. These limiting factors are similar to those that other federal agencies apply in established CEs. See the discussion below on the benchmarked CEs.

3.35.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on the information and analyses summarized below, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.35.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in a few activities similar to those proposed in CE #35. Previous application of TVA CEs to such activities indicates that these activities were found to have no potential to produce significant harm to the quality of the human environment.

For example, since 2002, TVA has documented dozens of individual activities involving the installation, maintenance or closure of wells. For most of these CECs, TVA staff applied existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). In most cases, TVA proposed actions involved installing, maintaining or closing multiple wells under one CEC review. While the majority of these wells are for monitoring groundwater, the proposed CE does not specify the purpose of the wells. Examples of relevant CECs or generic CECs documented under existing CE 5.2.1 include:

- *CEC 35540: Colbert Groundwater Well Redevelopment, (11/02/2016)*
- *CEC 35492: Widows Creek Groundwater Well Installation (6 wells), Well Redevelopment (13 wells), and Closure of Existing Wells (37 wells), (10/07/2016)*
- *CEC 35415: Colbert Monitoring Well Redevelopment (37 wells), (8/29/2016)*
- *CEC 35274: Gallatin Monitoring Well Installation (10 wells), Redevelopment and Closure of Existing Wells (6 wells), (8/11/2016)*
- *CEC 35202: Widows Creek Monitoring Well Installation (6 wells), Well Redevelopment (13 wells), and Closure of Existing Wells (35 wells), (8/04/2016)*
- *CEC 34927: Gallatin Monitoring Well Installation (9 wells), Well Redevelopment (22 wells), and Closure of Existing Wells (11 wells), (6/16/2016)*
- *CEC 34767: Watts Bar Groundwater Monitoring Well Installation (5 wells), (8/19/2016)*
- *CEC 34739: Colbert Groundwater Monitoring Well Installation (7 wells), (6/08/2016)*
- *CEC 34513: Cumberland Groundwater Monitoring Well Installation (13 wells), Installation of One Piezometer, Well Redevelopment (6 wells), and Closure of Existing Wells (15 wells), (4/15/2016)*
- *CEC 34209: Kingston Groundwater Wells Maintenance and Redevelopment (30 wells), (2/16/2016)*
- *CEC 33781: Paradise Coal Wash Plant Well Closures (4 wells), (12/07/2015)*
- *CEC 33780: Johnsonville Well Closure and Plugging (3 wells), (12/15/2016)*
- *CEC 33550: Paradise Monitoring Well Installation (10 wells), (8/24/2016)*
- *CEC 33445: Watts Bar Fossil Groundwater Monitoring Well Installation (8 wells), (10/21/2015)*
- *CEC 33323: John Sevier Monitoring Well Installation (5 wells), (10/04/2015)*
- *CEC 33020: Browns Ferry Groundwater Monitoring Well Installation (15 wells), (8/17/2015)*
- *CEC 31253: Browns Ferry Groundwater Monitoring Well Installation (10 wells), (10/23/2014)*
- *CEC 30153: Magnolia CC Well Installation (1 well), (9/09/2014)*
- *CEC 29637: Colbert Well Abandonment (1 well), (1/16/2014)*
- *CEC 28510: Well Closure on TVA Property on Wheeler Reservoir (1 well), (10/29/2013)*
- *CEC 27523: Blue Ridge Hydro Plant Dewatering Well Installation, (1/03/2013)*
- *CEC 27121: Colbert Monitoring Well Installation, (10/02/2012)*
- *CEC 26017: Kingston Well Installation (10 wells), (3/05/2012)*
- *CEC 25003: Gallatin Groundwater Well Installation (multiple wells), (9/02/2011)*
- *CEC 23115: Johnsonville Groundwater Well Installation, (11/01/2012)*
- *CEC 23027: Paradise Groundwater Well Installation (4 wells), (11/15/2010)*
- *CEC 23026: Gallatin Groundwater Well Installation (4 wells), (11/09/2010)*
- *CEC 23022: Johnsonville Groundwater Well Installation (3 wells), (9/09/2010)*
- *CEC 23021: Cumberland Groundwater Well Installation (2 wells), (10/29/2010)*
- *CEC 23020: John Sevier Groundwater Well Installation (2 wells), (9/22/2010)*
- *CEC 23019: Bull Run Groundwater Well Installation (2 wells), (9/09/2010)*
- *CEC 23016: Widows Creek Groundwater Well Installation (2 wells), (11/01/2010)*
- *CEC 23014: Colbert Groundwater Monitoring Well Installation (2 wells), (9/22/2010)*

- *CEC 19897: Caledonia CC Well Installation for Fire Protection Water Supply, (9/21/2009)*
- *CEC 18279: Fossil Power Group Generic Groundwater Well Installation, (11/03/2010)*
- *CEC 13437: Sequoyah Groundwater Well Installations (multiple wells), (3/10/2011)*
- *CEC 13247: Bellefonte Well Closure (6 wells), (6/28/2006)*
- *CEC 10896: Fossil Power Group Generic Well Replacement, (9/27/2005)*
- *CEC 8911: Scottsboro Power Service Center Monitoring Well Abandonment (24 wells), (2/17/2015)*
- *CEC 8178: Fossil Power Group Generic Groundwater Well Closure, (10/27/2004)*
- *CEC 6956: Sequoyah Groundwater Monitoring Well Installation (7 wells), (5/07/2004)*
- *CEC 4883: Watts Bar Nuclear Groundwater Monitoring Well Installation (3 wells), (10/03/2003)*
- *CEC 4086: Paradise Groundwater Monitoring Well Closures (7 wells), (6/11/2003)*
- *CEC 3265: Watts Bar Nuclear Groundwater Monitoring Well Installations (4 wells), (3/19/2003)*
- *CEC 2119: Watts Bar Nuclear Radiation Monitoring Well Installations (4 wells), (3/26/2003)*

3.35.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Only three EAs and FONSI were found in TVA records, which reflects that TVA staff typically completed CEC-level reviews rather than address such actions by completing EA-level reviews.

Table 3.35-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ROD Issued
TVA administration of Appalachian Regional Commission (ARC) grant to the Town of Belmont, Mississippi, for a water well in an industrial park EA	Belmont, MS	4/6/1998
TVA Economic Development Loan of \$200,000 from EDLF Funds to help finance a water tank and well EA	Leake, MS	9/5/2000
Potter’s Ford Well Remediation EA	Cumberland County, TN	4/30/2014

The following NEPA documents are illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Potter’s Ford Well Remediation EA and FONSI: In 2014, TVA funded the plugging and remediation of an abandoned oil and gas well in Cumberland County, Tennessee, as part of an Environmental Restoration and Enhancement Project to compensate for the impacts of the Kingston Fossil Plant ash spill in 2008. The well, located within a wildlife management area and adjacent to the Obed Wild and Scenic River, was known to discharge a mixture of oil, gas, and

water to the surface and into Underwood Branch. TVA found that reclamation of the well location would result in minor, short-term disturbance to wildlife, vegetation, visual resources and natural areas during activities and beneficial effects to groundwater by ending the potential for contaminants to leak from the well to groundwater. Special measures were employed to ensure that remediation did not affect adjacent aquatic resources. (TVA, 2014d) In its review, TVA referenced an EA completed by the National Park Service for *Oil and Gas Well Plugging and Reclamation in the Big South Fork National River and Recreation Area* (January 2010), which reviewed similar actions to plug and reclaim 45 wells in the Recreation Area (NPS, 2010). This action (i.e., the remediation of an oil and gas well) had a higher potential for environmental impacts than the typical well-plugging/abandonment action taken by TVA. The TVA and NPS EAs supports TVA's finding that such actions would not have a significant environmental effect.

Water Tank and Well - Walnut Grove Youth Correctional Facility EA: In 2000, TVA reviewed financing the installation of a water tank and well for the State facility with a population of up to 400 residents and studied the effects of the action on the community's groundwater levels. TVA found that the drilling actions would not generate waste, as all materials would be non-toxic, and that ground disturbance would be minor. TVA also found that the affected aquifer would be able to support the new well and water usage. Like the Potter's Ford action, the action under review in this EA was atypical of common TVA actions. (TVA, 2000c)

3.35.3.3 Potential Environmental Effects

The listed CECs and EAs above were used as sources of information for the discussion of potential environmental effects below. As indicated in the text of the proposed CE, activities under the proposed CE include the installation, modification (but not expansion) or plugging and abandonment of wells. However, such actions could be undertaken only at those sites where TVA has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers. Based on previous NEPA reviews of such activities, TVA has found that several environmental resources may be affected by such activities; however, they do not have significant environmental effects.

Water Resources: Minor, short term effects to water resources could occur if well installation (drilling, boring, excavation) were to occur within or adjacent to water sources. Minor impacts may occur from the disposal of excavated soils or from wastes generated by the equipment used to install new wells or modify, plug or abandon existing wells. (TVA, 2014d) Major impacts to aquifers from limited well installation and resulting water usage would be unlikely. (TVA, 2000c). TVA would continue to comply with the Clean Water Act through its environmental review process and with applicable state and local requirements. The CE would be limited to locations where contamination of freshwater aquifers would not occur.

Vegetation and Soils: Minor vegetation and ground disturbance would typically occur at well locations and to provide access to the site. Activities under the proposed CE are typically limited to small areas; plugging and abandonment of wells would occur in previously disturbed areas. (TVA, 2014d) The CE would be limited to locations where ground subsidence is unlikely.

Hazardous Waste: Contaminants or hazardous waste could be generated from some of the activities under the proposed CE. Potential impacts may vary by the type of well being plugged or abandoned. Best management practices and compliance with applicable procedures ensure such impacts are minor and short-term. Removal and disposal of hazardous materials would

occur in accordance with applicable TVA, state and federal requirements to limit effects on human health and safety.

Solid Waste: Solid waste could be generated from some of the activities under the proposed CE. These solid wastes would be handled in accordance with applicable TVA, state, and federal regulations and any effects from them would be minor.

Public Safety: Plugging and abandonment actions would generally have a beneficial effect because of the potential dangers posed to the public at well locations.

Cultural Resources: TVA would conduct site reviews prior to installing wells to ensure cultural resources are not impacted. Sites of existing wells have typically been previously disturbed which reduces the potential for impacts to cultural resources. TVA would conduct appropriate consultation under Section 106 of the National Historic Preservation Act when actions involve structures greater than 50 years old. (TVA, 2014d)

Summary: TVA NEPA records have shown that activities contemplated under the CE could have minor, localized short-term adverse effects. The records show that such actions would not cause significant environmental effects. Installation of new wells would be limited to new groundwater wells, not oil or gas wells. The CE would be applied only where it has been verified that actions would occur in areas where there is a low potential for seismicity, subsidence, and contamination of freshwater aquifers. In addition, because many of the plugging/abandonment actions would occur at previously disturbed sites, there would be minimal effects to natural resources.

3.35.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. TVA identified five Department of Energy CEs relating to wells that are relevant to the proposed CE.

TVA found that it would be conducting activities similar in size and under similar resource conditions and with similar environmental effects as those that DOE may categorically exclude. The CEs from DOE provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively. The most applicable of DOE's CEs are the B1.18, B3.7 and B5.3, although B3.7 includes may be used for injection wells, which are actions not proposed by TVA to fall under proposed CE #35. The workover of existing wells (B5.12) and experimental carbon sequestration wells (B5.13) are not actions TVA regularly conducts, but the CEs are noted here because the types of impacts of such actions are similar to those falling under the scope of TVA's proposed CE.

Department of Energy CEs [B1.18](#), [B3.7](#), [B5.3](#), [B5.12](#), and [B5.13](#) (76 FR 63764, 2011)

B1.18 Water Supply Wells:

Siting, construction, and operation of additional water supply wells (or replacement wells) within an existing well field, or modification of an existing water supply well to restore production, if provided that there would be no drawdown other than in the immediate vicinity of the pumping well, and the covered actions would not have the potential to cause significant long-term decline of the water table, and would not have

the potential to cause significant no degradation of the aquifer from the new or replacement well.

B3.7 New terrestrial infill exploratory and experimental wells:

Siting, construction, and operation of new terrestrial infill exploratory and experimental (test) wells, for either extraction or injection use, in a locally characterized geological formation in a field that contains existing operating wells, properly abandoned wells, or unminable coal seams containing natural gas, provided that the site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers, and the actions are otherwise consistent with applicable best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials. Such wells may include those for brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil. Uses for carbon sequestration wells include, but are not limited to, the study of saline formations, enhanced oil recovery, and enhanced coalbed methane extraction.

B5.3 Modification or abandonment of wells:

Modification (but not expansion) or plugging and abandonment of wells, provided that site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers, and the actions are otherwise consistent with best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials. Such wells may include, but are not limited to, storage and injection wells for brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil. Covered modifications would not be part of site closure.

B5.12 Workover of existing wells:

Workover (operations to restore production, such as deepening, plugging back, pulling and resetting lines, and squeeze cementing) of existing wells (including, but not limited to, activities associated with brine, carbon dioxide, coalbed methane, gas hydrate, geothermal, natural gas, and oil) to restore functionality, provided that workover operations are restricted to the existing wellpad and do not involve any new site preparation or earth work that would have the potential to cause significant impacts on nearby habitat; that site characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers; and the actions are otherwise consistent with best practices and DOE protocols, including those that protect against uncontrolled releases of harmful materials.

B5.13 Experimental wells for injection of small quantities of carbon dioxide:

Siting, construction, operation, plugging, and abandonment of experimental wells for the injection of small quantities of carbon dioxide (and other incidentally co-captured gases) in locally characterized, geologically secure storage formations at or near existing carbon dioxide sources to determine the suitability of the formations for large-scale sequestration, provided that (1) the characterization has verified a low potential for seismicity, subsidence, and contamination of freshwater aquifers; (2) the wells are otherwise in accordance with applicable requirements, best practices, and DOE protocols, including those that protect against uncontrolled releases of harmful

materials; and (3) the wells and associated drilling activities are sufficiently remote so that they would not have the potential to cause significant impacts related to noise and other vibrations. Wells may be used for enhanced oil or natural gas recovery or for secure storage of carbon dioxide in saline formations or other secure formations. Over the duration of a project, the wells would be used to inject, in aggregate, less than 500,000 tons of carbon dioxide into the geologic formation. Covered actions exclude activities in aquatic environments. (See B3.16 of this appendix for activities in aquatic environments.)

Several of these CEs (B1.18, B3.7, B5.3 and B5.12) were revised in the DOE's most recent revisions to its NEPA procedures. DOE reviewed the environmental effects of these activities to conclude that they do not individually or cumulatively result in significant environmental effects. Further, in supporting CE B5.13 in its 2011 administrative record, DOE noted that the CE was supported by its National Energy Technology Laboratory's experience with carbon-sequestration wells and the associated environmental reviews supported the DOE conclusion that such actions would not have the potential to cause significant impacts. (DOE, 2011a)

3.35.5 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.35.6 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and the CEs of other federal agencies shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. TVA's experience, expertise and best management practices in conducting these actions reduce the potential for such impacts. TVA specialists would complete a CEC in ENTRAC for such actions to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by these CE.

3.36 CE 36 - FACILITIES-BASED, ROUTINE, IN-KIND ACTIVITIES

TVA proposes to establish a new CE for routine, in-kind actions at TVA facilities and grounds. This proposed CE is one of several new CEs that address the category of actions under existing CE 5.2.1, which is currently one of the most frequently used and relied upon CE in TVA's NEPA procedures.

3.36.1 Proposed Categorical Exclusion Text

Routine operation, repair or in-kind replacement, and maintenance actions for existing buildings, infrastructure systems, facility grounds, public use areas, recreation sites, and operating equipment at or within the immediate vicinity of TVA's generation and other facilities. Covered actions are those that are required to maintain and preserve assets in their current location and in a condition suitable for use for its designated purpose. Such actions will not result in a change in the design capacity, function, or operation. (Routine actions that include replacement or changes to major components of buildings, facilities, infrastructure systems, or facility grounds, and actions requiring new permits or changes to an existing permit(s) are addressed in CE 37). Such actions may include, but are not limited to, the following:

- a. Regular servicing of in-plant and on-site equipment (including during routine outages) such as gear boxes, generators, turbines and bearings, duct work, conveyers, and air preheaters; fuel supply systems; unloading and handling equipment for fuel; handling equipment for ash, gypsum or other by-products or waste; hydropower, navigation and flood control equipment; water quality and air emissions control or reduction equipment; and other operating system or ancillary components that do not increase emissions or discharges beyond current permitted levels;*
- b. Regular servicing of power equipment and structures within existing transmission substations and switching stations;*
- c. Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, weather stations, and flumes);*
- d. Routine cleaning and decontamination, including to surfaces of equipment, rooms, and building systems (including HVAC, septic systems, and tanks);*
- e. Repair or replacement of plumbing, electrical equipment, small HVAC systems, sewerage, pipes, and telephone and other communication service;*
- f. Repair or replacement of doors, windows, walls, ceilings, roofs, floors and lighting fixtures in structures less than 50 years old;*
- g. Painting and paint removal at structures less than 50 years old, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements;*
- h. Recycling and/or removal of materials, debris, and solid waste from facilities, in accordance with applicable requirements;*
- i. Grounds keeping actions, including mowing and landscaping, snow and ice removal, application of fertilizer, erosion control and soil stabilization measures (such as reseeding and revegetation), removal of dead or undesirable vegetation with a*

- diameter of less than 3 inches (at breast height), and leaf and litter collection and removal;*
- j. Repair or replacement of gates and fences;*
 - k. Maintenance of hazard buoys;*
 - l. Maintenance of groundwater wells, discharge structures, pipes and diffusers;*
 - m. Maintenance and repair of process, wastewater, and stormwater ponds and associated piping, pumping, and treatment systems;*
 - n. Maintenance and repair of subimpoundments and associated piping and water control structures;*
 - o. Debris removal and maintenance of intake structures and constructed intake channels including sediment removal to return them to the originally-constructed configuration; and*
 - p. Clean up of minor spills as part of routine operations.*

After publishing the Proposed Rule in June 2017, TVA made several changes to the proposed CE's definition to improve clarity and address concerns raised by the public. TVA removed the adjectives "substantial" and "substantially" in the definition based on a comment stating that the use of the term may result in confusion about when it would be appropriate to apply the CE.

TVA added an example to reflect that the proposed CE would cover regular servicing of equipment at existing transmission substations and switching stations, and added a few additional examples of equipment that may be maintained in this category of actions, including small HVAC systems and tanks. Minor revisions were made to item (e) to ensure the CE is not applied to larger "utility" or "pipeline" infrastructure actions. TVA also removed two example actions because, upon additional internal review, it was determined that these actions were substantially the same as those described under proposed CE #44.

3.36.2 Background

Since its establishment in 1933, TVA has been constructing and maintaining power plants and other facilities needed to ensure the reliable and economical generation and transmission of electric power for more than 9 million people in parts of 7 southeastern states. TVA must maintain its facilities and structures necessary to supply power to its customers, provide recreational opportunities, facilitate navigation, and support other activities to fulfill its mission.

As of fiscal year 2013, TVA owned more than 2,500 buildings and leased an additional 35, equaling about 30 million square feet to manage. In 2018, TVA power facilities include 6 coal-fueled plants, 3 nuclear plants, 29 hydro plants, 18 natural gas-fueled plants, 15 solar energy sites, 1 wind energy site, and 1 pumped-storage hydroelectric plant. TVA's footprint is large and its facilities include a large amount of equipment, much of which is old or in need of repair or replacement. TVA thus has an ongoing need to maintain and repair older, malfunctioning equipment, or to replace or upgrade older equipment in order to increase efficiency.

TVA also regularly engages in other types of maintenance activities on its facilities and equipment, such as cleaning, painting, decontamination of equipment, repaving/resurfacing of parking areas, and the landscape maintenance of its grounds. TVA has many years of experience

with the routine operation, repair or in-kind replacement, and maintenance activities for existing buildings, infrastructure systems, facility grounds, and operating equipment.

Since 1983, the activities under this proposed CE have been primarily categorized under TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). Through the development of CE #36, as well as the new CEs #37, #38, and #39, TVA is proposing to provide more specific definitions of the activities that have been carried out under existing CE 5.2.1. The proposed new CEs are more refined (limited in scope), and provide examples activities within each CE. The proposed CEs (CE #36, #37, #38, and #39) would provide TVA specialists with clear guidance on which CE is the best fit for their proposed action. TVA NEPA staff anticipate that having four distinct CEs instead of one broad CE (5.2.1) would save TVA specialists time and resources.

This proposed CE is intended to address TVA's need to maintain its current infrastructure, equipment, and facilities. CE #36 is designed to address activities that are entirely routine and have no potential to significantly affect the environment—the repair or in-kind replacement of existing equipment. TVA NEPA staff anticipate this CE being applied on a regular basis because these types of routine maintenance activities are critical for TVA to continue operations of its facilities.

The language of the proposed CE was developed to identify activities with limited environmental effects. Generally, based on TVA's experience, a proposal would be considered minor if it would not result in an alteration to or change of a land use, facility, piece of equipment, facility or equipment operation, or production of emissions, discharges or wastes. Activities conducted under the proposed CE would not result in a significant change in the expected useful life, design capacity, function, or operation of TVA assets, nor require additional ground disturbance or an increase of waste generation or emissions.

It is important to note that these routine activities do not include replacement of a major component of a TVA facility that would significantly extend the originally intended useful life of an existing TVA asset. TVA included in the CE's definition clarification that CE #35 does not include routine actions that include replacement or changes to major components of buildings, facilities, infrastructure systems, or facility grounds, and actions requiring new permits or changes to an existing permit(s).

3.36.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE does not individually or cumulatively have a significant effect on the quality of the human environment.

3.36.3.1 TVA Experience with Relevant Existing CEs

TVA NEPA staff reviewed the ENTRAC database for previous uses of related existing CEs since 2002, and found many instances of activities similar to those included in the proposed CE. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Many of the activities included in the proposed CE, and within existing CE 5.2.1, are considered so routine, and repeated so often, without any significant environmental effects, that several TVA business units have created “generic” CECs in the ENTRAC database system as a way to streamline environmental documentation procedures. Generally, a generic CEC was created once for a set of activities at a single facility or multiple similar facilities, and then the generic CEC was referred to each time thereafter that one or more of the activities was proposed. TVA staff verified that the proposed action was covered by one of the generic CECs and recorded the generic CEC number in their project files before proceeding with the action, rather than creating a new CEC in ENTRAC for each proposed action. The use of generic CECs is indicative of how routine the activities within the proposed CE are and how often they are conducted without adverse individual or cumulative effects on the environment.

TVA’s ENTRAC review identified more than 1,800 CECs that included facility or equipment repair or replacement actions, and 82 CECs related to painting. In most cases, TVA staff cited in the CEC to existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). Some used CE 5.2.18 (*Construction and operation of communication facilities (i.e., powerline carrier, insulated overhead ground wire, VHF radio, and microwave)* or CE 5.2.26 (*Approvals under Section 26a of the TVA Act of minor structures, boat docks, and shoreline facilities*).

As noted above, existing CE 5.2.1 addresses many of the activities included in the proposed CE, in addition to those mentioned in the previous paragraph. TVA has used CE 5.2.1 over 5,600 times since 2002. Additionally, many of the generic CECs created by TVA staff also include activities included in the proposed CE.

Examples of relevant CECs or generic CECs documented under CE 5.2.1 include:

- *CEC 35502: Generic - Reservoir Release Improvements Oxygen Diffuser Line Replacement, (9/9/2016), CE 5.2.1*
- *CEC 34347: Generic - Replacement of Pressure Relief Devices at Hydro Plants (3/29/2016), CE 5.2.1*
- *CEC 28256: Replacement of Vibration Monitors (Generic), River Operations, (4/12/2013), CE 5.2.1*
- *CEC 27783: Routine maintenance to vacuum sediment from the FGD stormwater pond, (1/28/2013)*
- *CEC 25079: Facilities Operations and Maintenance – Replace Production Copier Equipment, (9/6/2011)*
- *CEC 17196: Generic – Routine Repairs of Existing Mooring Cells, (5/29/2008)*
- *CEC 10142: Generic Upgrade and Maintenance of Lighting Equipment, (2/1/2006)*

- *CEC 23691: BLN Generic CEC – Underground Piping Repair, (3/25/2011)*
- *CEC 10897: PSS Old Maintenance HVAC Installation, (9/29/2005)*
- *CEC 7950: Hiwassee Hydro Elevator Repair, (9/28/2004)*
- *CEC 5817: Watts Bar Lock – Repair of Leakage Through Lock Wall – Remedial Water Stop Repair – Monolith Joint R-5/R-6, (2/5/2004)*
- *CEC 4966: Repair Concrete Spalls in Ceiling of Turbine and Generator Room, (10/16/2003)*
- *CEC 4547: Generic – Water Pump Test, (10/14/2003)*
- *CEC 10896: Generic – FPG Groundwater Well Replacement, (03/31/2003)*
- *CEC 3057: Douglas Hydro Plant – Repair of Surface Water Pump Connections. (3/2/6/2003)*
- *CEC 1241: Generic Grounds Maintenance Activities, (12/13/2002)*
- *CEC 2825: Maintenance on Transformers in Switchyard, (4/21/2003), CE 5.2.1*
- *CEC 2125: Kingston, Dandridge, Guntersville, and Big Sandy Pumping Stations – Routine Maintenance Activities, (12/11/2002)*
- *CEC 2238: Wheeler – Fence Repair and Modification, (12/10/2002)*
- *CEC 2237: Watauga – Repairs to Bridges – Roadway and Access to Powerhouse. (12/10/2002)*
- *CEC 407: Ocoee 1, 2, 3 – Repairs to Access Ladder, (10/31/2002)*
- *CEC 168: Generic Painting and Floor Maintenance, (9/9/2002)*
- *CEC 931: Repair elevator, (7/18/2002)*
- *CEC 2027: Generic FPG – Solid Waste Collection and Recycling of Scrap Metal, (05/6/2003)*
- *CEC 438: Hartsville Maintenance Facility Structures Painting Project, (5/6/2002)*
- *CEC 8515: Generic – Repair or Replace Flooring (09/27/2005)*
- *CEC 711: Generic FPG – Removal of Asbestos Material (10/27/2004), CE 5.2.1*
- *CEC 22447: WIH Spillway Gate 4 Debris Removal, (7/7/2010), CE 5.2.1*
- *CEC 2880: Debris Cleanup – Oakfield, (2/5/2003), CE 5.2.27*

3.36.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous EAs and FONSI. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.36-1.

Table 3.36-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Bellefonte Site Utility Improvements EA	Jackson County, AL	4/25/2014
Installation of Emission Control Equipment and Associated Facilities at Gallatin Fossil Plant EA	Sumner County, TN	3/11/2013
Replacement of Structure 7 – Kentucky Hydroelectric Plant-Gilbertsville 69-kiloVolt Transmission Line, Kentucky Dam Reservation EA	Livingston County, KY	6/15/2010

Title	Location	Date FONSI Issued
Kingston Fossil Plant Ash Recovery – Utility Restorations and Enhancements EA	Roane County, TN	12/22/2009
Revised Finished Waterline Installation Plans Sevierville Water Systems Raw Water Intake and Water Treatment Plant at French Broad River Mile 27.5L EA	Sevier County, TN	7/7/2006
SCR Catalyst Replacement – Allen Fossil Unit 2 EA	Shelby County, TN	8/20/2004
Hallsdale – Powell Norris Water Treatment Plant EA	Union, TN	8/20/2004
Replacement of Steam Generators at Sequoyah Nuclear Plant Unit 1 EA	Hamilton County, TN	5/15/2000
Spillway Apron Repair at Kentucky Dam EA	Marshall and Livingston Counties, KY	7/21/1999
City of Florence, Alabama, Wastewater Treatment Expansion EA	City of Florence, AL	7/8/1997
Facility Improvements by Bunge Corporation, Tennessee River Mile 305.9L EA	Decatur, Morgan County, AL	12/1/1996
John Sevier Fossil Plant Intake Debris Removal EA	Hawkins County, TN	12/16/2005

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Bellefonte Site Utility Improvements EA and FONSI: TVA proposed to replace an existing waterline and install two sewer lines. The project took place on previously disturbed areas, which, after the project, were re-vegetated with non-invasive species. In terms of relevance to the proposed CE, this EA analyzed the environmental effects of minor utility replacement activities that would not result in a significant change in the expected useful life, design capacity, function, or operation nor require additional ground disturbance or an increase in waste generation or emissions. The EA found that there would be negligible effects on most resources with some minor, short-term effects on transportation from the temporary closure of a local road and short detour, and on air quality during installation activities, but no long-term significant effects would occur. A nearby archaeological site was avoided. (TVA, 2014a)

John Sevier Fossil Plant Intake Debris Removal EA and FONSI: The John Sevier Fossil Plant was experiencing decreased plant efficiency due to accumulation of debris and partial blockage of the trash racks on the raw water intake structure, therefore TVA proposed to remove the debris. The EA concluded that there would be no adverse effects to the resources within or surrounding the project area. (TVA, 2005) This EA is directly relevant to the proposed CE #36 item (p).

3.36.3.3 Potential Environmental Effects

For most activities included in proposed CE #36, there is little potential for any environmental impact. A majority of such actions would occur inside of a facility or at a previously disturbed location or on a heavily industrialized site. As indicated in the text of the proposed CE, routine

operation, repair or in-kind replacement, and maintenance activities for existing buildings, infrastructure systems, facility grounds, and operating equipment activities under the proposed CE may have some limited, minor environmental effects. Based on previous NEPA reviews of actions listed in (a) through (q), TVA has found that several environmental resources may potentially be affected by such activities, as summarized below. However, these activities do not have significant environmental effects.

Vegetation: Routine maintenance, landscaping, and other grounds keeping activities could have minor effects on vegetation in the area. Groundskeeping actions including removal of dead or undesirable trees and leaf and litter collection and removal could have minor, localized long-term effects on existing vegetation. However, since these activities would occur on already disturbed or developed areas and maintained grounds, and such activities would typically introduce no new environmental effects on vegetation. To ensure that removal of trees would not affect potential habitat of sensitive bat species, the definition of the CE includes a limit on the diameter of trees that may be removed under this category of actions. (TVA, 2013a; TVA, 2014a)

Water Resources: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from routine maintenance or repairs activities of wells or other equipment that draws water from the groundwater supply. Minor, short-term effects to water resources could occur if surface disturbing activities were to occur within or adjacent to water sources. Soil stabilization and erosion control activities could provide long-term minor beneficial effects on water quality. TVA would continue to comply with the Clean Water Act through its environmental review process. Replacement of sewer lines could eliminate infiltration and exfiltration problems caused by the poor condition of old pipe, thus eliminating a source of groundwater and surface water contamination, and have long-term beneficial effects. (TVA, 2013a; TVA, 2014a)

Fish and Wildlife: Minor, short-term, localized adverse effects to wildlife from alterations of wildlife habitat could occur if surface disturbing activities were to take place, and from increased levels of human disturbance. Effects would be minimal since only previously disturbed areas would be affected. No adverse effects to local aquatic life or aquatic habitats would be anticipated from the proposed activities. (TVA, 2013a; TVA, 2014a)

Air Quality: Short-term, minor effects from fugitive dust, equipment fumes, noise, and land disturbance and fugitive air emissions from mechanical equipment, repainting, or decontamination activities needed to complete a specific activity could occur. Resurfacing and landscaping activities could also cause minor, short-term effects on local air quality. Upgrading or replacing small pieces of equipment would likely have no adverse effects on air quality and, depending on the equipment, could have beneficial effects on air quality. (TVA, 2013a; TVA, 2014a)

Transportation: Construction activities associated with replacement of utilities could cause temporary traffic changes in a project area. Due to the temporary duration of such projects, and implementation of an appropriate traffic control plan if needed, the effects to traffic would be expected to be minor. (TVA, 2013a; TVA, 2014a)

Visual: Visual changes due to the presence of work vehicles and other equipment would be localized and restricted to the construction period and could result in minor adverse effects. Visual effects from repainting or repairs could result in minor, long-term, beneficial or adverse effects. (TVA, 2013a; TVA, 2014a)

Soils: Minor, short term effects to soils could occur if surface disturbing activities or excavation were to occur. (TVA, 2013a; TVA, 2014a)

Hazardous Waste: Most of the activities would not have any adverse effects on hazardous waste. Removal and disposal of lead-based paint and asbestos-containing materials would occur in accordance with applicable TVA, state, and federal requirements to limit any effects on human health and safety. Therefore, no significant effects from hazardous wastes are anticipated from the proposed activities. (TVA, 2013a; TVA, 2014a)

Solid Waste: A small amount of solid waste could be generated from the activities under the proposed CE. Solid waste would be handled in accordance with applicable TVA, state, and federal regulations and should have minor, if any, effects. (TVA, 2013a; TVA, 2014a)

Cultural Resources: At TVA facilities and sites which may have historic value, routine actions, such as painting structures or repairing or replacing doors, windows, or roofs, have the potential to affect the historic nature or character of the structure. Under this CE, however, only such actions occurring at structures less than 50 years old could be categorically excluded, ensuring that no significant impacts to historically valuable structures could occur.

Summary: Previous TVA environmental reviews have shown that activities contemplated under the proposed CE could have minor, localized short-term adverse effects and long-term beneficial effects for the resources noted above. This is due to the nature, small scale, and short duration of these activities and their limitation to previously disturbed areas. TVA concludes that these activities do not cause significant environmental effects.

3.36.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of activities included in TVA's proposed CE #36. Specifically, these other agency CEs include routine maintenance of real property and general facilities, and minor system enhancements (e.g., equipment purchases and rehabilitation, maintenance, and facility rehabilitation).

Most federal agencies have a CE similar to the CE proposed by TVA. The types of activities included in CE #36 are routine; many federal agencies conduct such activities hundreds of times a year. To narrow the scope of which agency CEs to include, TVA concentrated on agencies that are directly relevant to TVA because they have similar missions, mandates, responsibilities, and authority to maintain their facilities in keeping with requirements to manage and conserve natural resources; manage significant numbers of facilities; and have extensive histories and experience with routine facility management.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the activities other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CEs [B1.3](#), [B1.16](#), and [B1.34](#) (76 FR 63764, 2011)

B1.3: Routine maintenance:

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

- (a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;*
- (b) Door and window repair or replacement;*
- (c) Wall, ceiling, or floor repair or replacement;*
- (d) Reroofing;*
- (e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;*
- (f) Routine replacement of high-efficiency particulate air filters;*
- (g) Inspection and/or treatment of currently installed utility poles;*
- (h) Repair of road embankments;*
- (i) Repair or replacement of fire protection sprinkler systems;*
- (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;*
- (k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);*
- (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management," or its successor;*

- (m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions) or its successor;*
- (n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);*
- (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removal of contaminated intact equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors); and*
- (p) Removal of debris.*

B1.16 Asbestos Removal

Removal of asbestos-containing materials from buildings in accordance with applicable requirements (such as 40 CFR part 61, “National Emission Standards for Hazardous Air Pollutants”; 40 CFR part 763, “Asbestos”; 29 CFR part 1910, subpart I, “Personal Protective Equipment”; and 29 CFR part 1926, “Safety and Health Regulations for Construction”; and appropriate state and local requirements, including certification of removal contractors and technicians).

B1.34 Lead-based Paint:

Containment, removal, and disposal of lead-based paint in accordance with applicable requirements (such as provisions relating to the certification of removal contractors and technicians at 40 CFR part 745, “Lead-Based Paint Poisoning Prevention In Certain Residential Structures”).

TVA’s proposed CE #36 is most similar to the DOE’s CE B1.3. DOE proposed clarifying B1.3 and adding B1.34 as a new CE in its 2011 Proposed Rule. For B1.3, DOE clarified that “routine maintenance actions may occur as a result of non-routine events (e.g., severe weather, such as hurricanes, floods, and tornadoes, and wildfires).” DOE provided additional example of activities in the scope, and clarified that the usage of pesticides should be managed to “minimize the possibility of environmental impacts beyond the product’s intended application.” (DOE, 2011a)

According to DOE’s administrative record, DOE had prepared several EAs that analyzed the effects of constructing and operating small facilities and determined that these actions do not have the potential to cause significant environmental effects (DOE, 2011a):

- *DOE/EA-1444: Construction of New Office Building, Child-Care Facility, Parking Garage, and Storm Water Retention Pond, FONSI (September 2002).*
- *DOE/EA-1412: Expansion of the Volpentest Hazardous Materials Management and Emergency Response Training and Education Center, Hanford Site, Richland, Washington, FONSI (November 2002).*

- DOE/EA-1375 : *Construction and Operation of a New Office Building and Related Structures at TA 3 within Los Alamos National Laboratory (June 2001), FONSI (July 2001)*

Additionally, DOE declared that these activities, which they termed “routine” activities, “may be addressed in a single categorical exclusion determination after considering the potential aggregated impacts” (DOE, 2011a).

For the new proposed CE B1.34, DOE stated:

This proposed categorical exclusion is based on laws and regulations governing such activities for buildings and other structures. Use of the proposed categorical exclusion would require adherence to applicable laws and regulations. Further, the creation of this categorical exclusion is supported by existing lead paint removal categorical exclusions from the Environmental Protection Agency [EPA] and the Department of the Army. DOE has determined that such paint removal actions would not have the potential to cause significant impacts. (DOE, 2011a)

In the Final Rule, DOE revised the title of B1.34 for clarification. DOE did not receive comments for proposed changes to B1.3. (DOE, 2011a)

Department of Homeland Security CE D3 (DHS, 2014)

Repair and maintenance of Department-managed buildings, roads, airfields, grounds, equipment, and other facilities which do not result in a change in functional use or an impact on a historically significant element or setting (e.g. replacing a roof, painting a building, resurfacing a road or runway, pest control activities, restoration of trails and firebreaks, culvert maintenance, grounds maintenance, existing security systems, and maintenance of waterfront facilities that does not require individual regulatory permits).

According to DHS’s administrative record, the activities in D3 would not individually or cumulatively result in significant environmental effects. Similar to TVA’s proposed CE, DHS included examples in the CE that “would be helpful to future users in clarifying the types of activities envisioned by the categorical exclusion. In providing examples, [DHS] did not intend to extend the categorical exclusion to actions including extraordinary circumstances that may result in the activity having significant environmental effects.” (DHS, 2006)

DHS substantiated CE D3 with legacy CEs from other agencies, including:

- U.S. Coast Guard (COMDTINST M 16475.1D, Categorical Exclusions 2.q, u, v, w, x, 6.a);
- Federal Emergency Management Agency (FEMA) 44 CFR 10 (x), (xv), (xvi); and
- Animal and Plant Health Inspection Service 7 CFR 372.5 (c)(4)). (DHS, 2006)

DHS also substantiated D3 with 15 EAs from the U.S. Border Protection for its land-based routine maintenance activities.

Based upon the agency's history of environmental analyses and on expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

National Aeronautics and Space Administration CE (d)(2)(i) (76 FR 43616, 2011)

§ 1216.304(d)(2): Operations and Management Activities including:

(i) Routine maintenance, minor construction or rehabilitation, minor demolition, minor modification, minor repair, and continuing or altered operations at, or of, existing NASA or NASA-funded or -approved facilities and equipment such as buildings, roads, grounds, utilities, communication systems, and ground support systems, such as space tracking and data systems

According to NASA's Federal Register CE substantiation, this CE consolidates two existing NASA CEs, which the agency had used for routine maintenance and repair activities at facilities it owns and operates. Based on NASA's experience with these types of actions, as demonstrated in NASA environmental documentation which had been completed and monitored by NASA's environmental professional staff, these actions do not result in individually or cumulatively significant environmental effects. In addition, based on a review of the activities covered by other agencies' CEs, NASA determined that it would be conducting similar activities, under similar circumstances, and with similar environmental effects. NASA also substantiated its CE by referring to other agency CEs, including:

- U.S. Army, [CE \(g\)\(1\)\(2\)\(3\)](#). *Routine repair and maintenance building equipment, roads, vehicles, and grounds.*
- EPA, [CE\(a\)\(1\)\(i\)](#). *Actions at EPA facilities involving routine facility maintenance, repair, grounds keeping; minor rehabilitation, restoration, renovation.*
- U.S. Navy, [CE \(8\)](#), *Routine repair and maintenance of buildings, facilities, vessels, aircraft, and equipment.*
- DOE [CE B1.3](#), *Routine maintenance/custodial service for buildings, structures, infrastructure, and equipment.*

Accordingly, based on its own experience and that of other agencies, NASA concluded that its activities under its CE (d)(2)(i) would not result in significant environmental effects and were, therefore, eligible for categorical exclusion. (76 FR 43616, 2011)

U.S. Army CE (g)(1) (32 C.F.R. § 651, 2011)

Routine repair and maintenance of buildings, airfields, grounds, equipment, and other facilities. Examples include, but are not limited to: Removal and disposal of asbestos-containing material (for example, roof material and floor tile) or lead-based paint in accordance with applicable regulations; removal of dead, diseased, or damaged trees; and repair of roofs, doors, windows, or fixtures (REC required for removal and disposal of asbestos-containing material and lead-based paint or work on historic structures).

The Army reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. TVA notes that this CE was used by other agencies in their CE substantiation documents.

Department of the Navy CE 8 (32 C.F.R. § 775, 2004)

Routine repair and maintenance of buildings, facilities, vessels, aircraft, and equipment associated with existing operations and activities (e.g., localized pest management activities, minor erosion control measures, painting, refitting)

The Navy reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. Notably, this CE was used by other agencies in their CE substantiation documents.

Environmental Protection Agency CEs (a)(1)(i) and (a)(2)(ix) (40 C.F.R. § 6, 2014)

(a)(1)(i) Actions at EPA owned or operated facilities involving routine facility maintenance, repair, and grounds-keeping; minor rehabilitation, restoration, renovation, or revitalization of existing facilities; functional replacement of equipment; acquisition and installation of equipment; or construction of new minor ancillary facilities adjacent to or on the same property as existing facilities.

(a)(2)(ix) Actions involving containment or removal and disposal of asbestos-containing material or lead-based paint from EPA owned or operated facilities when undertaken in accordance with applicable regulations.

The EPA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. Also of note, both of EPA’s CEs were used by other agencies in their CE substantiation documents.

Comparability of CEs

Table 3.36-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.36-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #36	DOE	DHS	NASA	Navy	U.S. Army	EPA
Routine operation, repair or in-kind replacement, and maintenance activities for existing buildings, infrastructure systems, facility grounds, and operating equipment	X	X	X	X	X	X
Cleaning of major equipment ...	X					
Painting and paint removal, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements		X			X	X
Removal and disposal of asbestos-containing materials	X				X	X

All of the activities included in TVA's proposed CE would occur with similar timing and in a similar environmental context to those actions performed by the federal agencies listed in Table 3.36-2 and covered by those agencies' CEs. Repairs generally occur one time in one area/component; maintenance activities range in occurrence from daily, weekly, monthly, or annually depending on the system/component being serviced. All activities are conducted according to detailed regulations that are fundamentally consistent across federal agencies. TVA NEPA staff would identify applicable laws, regulations, management plans, standard operating procedures, and areas of known contamination. NEPA, the National Historic Preservation Act, the Clean Air Act, the Clean Water Act, and other applicable federal and state regulations may apply to the activities.

All of the other agency CEs cover the types of routine operation, repair or in-kind replacement, and maintenance activities that are included in TVA's proposed CE. The DOE, U.S. Army, and EPA CEs cover the removal and disposal of lead-based paint as well as asbestos-containing materials.

TVA notes that the CEQ has reviewed all of these other agencies' CEs and determined that they conform to NEPA and CEQ regulations.

3.36.4 CE Documentation Requirement

TVA staff would not complete a CEC in TVA's ENTRAC database to document when actions under CE #36 are proposed. As noted above in Section 3.36.3.1, TVA specialists currently complete CECs for very routine and common actions or use generic CECs as a way to streamline environmental documentation procedures.

One of the major objectives of creating CE #36 is to separate those routine operation and maintenance actions for which TVA has determined documentation is no longer necessary from those which TVA has determined still should be reviewed through the CEC process in ENTRAC. For actions under CE #36, then, TVA determined that the routine operation, repair or in-kind replacement, and maintenance activities for existing buildings, infrastructure systems, facility grounds, and operating equipment would not result in significant environmental effects.

3.36.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and minor beneficial long-term effects. This CE is supported by long-standing CEs of other agencies that were developed through a process consistent with NEPA regulatory requirements. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would not complete a CEC in ENTRAC for each application of the CE because, based on TVA's extensive experience reviewing, documenting, and implementing these routine activities, the preparation of paperwork to document these activities is not necessary to ensure that no significant environmental effects occur.

3.37 CE 37 - FACILITIES-BASED UPGRADES & MODIFICATIONS

TVA proposes to establish a new CE for minor actions that modify or upgrade existing TVA facilities, equipment, or grounds. Like CE #36, this proposed addresses the category of actions under existing CE 5.2.1, which is currently one of the most frequently used and relied upon CE in TVA's NEPA procedures.

3.37.1 Proposed Categorical Exclusion Text

Modifications, upgrades, uprates, and other actions that alter existing buildings, infrastructure systems, facility grounds, and plant equipment, or their function, performance, and operation. Such actions, which generally will not physically disturb more than 10 acres, include but are not limited to, the following:

- a. Replacement or changes to major components of existing buildings, facilities, infrastructure systems, facility grounds, and equipment that are like-kind in nature;*
- b. Modifications, improvements or operational changes to in-plant and on-site equipment that do not substantially alter emissions or discharges beyond current permitted limits. Examples of equipment includes, but is not limited to: gear boxes, generators, turbines and bearings, duct work, conveyers, superheaters, economizers, air preheaters, unloading and handling equipment for fuel; handling equipment for ash, gypsum or other by-products or waste; hydropower, navigation and flood control equipment; air and water quality control equipment; control, storage, and treatment systems (e.g. automation, alarms, fire suppression, ash ponds, gypsum storage, and ammonia storage and handling systems); and other operating system or ancillary components;*
- c. Installation of new sidewalks, fencing, and parking areas at an existing facility;*
- d. Installation or upgrades of large HVAC systems;*
- e. Modifications to water intake and outflow structures such that intake velocities and volumes and water effluent quality and volumes are consistent with existing permit limits;*
- f. Repair or replacement of doors, windows, walls, ceilings, roofs, floors and lighting fixtures in structures greater than 50 years old; and*
- g. Painting and paint removal at structures greater than 50 years old, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements.*

After the publication of the Proposed Rule in June 2017, TVA made one minor edit to the definition of this proposed CE. TVA added "large" as an adjective before "HVAC systems" under item (d) after an internal discussion. Combined with an edit made to CE #36, this edit will clarify for TVA staff that repair and installation of small HVAC systems for existing facilities are included under CE #36, whereas similar actions involving larger HVAC systems (at an industrial scale) are included under CE #37.

3.37.2 Background

As of fiscal year 2013, TVA owns more than 2,500 buildings and leases an additional 35, equaling almost 30 million square feet of facilities to manage. Because of this large footprint,

TVA has a large amount and wide variety of equipment within its facilities. At any given point in time, many pieces of equipment could be in need of minor upgrades and modifications. This proposed CE is intended to address TVA's need to maintain its current infrastructure, equipment, and facilities. The activities included in the CEs are required for TVA to continue its mission.

Since 1983, the activities under proposed CE have been primarily categorized under TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). By developing CE #37, as well as CEs #36, 38 and 39, TVA is proposing to provide more specific definition of the activities that have been carried out under existing CE 5.2.1. The proposed new CEs are more limited in scope and provide examples activities within each CE. The proposed CE would provide TVA specialists with clear guidance on which CE is the best fit for their proposed action. TVA NEPA specialists anticipate that improving this clarity and having four distinct CEs instead of one broad CE (5.2.1) improves efficiency and increases transparency.

The language of the proposed CE was developed to identify activities with limited environmental effects. CE #37 is designed to address activities that are extremely common: minor upgrades and modifications to existing facilities, facility grounds, and equipment, and routine maintenance to *major* components of buildings, equipment, or systems. TVA staff anticipate this CE being applied on a regular basis because such actions are so common. The CE would allow TVA to more efficiently consider and carry out projects.

Generally, a proposal would be considered minor by TVA if it would not result in a substantial alteration to or change of a land use of ten acres or less, facility, or piece of equipment, their operation, or performance or outputs of emissions or waste. The limit to the amount of land disturbance, 10 acres, helps prevent or minimize the level of disturbance to natural resources in the project area. With some exceptions, these actions would generally occur at existing facilities that have been previously disturbed, further ensuring that the level of disturbance to natural resources is minor.

The definition of proposed CE #37 is similar to the definition of CE #36 discussed above. However, the distinction between actions of CE #36 and #37 is very important. As noted above, one of the major objectives of creating CEs #36 and #37 is to separate those routine operation and maintenance actions for which TVA has determined documentation is no longer necessary from those which TVA has determined should be reviewed through the CEC process in ENTRAC. For actions under CE #36, then, TVA determined that such routine operation, repair or *in-kind* replacement, and maintenance activities carry little or no risk of significant environmental effects (i.e., for such actions, the condition or operations would be maintained and not change). For routine actions under CE #37, some substantive change, improvement or alteration would be made to existing operations, structure, equipment, or emissions. Because the actions would result in some substantive change, TVA would continue to review actions under CE #37 more thoroughly by documenting its application in the ENTRAC database. Completion of a CEC for every application of the proposed CE #37 will ensure that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances.

3.37.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.37.3.1 TVA Experience with Relevant Existing CEs

Some of the activities included in the proposed CE, and within existing CE 5.2.1, are considered so routine, and repeated so often, without any significant environmental effects, that several TVA business units have created “generic CECs” in the ENTRAC database system as a way to streamline environmental documentation procedures. As discussed in Section 3.36.3.1, generally, a generic CEC was created once for a set of activities at a single facility or multiple similar facilities, and then the generic CEC was referenced each time one or more of the activities was subsequently proposed. After the initial preparation of the generic CEC, TVA staff would verify that the proposed action is covered by one of the generic CECs and would record the CEC number in their project files before proceeding with the action, rather than creating a new CEC in ENTRAC for each proposed action. The use of generic CECs is indicative of how routine the activities within the proposed CE are, and how often they are conducted without any adverse individual or cumulative effects on the environment.

TVA NEPA staff reviewed the ENTRAC database for previous uses of relevant CEs since 2002, and found many instances of activities similar to the proposed CE. The ENTRAC database documents over 600 individual activities related to facility or infrastructure upgrades, modifications, and improvements. Most of these CECs used existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TV facilities*). TVA staff planning these activities used some additional CEs occasionally.

As noted above, CE 5.2.1 covers many of the activities included in the proposed CE, in addition to those mentioned in the previous paragraph. TVA has used CE 5.2.1 over 5,600 times since 2002.

Examples of CECs for activities relevant to the proposed CE include:

- *CEC 35672: Replace and Upgrade HVAC at Systems Operation Center, Chattanooga (10/24/2016), CE 5.2.1*
- *CEC 35449: Chickamauga Boatshed Security Installations (9/30/2016), CE 5.2.1*
- *CEC 35330: Watts Bar Firing Range Upgrade (New Trailer and Septic Tank), (9/15/2016), CE 5.2.1*
- *CEC 35245: Bellefonte Nuclear - Met Towers Electrical Upgrades (9/6/2016), CE 5.2.1*

- CEC 35192: Watts Bar Transmission Service Center New Truck Canopy (7/26/2016), CE 5.2.1
- CEC 35127: Install New Elevator on Existing Pad (Paradise Fossil Plant), (7/20/2016), CE 5.2.1
- CEC 34074: Generic Replace/Upgrade to Generator Exciters (River Operations), (2/11/2016), CE 5.2.1
- CEC 31089: GUH South Embankment Excavation, (9/4/2014), CE 5.2.1
- CEC 28225: Generic - Replacement of Thrust Oil Coolers (some existing piping), (4/8/2013), CE 5.2.1
- CEC 23432: Blue Ridge Rehabilitation Project, (6/19/2013), CE 5.2.1
- CEC 25076: Removal, installation, repair, & maintenance of HVAC systems/equipment, (10/31/2011), CE 5.2.1
- CEC 10072: SQN HVAC Upgrade, (3/9/2011), CE 5.2.1
- CEC 22030: BFN Generic HVAC Removal/Installation/Repair, (3/24/2010), CE 5.2.1
- CEC 21428: FPH – Clear debris/trash in front of U-1 & U-2, (12/7/2009), CE 5.2.1
- CEC 19261: COF Supply Dry Fly Ash for Bear Creek Dam Rehabilitation, (4/23/2009), CE 5.2.1
- CEC 13566: COF Dry Fly Ash Sump Rehabilitation, (8/28/2006), CE 5.2.1
- CEC 870: Generic FPG-Removal, installation and repair of HVAC systems/equipment, (5/22/2006), CE 5.2.1
- CEC 12803: Sewage Sand Filter Rehabilitation, (5/2/2006), CE 5.2.1
- CEC 4161: Wilson Lock – Lock Operations Building Rehabilitation, (7/15/2003), CE 5.2.1
- CEC 1242: Generic SHF – HP/IP/LP Turbine Rehabilitation, (1/10/2003), CE 5.2.1
- CEC 2017: Guntersville – South embankment – Downstream Drainage Improvements, (12/2/2002), CE 5.2.1

3.37.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of TVA EAs and FONSI for activities that were relevant to the proposed CEs. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.37-1.

Table 3.37-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Supplement to Sequoyah Nuclear Plant Unit 2 Steam Generator Replacements EA	Hamilton County, TN	5/27/2011 (revised FONSI)
Blue Ridge Dam Rehabilitation Project EA	Fannin County, GA	4/11/2011
Sequoyah Nuclear Plant Unit 2 Steam Generator Replacements EA	Hamilton County, TN	11/13/2009
Operational Improvements to Optimize Select Catalytic Reduction Systems at Five Fossil Plants EA	TVA-wide	4/30/2008
Installation of Flue Gas Desulfurization System at Kingston Fossil Plant EA	Roane County, TN	4/10/2006

Title	Location	Date FONSI Issued
Installation of Flue Gas Desulfurization System at Bull Run Fossil Plant EA	Anderson County, TN	4/19/2005
Replacement or Rejuvenation of Catalyst for Select Catalytic Reduction Systems at Seven TVA Fossil Plants EA	TVA-wide	1/10/2005
Installation of Flue Gas Desulfurization System on Paradise Fossil Plant Unit 3 EA	Muhlenberg County, KY	3/24/2003
Colbert Fossil Plant Units 1 Through 5 Reduction Systems for Control of Nitrogen Oxides EA	Colbert County, AL	1/7/2003
Bull Run Fossil Plant Unit 1 Selective Catalytic Reduction System for Nitrogen Oxide Control EA	Anderson County, TN	4/4/2002
Allen Fossil Plant Units 1, 2, and 3 Selective Catalytic Reduction Systems for Nitrogen Oxide Control EA	Shelby County, TN	3/29/2001
Cumberland Fossil Plant Units 1 and 2 Selective Catalytic Reduction Systems for Nitrogen Oxide Control EA	Stewart County, TN	12/14/2000

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Cumberland Fossil Plant Units 1 and 2 Selective Catalytic Reduction Systems for Nitrogen Oxide Control EA and FONSI: This proposed facility improvement project was to install and operate selective catalytic reduction systems at TVA's Cumberland Fossil Plant Units 1 and 2. No new ground disturbance occurred for the installation of the systems. The EA concluded there would be no adverse effects to resources from the construction and installation of the selective catalytic reduction systems at the facility. The replacement of the system was anticipated to provide long-term, beneficial effects to air quality. (TVA, 2000a) This EA is directly relevant to the actions described under proposed CE #37 item (b) because the action would be included in the proposed category of actions and the EA supports the TVA's finding that the such actions do not have significant effects.

Sequoyah Nuclear Plant Unit 2 Steam Generator Replacements EA and FONSI: The EA analyzed the replacement of four steam generators at the Sequoyah Nuclear Plant. The replacement of the turbines in Unit 2 would allow TVA to operate Sequoyah Nuclear Plant more efficiently and maintain the generating capacity of the Unit. The analysis disclosed that only a small amount of site disturbance would occur, resulting in minor, insignificant effects to water, vegetation, fisheries and wildlife; and there would not be any adverse effects to nearby natural areas, recreational facilities, or recreation opportunities. (TVA, 2009) This EA is directly relevant to the proposed CE #37 item (a) because the action represents the replacement of a major component of equipment/portion of the proposed CE text and supports the minimal effects of the CE.

3.37.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include modifications, upgrades, uprates, and other actions that alter existing buildings, infrastructure systems, facility grounds, and plant equipment, or their function, performance, and operation. Actions listed in CE #37 as examples include:

- a. Replacement or changes to major components of existing buildings, facilities, infrastructure systems, facility grounds, and equipment that are like kind in nature;
- b. Modifications, improvements or operational changes to in-plant and on-site equipment that do not substantially alter emissions or discharges beyond current permitted limits. Examples of equipment includes, but is not limited to: gear boxes, generators, turbines and bearings, duct work, conveyers, superheaters, economizers, air preheaters, unloading and handling equipment for fuel; handling equipment for ash, gypsum or other by-products or waste; hydropower, navigation and flood control equipment; air and water quality control equipment; control, storage, and treatment systems (e.g. automation, alarms, fire suppression, ash ponds, gypsum storage, and ammonia storage and handling systems); and other operating system or ancillary components;
- c. Installation of new sidewalks, fencing, and parking areas at an existing facility;
- d. Installation or upgrades of large HVAC systems;
- e. Modifications to water intake and outflow structures such that intake velocities and volumes and water effluent quality and volumes are consistent with existing permit limits;
- f. Repair or replacement of doors, windows, walls, ceilings, roofs, floors and lighting fixtures in structures greater than 50 years old;
- g. Painting and paint removal at structures greater than 50 years old, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements.

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Vegetation and Soils: Minor, short term effects to vegetation and soils could occur from surface disturbing activities. The limit applied to activities under the proposed CE would ensure that only small areas of ground disturbance would occur from a proposed action. (TVA, 2000a; TVA, 2005; TVA, 2009)

Water Resources: Minor, short term effects to water resources could occur if surface disturbing activities were to occur within or adjacent to water sources. Soil stabilization and erosion control activities could provide long-term minor beneficial effects on water quality. TVA would continue to comply with the Clean Water Act through its environmental review process. Modifications to screened water intake and outflow structures would be consistent with existing permit limits, limiting any potential effects. (TVA, 2000a; TVA, 2005; TVA, 2009)

Hazardous Waste: Hazardous waste could be generated from some of the activities under the proposed CE. Removal and disposal of hazardous waste, including asbestos containing materials

would occur in accordance with applicable TVA, state and federal requirements to limit any effects on human health and safety. (TVA, 2000a; TVA, 2005; TVA, 2009)

Solid Waste: Solid waste could be generated from some of the activities under the proposed CE. Solid wastes generated would be handled in accordance with applicable TVA, state, and federal regulations and could have minor, if any effects. (TVA, 2000a; TVA, 2005; TVA, 2009)

Cultural Resources: At TVA facilities and site which may have historic importance, alterations to the structure, particularly the exterior components of a building, may impact the historic character of the structure. TVA would conduct appropriate consultation under Section 110 of the National Historic Preservation Act and would complete CEC documentation when routine repairs and modifications to structures greater than 50 years old are proposed.

Summary: TVA EAs and EISs have shown that activities contemplated under the CE could have minor, localized short-term adverse effects for the natural resources within the Tennessee Valley and do not cause significant environmental effects. The 10-acre limitation for surface disturbing activities decreases the potential for significant environmental effects from activities associated with the proposed CE. In addition, because many of the activities would occur within buildings, developed areas, and on existing structures, there would be minimal effects to natural resources.

3.37.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE. Most federal agencies that own or lease facilities have a CE similar to the proposed CE, which reflects that the types of activities included in CE #37 are routine across the federal government. Many federal agencies conduct such activities hundreds of times a year. To narrow the scope of which agency CEs to include, TVA concentrated on agencies that have similar missions, responsibilities, and/or operations and that have extensive experience with facilities management.

TVA found that its activities are similar in size and scope as those of the other agencies and are conducted typically under similar resource conditions and with similar environmental effects. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CEs [B1.3](#), [B1.4](#), [B1.8](#), [B1.11](#) and [B4.11](#) (76 FR 63764, 2011)

B1.3. Routine maintenance:

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements.

Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal).

Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events.

Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility.

Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

- (a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;*
- (b) Door and window repair or replacement;*
- (c) Wall, ceiling, or floor repair or replacement;*
- (d) Reroofing;*
- (e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;*
- (f) Routine replacement of high-efficiency particulate air filters;*
- (g) Inspection and/or treatment of currently installed utility poles;*
- (h) Repair of road embankments;*
- (i) Repair or replacement of fire protection sprinkler systems;*
- (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;*
- (k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);*
- (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management," or its successor;*
- (m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions) or its successor;*
- (n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);*
- (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removal of contaminated intact*

equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors); and
(p) Removal of debris.

B1.4 Air Conditioning Systems for Existing Equipment:

Installation or modification of air conditioning systems required for temperature control for operation of existing equipment.

B1.8 Screened Water Intake and Outflow Structures

Modifications to screened water intake and outflow structures such that intake velocities and volumes and water effluent quality and volumes are consistent with existing permit limits.

B1.11 Fencing:

Installation of fencing, including, but not limited to border marking, that would not have the potential to significantly impede wildlife population movement (including migration) or surface water flow.

B4.11: Electric power substations and interconnection facilities

Construction or modification of electric power substations or interconnection facilities (including, but not limited to, switching stations and support facilities).

A discussion of TVA's review of DOE's substantiation of CE B1.3 Routine Maintenance, is in Section 3.36.3.4, proposed CE #36.

Subsections (c) and (f) of TVA's proposed CE are identical in concept to existing DOE CEs B1.4, and 1.8, respectively. In TVA's review of potential agency CEs, DOE B1.4 and 1.8 captured and defined the category of activities TVA wished to include in its new CE. In addition to TVA's extensive experience with similar activities, DOE's experience with almost identical CEs helps substantiate the absence of potential significant effects associated with the proposed CEs.

For CE B1.11, DOE clarifies that the limitation in this CE applies to fencing that would have the potential to cause significant effects to surface water flow or wildlife populations or migration, as opposed to individual animal movements. DOE explains, "Fencing can and probably often does affect individual movements, but such impacts on individual animals would not be considered significant unless the context and intensity of the impacts would have the potential to cause significant impacts to wildlife populations or migration." (76 FR 63764, 2011)

DOE CE B4.11 addresses the modification of existing facilities, similar to TVA's proposed CE #17. The CE also includes activities completed on switching stations and other support facilities for power transmission. According to DOE's administrative record, this CE has been used to address upgrades of existing power transmission lines and their support facilities, as well as construction of new facilities along existing transmission paths. (76 FR 63764, 2011)

Department of Commerce BTOP CEs A5, B5, B8, and B9 (BTOP, 2009)

A5: Internal modifications or equipment additions (e.g., computer facilities, relocating interior walls) to structures or buildings

B5: Changes or additions to existing substations, switching stations, telecommunications switching or multiplexing centers, or external changes to buildings or small structures requiring one acre (0.4 hectare) or more but no more than five acres (2 hectares) of new physically disturbed land or fenced property

B8: Ordinary maintenance or replacement of equipment or small structures (e.g., line support structures, line transformers, microwave facilities, telecommunications remote switching and multiplexing sites)

B9: The construction of telecommunications facilities within the fenced area of an existing substation, switching station, or within the boundaries of an existing electric generating facility site

TVA reviewed BTOP's administrative record for CEs A5, B5, B8 and B9. BTOP established their CEs based on the existing NEPA requirements and experience of the Rural Utilities Services' Telecommunication Program, which addressed potential environmental effects from activities similar to TVA's telecommunication installation systems. BTOP's administrative record benchmarked to a CE of the Rural Utilities Service (CE b5) as part of their substantiation for CEs A5 and B8. BTOP explained: "Based upon the extensive history of RUS application of these Categorical Exclusions and the lack of extraordinary circumstances associated with their application, these legacy Categorical Exclusions are determined to be applicable to BTOP projects." According to BTOP's administrative record, CE B5, was substantiated based on "extensive history of RUS application of these Categorical Exclusions and the lack of extraordinary circumstances associated with their application" (BTOP, 2009). For CE B9, BTOP referred to DOE CEs B4.11 as their source of substantiating evidence of no significant effects. (BTOP, 2009) (Note, in 2016, RUS updated its NEPA procedures and revised its CEs).

Department of Homeland Security CE D1 (DHS, 2014)

Minor renovations and additions to buildings, roads, airfields, grounds, equipment, and other facilities that do not result in a change in the functional use of the real property (e.g. realigning interior spaces of an existing building, adding a small storage shed to an existing building, retrofitting for energy conservation, or installing a small antenna on an already existing antenna tower that does not cause the total height to exceed 200 feet and where the FCC would not require an environmental assessment or environmental impact statement for the installation).

According to DHS's administrative record, the activities in D1 would not individually or cumulatively result in significant environmental effects. Similar to TVA, DHS used examples in the CE that "would be helpful to future users in clarifying the types of activities envisioned by the categorical exclusion. In providing examples, [DHS] did not intend to extend the categorical exclusion to actions including extraordinary circumstances that may result in the activity having significant environmental effects." (DHS, 2006)

DHS substantiated D1 with CEs from other agencies, including:

- U.S. Coast Guard, COMDTINST M 16475.1D, Categorical Exclusions 2.q, u, v, w, x, 6.a;
- Federal Aviation Administration Order 5050.4A Chapter 3, Section 23 a (5);
- U.S. Air Force, 32CFR989 Appendix B, A2.3.8.,
- Federal Emergency Management Agency (FEMA) 44 CFR 10 [CEs \(xv\) and \(xvii\)](#) and
- Animal and Plant Health Inspection Service 7 CFR 372.5 (c)(4). (DHS, 2006)

DHS also substantiated D1 with 34 EAs from DHS component organizations for its land based routine maintenance activities.

Based upon the agency's history of environmental analyses and on expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

U.S. General Services Administration (GSA) [CEs m and n \(GSA, 1999\)](#)

(m) Repair to or replacement in kind of equipment or components in GSA controlled facilities without change in location, e.g. HVAC, electrical distribution systems, windows, doors or roof where there is no evidence of unresolved environmental issues.

(n) Facility maintenance, custodial, and grounds keeping activities not involving environmentally sensitive areas (such as eroded areas, wetlands, cultural sites, etc.), including window washing, lawn mowing, trash collecting, and snow removal.

The GSA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Army Corps of Engineers [CE b \(33 C.F.R. § 230, 2015\)](#)

Activities at completed Corps projects which carry out the authorized project purposes. Examples include routine operation and maintenance actions, general administration, equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing structures and facilities such as buildings, roads, levees, groins and utilities, and installation of new buildings utilities, or roadways in developed areas.

The USACE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Environmental Protection Agency CEs [\(a\)\(1\)\(i\) and \(a\)\(2\)\(ix\) \(40 C.F.R. § 6, 2014\)](#)

(a)(1)(i) Actions at EPA owned or operated facilities involving routine facility maintenance, repair, and grounds-keeping; minor rehabilitation, restoration, renovation, or revitalization of existing facilities; functional replacement of equipment; acquisition and installation of equipment; or construction of new minor ancillary facilities adjacent to or on the same property as existing facilities.

(a)(2)(ix) Actions involving containment or removal and disposal of asbestos-containing material or lead-based paint from EPA owned or operated facilities when undertaken in accordance with applicable regulations.

The EPA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. Also of note, both of EPA’s CEs were used by other agencies in their CE substantiation documents.

Comparability of CEs

Table 3.37-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.37-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #37	DOE	BTOP	DHS	GSA	USACE	EPA
Alteration of existing buildings, infrastructure systems, facility grounds, and equipment, or their function, performance, and operation, including minor upgrades and improvements, modifications, excavation, installations, and operational changes resulting in new ground disturbance no more than 10 acres	X	X	X	X	X	X
Modifications, improvements, or management changes to operational in-plant and on-site equipment...	X	X	X		X	
Painting and paint removal, including actions taken to contain, remove and dispose of lead-based paint when in accordance with applicable requirements	X	X	X	X	X	X
Installation at an existing facility	X		X		X	
Installation or upgrade of HVAC systems required for temperature control for operation of existing equipment or buildings	X		X	X		
Modifications to screened water intake and outflow structures...	X					
Installation of fencing and sidewalks.	X				X	

As noted above, the other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. All of the listed agencies have a CE that includes the alteration of existing buildings, infrastructure systems, facility grounds, equipment, and minor upgrades, installation, modifications and other building and facility improvements. Many of the specific actions used as examples for the types of actions that could be included under the CE are covered by at least one agency, with the exception of management that is specific to TVA, such as activities related to operation of power plants and nuclear facilities.

All of the activities included in TVA's proposed CE would occur within a similar context to those actions performed by the federal agencies listed in the table and covered by those agencies' CEs. In addition, DOE CEs B1.4 and B1.8 are identical to subsections of TVA's proposed CE.

TVA notes that all of these other agencies' CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.37.4 CE Documentation Requirement

In contrast to CE #36 actions, actions included under the proposed CE #37 may physically alter existing buildings, infrastructure systems, facility grounds, and equipment, or their function, performance, and operation. Therefore TVA sees value in documenting application of this CE in its ENTRAC database and using a site-specific review to verify that no extraordinary circumstances exist pertaining to the proposed action that could have significant effects on the environment.

3.37.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have very few, minor, short-term, adverse effects since the activities would occur within previously disturbed or developed areas. Additionally, the limitation of up to 10 acres of new disturbance could limit effects to minor, short-term, adverse in those areas where new disturbance occurs. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in the ENTRAC for each application of the CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by the CE.

3.38 CE 38 - SITING, CONSTRUCTION & OPERATION OF BUILDINGS

TVA proposes to establish a new CE for siting, constructing, and using new buildings and associated infrastructures. The CE would not apply to new power generating facilities.

3.38.1 Proposed Categorical Exclusion Text

Siting, construction, and use of buildings and associated infrastructure (e.g., utility lines serving the building) physically disturbing generally no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed.

After publishing the Proposed Rule in June 2017, TVA made a minor addition to the definition of the proposed CE by adding an example to improve clarity of the term “associated infrastructure.” The change was based on additional internal deliberation. TVA also revised the text to clarify the meaning of “disturbed” lands.

3.38.2 Background

TVA has been actively involved with land and water resources and river system integration since 1933, when Congress passed the TVA Act and charged the agency with managing and serving as the steward of the Tennessee River and its watershed (United States Congress, 1933). TVA manages its resources in an integrated manner to ensure the protection, enhancement, and conservation of these resources for future generations to enjoy.

The construction of new buildings and associated infrastructure is a common TVA activity and essential for supporting the reliable operation of the TVA power system and the fulfillment of TVA’s other missions. Such buildings may be stand-alone or part of a larger facility such as a generating plant. When planning construction of new buildings, TVA staff use criteria to screen potential sites. After identifying an area in which construction is desired, specific sites are screened by numerous engineering, environmental, and financial criteria (e.g., geology, proximity to major highways, existing infrastructure, land use, air quality, the presence of floodplains, and potential effects to endangered and threatened species, wetlands, and historic properties). Through this systematic process, TVA staff systematically identify and avoid the potential environmental effects of the construction and operation of new buildings. (TVA, 2015b)

Since 1983, the activities under CE #38 have been primarily categorized under TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). CE #38, as well as CEs #36, 37, and 39, are intended to provide more specific definitions of the activities that have been carried out under existing CE 5.2.1. Because the individual CEs are more limited in scope, with example activities within each CE, it is anticipated that it will be more apparent to TVA specialists which of the new CEs best fits their proposed action. TVA NEPA specialists anticipate that having several distinct CEs instead of one broad CE (5.2.1) would improve clarity and transparency.

CE #38 would not be used for the siting, construction, and operation of new power generating facilities.

CE #38 is designed to address activities that involve siting, construction, and operation of buildings, structures (including, but not limited to, trailers and modular buildings) and associated infrastructure such as utility connections, access roads, and parking areas on no more than 10 acres at an undisturbed site and no more than 25 acres at a previously disturbed site. TVA NEPA staff anticipate this CE being applied regularly.

Since building construction could involve numerous considerations, TVA established the acreage limiting in the proposed CE to avoid the potential for significant effects to the human environment. Disturbance of larger land areas would not generally be considered minor. With these limitations, TVA determined that this categorical exclusion would have not potential for significant effects to the human environment.

Completion of a CEC for every application of this CE ensures that the CE would not be applied to activities that could have significant effects on the environment due to extraordinary circumstances.

The *temporary* siting, placement and operation of trailers, prefabricated and modular buildings, or tanks are actions that would be covered by the proposed CE #39 if those proposed actions occur on previously disturbed sites at an existing TVA facility. See discussion of CE #39 below.

3.38.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.38.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in hundreds of activities similar to those included in CE #38. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. For example, since 2002, TVA has documented hundreds of individual actions involving construction and siting of buildings, structures, trailers, and modular buildings. TVA has also reviewed the actions of TVA business units that are focused on facilities management, and noted these units applied to existing CEs over 500 times. The CE applied for most of these activities was the existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). TVA has used CE 5.2.1 over 5,600 times. Of these, TVA has identified over 100 actions related to facility and infrastructure additions and improvements.

Examples of CECs relevant to the proposed CE include:

- *CEC 30443: Installation of Modular Building for use by Security – SQN, (6/2/2014), CE 5.2.1*
- *CEC 26916: Generic CEC for installation of modular buildings/trailer at BFN, (3/7/2013), CE 5.2.1*
- *CEC 26482: Construction trailer complex for Dry FGD Scrubber System at Gallatin FP, (7/18/2012), CE 5.2.1*
- *CEC 22333: Siting Investigation, (6/22/2010), CE 5.2.1*
- *CEC 21577: Property siting activities, (4/6/2010), CE 5.2.1*
- *CEC 20752: Modular Office Space Fabrication, (7/16/2009), CE 5.2.1*
- *CEC 2821: Construction of Modifications Fab. Shop, (9/23/2004), CE 5.2.1*
- *CEC 8225: Johnsonville Powerhouse Exterior Upgrades, (11/24/2004), CE 5.2.1*
- *CEC 4288: Bear Creek Dam – Construction of Storage Building, (8/25/2003), CE 5.2.1*

3.38.3.2 TVA Experience with Relevant EAs and EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.38-1.

Table 3.38-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Browns Ferry Nuclear Plant Cooling Tower 3 Replacement Supplemental EA	Limestone County, AL	12/6/2012
Mayfield, Kentucky Customer Service Center EA	Mayfield, KY	6/30/1998
TVA Nuclear Training Facility EA	Hollywood, AL	4/19/2010
Kingston Fossil Plant Ash Recovery – Utility Restorations and Enhancements EA	Roane County, TN	12/22/2009
Colbert Fossil Plant Construction of Skimmer Wall EA	Colbert County, AL	1/25/2002
Huntsville, Alabama Customer Service Center EA	Huntsville, AL	4/27/1999
Borrow Area for Site Preparation and Construction of the Kemper County, Mississippi, Combustion Turbine Plant EA	Kemper County, Mississippi	5/14/2001
EA – Glasgow, Kentucky Crew Quarters – FONSI	Glasgow, KY	9/30/1997

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the actions and findings in these documents to the proposed CE.

Huntsville, Alabama Customer Service Center EA and FONSI: TVA proposed to develop a new customer service center on a 7.5-acre site in Huntsville, Alabama. The facility included a one-story building with office space, storage and shop areas, a covered vehicle shed, and a large paved parking and material storage area. The new facility was to replace two existing facilities which no longer supported TVA’s needs. TVA found that the proposed action would not result in significant adverse impacts. This EA is relevant because it addresses the environmental effects of

a new facility occupying less than 10 acres. TVA has completed additional EAs for other proposed customer service centers. (TVA, 1999)

TVA Nuclear Training Facility EA and FONSI: TVA proposed to develop a new centralized training and processing center for workers at its nuclear facilities by purchasing an existing 36,000-square-foot building and adjacent property near Hollywood, Alabama. TVA would also construct a new access road, provide additional parking, and install a new fiber optic cable to the site. TVA completed a CEC (21872) during the environmental review process, which was incorporated into the EA. TVA found no significant effects for threatened and endangered species, spread of invasive plants, cultural resources, waste streams from building construction and operation, environmental justice or socioeconomics. The CEC was completed for all other resources. (TVA, 2010a) This EA is relevant because it considers the environmental effects of siting, construction of a facility, as well as related improvements to an area less than 10 acres.

3.38.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include the siting, construction, and operation of buildings and structures (including, but not limited to, trailers and modular buildings), where disturbance is limited to no more than 10 acres of previously undisturbed land or no more than 25 acres of previously-undisturbed land.

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete a specific construction activity could occur from the activities under the proposed CE. Construction could have associated transient air pollutant emissions during the construction phase. The total amount of these emissions would be small and would result in minimal effects. Overall, the air quality effect of siting, construction, and operation-related activities would be minor and temporary. Although the construction equipment would also emit greenhouse gases, the effects would also be negligible. (TVA, 2014b; TVA, 2015b)

Water Resources: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from construction work. Wastewaters generated during construction may include construction stormwater runoff, domestic sewage, dewatering of work areas, non-detergent equipment washings. The proposed facilities would be constructed in accordance with appropriate best management practices and would result in only minor and temporary effects to surface water. (TVA, 2010a; TVA, 2014b)

Noise: Delivery trucks and construction equipment could generate noise during the construction and facility improvement activities. However, these effects would typically be short-term, minor, and limited to the site area (localized). (TVA, 2010a; TVA, 2014b)

Solid Waste: There could be a small amount of solid waste generated due to construction and facility improvement. Solid wastes generated during construction would be handled in

accordance with applicable state and federal regulations, and there would be limited environmental effects. (TVA, 2010a; TVA, 2014b). As with water resources, any increase in solid waste flows from operations of new facilities would be minor due to the limited size of the facilities for the proposed activities.

Transportation: There could be temporary, minor adverse effects related to transportation during construction or facility improvements due to the necessary increase of traffic over local roads by material deliveries and workers. Any increase in traffic from operations of new facilities would likely be minor due to the limited size of the facilities for the proposed activities. Overall, the effects on transportation would be negligible. (TVA, 2014b)

Cultural Resources: Any land disturbing activity has potential to cause effects on cultural resources. However, each project footprint would be reviewed by TVA cultural staff to determine whether sensitive cultural or archaeological resources are present and ensure compliance with NHPA Section 106. TVA would comply with all applicable federal, state, and TVA regulations to mitigate any effects on cultural resources. The potential impacts, mitigation commitments, and associated consultation would be recorded by TVA in a CEC in the ENTRAC database.

Fish and Wildlife: Long-term, localized adverse effects to wildlife may result from converting land that serves as wildlife habitat and due to increased levels of human disturbance. Habitat loss may be greater in areas not previously disturbed compared to previously disturbed areas. Effects would be minimal in previously disturbed areas. Temporary increases in water turbidity due to soil disturbance during construction may affect aquatic organisms, although best management practices address soil erosion. Generally, minimal or no adverse effects to local aquatic life or aquatic habitats would be anticipated from the proposed activities. TVA would review the potential construction location for sensitive species (e.g., threatened or endangered species) to ensure compliance with Section 7 of the Endangered Species Act.

Summary: Previous TVA environmental reviews have shown that activities contemplated under this CE could have minor, localized short-term adverse effects for the resources noted above. This is due to the avoidance of sensitive resources during the siting process, the small scale of these activities and their limitation to previously undisturbed areas of less than 10 acres and previously disturbed areas of less than 25 acres. TVA concludes that these activities do not cause significant environmental effects.

3.38.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified the following agency CEs because they are similar in the nature, scope, and intensity of included activities to the TVA's proposed CE, including siting of structures such as trailers and prefabricated buildings within an already developed area, and construction and operation of buildings. These agencies' CEs are also relevant to TVA activities because these agencies, like TVA, manage significant numbers of facilities, have missions, mandates, responsibilities, and authority to site and construct facilities in keeping with requirements to protect and conserve natural resources, and have extensive histories and experience with facility construction and management.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Commerce (DOC) CE A-10 (DOC, 2009)

Siting, construction (or modification), and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). This Categorical Exclusion does not apply where the project must be submitted to the National Capital Planning Commission (NCPC) for review and NCPC determines that it does not have an applicable categorical exclusion.

DOC substantiated their A-10 by benchmarking the Department of Energy CE B1.15 (10 CFR 1021 Appendix B, CE number B1.15). In addition, DOC cited to two DOE Memoranda for File for relevant projects. Based on DOE's history of environmental analyses and the expert analysis, DOC determined that A-10 would have no significant environmental effects. (DOC, 2009)

Department of Energy CE B1.15 (76 FR 63764, 2011)

Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

DOE has used this CE 365 times since April 2009 (DOE, 2015a). Relevant examples include:

- *Replacement of DOE trailers at the Savannah River Site in Aiken, South Carolina, including five new office trailers and one new conference room trailer (DOE, 2014a);*
- *Renovation of 920 Plateau West Parking Lot Drainage System and Wallace Road Curb Installation Project, including demolition of existing broken concrete drainage swale, installation of new concrete curb and catch basins, replacement of existing guardrail, installation of asphalt curb, and embankment protection (DOE, 2014b); and*

- *Pacific Northwest National Lab’s activities siting, modifying and operating support buildings and support structures within or contiguous to an already developed area (DOE, 2014c).*

Accordingly, based on its extensive history, DOE states that CE B.1.15 would have no individual or cumulative significant impacts on the environment.

Department of Homeland Security CE E2 (DHS, 2014)

New construction upon or improvement of land where all of the following conditions are met: (a) The structure and proposed use are compatible with applicable Federal, tribal, state, and local planning and zoning standards and consistent with federally approved state coastal management programs, (b) The site is in a developed area and/or a previously disturbed site, (c) The proposed use will not substantially increase the number of motor vehicles at the facility or in the area, (d) The site and scale of construction or improvement are consistent with those of existing, adjacent, or nearby buildings, and, (e) The construction or improvement will not result in uses that exceed existing support infrastructure capacities (roads, sewer, water, parking, etc.).

TVA reviewed DHS’s administrative record for the CE. According to DHS’s record, E2 is supported by long-standing CEs and ARs brought to DHS by its components that would have only been developed through a process consistent with NEPA regulatory requirements. DHS supported E2 with legacy CEs from the U.S. Coast Guard, the Federal Emergency Management Agency, (44CFR10.8 (d) (2) (xvi)), and Navy (32CFR775.6 (9)), and referenced 60 EAs and Supplemental EAs with FONSI from the U.S. Border Patrol and Federal Law Enforcement Training Center as further substantiation for their CE. Based upon their review, experience, and substantiating information, DHS determined that “actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts” (DHS, 2006).

Rural Utilities Service, Department of Agriculture CE (4) (7 C.F.R. Part 25 , 2016)

§1970.53(d)(4) Construction of or substantial improvement to a single-family dwelling, or a Rural Housing Site Loan project or multi-family housing project serving up to four families and affecting less than 10 acres of land;

*§1970.54(a) Small-scale site-specific development. The following CEs apply to proposals where site development activities (including construction, expansion, repair, rehabilitation, or other improvements) for rural development purposes would impact not more than 10 acres of real property and would not cause a substantial increase in traffic. These CEs are identified in paragraphs (a)(1) through (a)(9) of this section. This paragraph does not apply to new industrial proposals (such as ethanol and biodiesel production facilities) or those classes of action listed in §§ 1970.53, 1970.101, or 1970.151. (1) Multi-family housing and Rural Housing Site Loans.
(2) Business development.
(3) Community facilities such as municipal buildings, libraries, security services, fire protection, schools, and health and recreation facilities.*

(4) Infrastructure to support utility systems such as water or wastewater facilities; headquarters, maintenance, equipment storage, or microwave facilities; and energy management systems. This does not include proposals that either create a new or relocate an existing discharge to or a withdrawal from surface or ground waters, or cause substantial increase in a withdrawal or discharge at an existing site.

These CEs apply to financial assistance. RUS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Department of the Navy CE 34 (32 C.F.R. § 775, 2004)

New construction that is consistent with existing land use and, when completed, the use or operation of which complies with existing regulatory requirements and constraints, e.g., a building on a parking lot with associated discharges/runoff within existing handling capacities, a bus stop along a roadway, and a foundation pad for portable buildings within a building complex.

The Navy reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Federal Transit Administration (FTA) CEs 1 and 9 (23 C.F.R. § 771, 2014)

(1) Acquisition, installation, operation, evaluation, replacement, and improvement of discrete utilities and similar appurtenances (existing and new) within or adjacent to existing transportation right-of-way, such as: utility poles, underground wiring, cables, and information systems; and power substations and utility transfer stations.

(9) Assembly or construction of facilities that is consistent with existing land use and zoning requirements (including floodplain regulations), and uses primarily land disturbed for transportation use, such as: buildings and associated structures; bus transfer stations or intermodal centers; busways and streetcar lines or other transit investments within areas of the right-of-way occupied by the physical footprint of the existing facility or otherwise maintained or used for transportation operations; and parking facilities.

The FTA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.38-2 provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CE.

Table 3.38-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #38	DOC	DOE	RUS	DHS	Navy	FTA
Siting, construction, and operation of buildings	X	X	X	X		X
Associated infrastructure	X	X		X	X	X
Encompassing no more than 10 acres of land			X	X		

As noted above, the other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. Like TVA’s proposed CE, DOC, DOE, and FTA CEs include siting, construction, and operation of buildings. The RUS CEs include construction of buildings. DOC and DOE’s CEs specifically include trailers and prefabricated (modular) buildings. Similar to TVA’s proposed CE, RUS includes the 10 acre-limit. The Navy’s CE includes routine repair and maintenance of buildings, facilities, and equipment associated with existing operations and activities, similar to TVA’s proposed CE language for improvements at an existing facility site. FTA’s CE includes acquisition, installation, operation, and improvement of discrete utilities within or next to existing rights-of-way, including building-sized facilities like power substations. FTA’s CE also includes facility construction consistent with existing land use and zoning within the physical footprint of the existing facility. Similar to TVA’s proposed CE, Navy CE 8 concerns buildings and facilities associated with existing operations.

In the same manner that TVA would limit this proposed CE to an existing facility site, FTA limits its CE (1) to previously established facility spaces. FTA specifies that its CE (1) applies to “utility-related activities when limited in scope and within or directly adjacent to the property” considered the traditional transportation right-of-way. FTA further defines “discrete utilities” as “those that are separate and independent” from a larger project (like rail line modernization or station expansion). FTA further reasons that, “the traditional transportation right-of-way will likely have been disturbed by prior installation of utilities, and activities occurring there would have little potential for significant environmental effect” (FTA, 2014).

All of the activities included in TVA’s proposed CE would occur with similar timing and in a similar environmental context to those activities performed by the federal agencies listed in Table 3.38-2 and covered by those agencies’ CEs.

TVA notes that CEQ has reviewed all of these other agencies’ CEs, and determined that they conform to NEPA and CEQ regulations.

3.38.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE #38 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.38.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. The spatial limit included in the CE would further limit the potential for adverse effects associated with such actions. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.39 CE 39 - TEMPORARY STRUCTURES ON FACILITY SITES

TVA proposes to establish a new CE relating to siting, placing, and operating temporary structures at TVA sites.

3.39.1 Proposed Categorical Exclusion Text

Siting and temporary placement and operation of trailers, prefabricated and modular buildings, or tanks on previously disturbed sites at an existing TVA facility.

3.39.2 Background

Currently, TVA power facilities include 6 fossil plants, 3 nuclear plants, 29 hydro plants, 18 natural gas plants, 16 renewable energy sites, and 1 pumped-storage hydroelectric plant. Most of these locations are expansive areas which have for decades been active, heavily disturbed industrial areas. Over time, numerous projects have occurred at these locations for which TVA has completed environmental reviews. Generally, these are disturbed areas which TVA has extensively studied and has a full understanding of any environmental resources and issues present.

TVA frequently uses buildings as temporary office, storage and work spaces to house extra personnel and material during plant outages, construction activities, and during other times of increased on-site staffing. These temporary buildings are generally wired for electrical service and climate controlled. Some have indoor running water and/or toilets; others use port-o-lets or nearby facilities with plumbing. They may be placed on existing or new gravel or concrete pads; they may or may not be skirted. The temporary buildings are usually transported on- and offsite by flatbed truck and mounted on concrete block piers. They are intended to be removed at the end of the period of increased activity, which may include returning rented structures to the vendor or moving them to another TVA site for further use.

Temporary buildings are often needed to support a major construction or maintenance project on the facility site and the impacts of the buildings are often evaluated as part of the overall construction or maintenance project. This proposed CE is to address the situations where the temporary buildings were not covered in the NEPA review of the overall project and for other situations where temporary buildings are proposed.

When planning construction of new facilities, TVA staff use criteria to screen potential sites. After establishing a general area, sites are screened by numerous engineering, environmental, and financial criteria (e.g., geology, proximity to major highways, existing infrastructure, land use, air quality, the presence of floodplains, and potential effects to endangered and threatened species, wetlands, and historic properties). Through this systematic process, TVA staff systematically avoid the potential environmental effects of the construction and operation of new generating facilities. (TVA, 2015b)

There are several distinctions between proposed CE #39 and the previously discussed CE #38. TVA proposes three important limits in the definition of CE #39 to ensure that the category of actions would have little potential to result in significant environmental impacts. First, the siting,

placement and operation of structures under CE #39 must be temporary in nature. In addition, the actions may occur only on previously disturbed sites and only at an existing TVA facility. TVA staff would consult with TVA NEPA staff if there is some question as to whether there is some question about the nature of the proposed action and whether it would fall under the proposed CE #39.

3.39.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE. Much of the documentation supporting CE #38 discussed above also supports this proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.39.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in dozens of activities that would fall under proposed CE #39. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Since 2002, TVA staff that have cited to CEC 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*) when considering past actions involving the siting and temporary placement and operation of trailers, prefabricated and modular buildings, or tanks. Examples of the CECs that are relevant to the proposed CE include:

- CEC 35296: *Installation of Modular Building, Sequoyah Nuclear Plant (SQN), CE 5.2.1*
- CEC 30443: *Installation of Modular Building for Security at SQN, (6/2/2014), CE 5.2.1*
- CEC 27090: *New trailers at Unit 2, Watts Bar Nuclear (WBN), (12/18/2012), CE 5.2.1*
- CEC 26916: *Generic CEC for installation of modular buildings/trailer at BFN, (3/7/2013), CE 5.2.1*
- CEC 26770: *Outage trailer for support personnel (WBN), (7/24/2012), CE 5.2.1*
- CEC 26768: *Outage trailer for TriTool (WBN), (7/24/2012), CE 5.2.1*
- CEC 26310: *Fourplex trailer location (8/24/2012), CE 5.2.1*
- CEC 26482: *Construction trailer complex for Dry FGD Scrubber System at Gallatin FP, (7/18/2012), CE 5.2.1*
- CEC 25480: *NRC Trailer (WBN), (12/27/2011), CE 5.2.1*
- CEC 25479: *Temporary Trailer for personnel (WBN), (12/27/2011), CE 5.2.1*
- CEC 25475: *Installation of Temporary Trailer South of WBN Main Office Building, (11/23/2011), CE 5.2.1*
- CEC 25132: *Trailer 79 relocation (WBN), (1/20/2012), CE 5.2.1*

- CEC 25127: Trailer Relocation (WBN), (9/30/2011), CE 5.2.1
- CEC 25124: New WBN trailer by cooling towers (9/30/2011), CE 5.2.1
- CEC 24707: Watts Bar Outage Trailer Demolition (7/12/2011), CE 5.2.1
- CEC 23480: Potable water line for CAB addition Trailers (Bellefonte Nuclear), (2/24/2011), CE 5.2.1
- CEC 22991: Bellefont Nuclear - generic CEC for portable trailers and supporting restroom facility trailers (provide electrical, communications, water, sewage as necessary), (3/14/2011), CE 5.2.1
- CEC 20256: ICC Trailer Sewage Tie-In, (4/7/2009), CE 5.2.1
- CEC 20752: Modular Office Space Fabrication, (7/16/2009), CE 5.2.1
- CEC 15292: Generic Small Buildings/Trailer Removal, (11/4/2009), CE 5.2.1
- CEC 13870: Mobile Radiography Developer Trailer (9/7/2006), CE 5.2.1
- CEC 13211: Paradise Fossil - Relocation of HED Trailer (7/13/2006), CE 5.2.1
- CEC 2821: Construction of Modifications Fab. Shop, (9/23/2004), CE 5.2.1

3.39.3.2 TVA Experience with Relevant EAs and EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. TVA NEPA staff did not identify an EA that addressed solely temporary siting, placement and operation of such structures. However, numerous relevant EAs were identified which analyzed impacts of such actions. In the EAs listed below, the placement and use of temporary buildings or office trailers were addressed as part of a larger project; such actions were typically addressed in the EAs' discussions of impacts of laydown areas and project operations. These were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in the following table.

Table 3.39-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Boone Dam Seepage Remediation EA	Sullivan and Washington Counties, TN	1/7/2016
Shawnee Fossil Plant Units 1 and 4 EA	West Paducah, KY	12/23/2014
Paradise Fossil Plant Units 1 and 2: Mercury and Air Toxics Standards Compliance Project EA	Muhlenberg, County, KY	11/13/2013
Gallatin Fossil Plant - Installation of Air Pollution Control Equipment and Associated Facilities EA	Sumner County, TN	3/12/2013
Johnsonville Cogeneration Plant EA	Humphreys County, TN	7/1/2015
Fukushima Response Strategy (Watts Bar, Sequoyah and Browns Ferry Nuclear Plants)	Hamilton and Rhea Counties, TN, and Limestone County, AL	3/15/2013
Pickwick Landing Dam South Embankment Seismic Upgrade EA	Hardin County, TN	9/30/2016
Shawnee Fossil Plant Bottom Ash Process Dewatering Facility EA	McCracken County, TN	9/14/2016

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the actions and findings in these documents to the proposed CE.

Johnsonville Cogeneration Plant EA and FONSI, Humphreys County, Tennessee: In April 2011, TVA entered into an agreement to retire all coal-fired units at the Johnsonville coal plant by the end of 2017. TVA currently provides steam produced by the coal-fired units to an external customer and considered in the EA whether to continue to provide steam to the customer following the retirement by constructing and operating a heat recovery steam generator integrated into an existing combustion turbine. Construction would require a laydown area (11 acres) including temporary structures for personnel and offices. The EA discussed potential impacts of such buildings on soils, land use, visual and noise impacts, and farmlands and determined that because the site was previously disturbed at an existing site, any impacts would be minor. (TVA, 2015f)

Shawnee Fossil Plant Units 1 and 4 EA and FONSI, West Paducah, Kentucky: In this EA, TVA reviewed its decision whether to retire or install additional air pollution controls to continue operating Units 1 and 4 at its Shawnee Fossil Plant near Paducah, Kentucky. Controls would be necessary to meet the terms of a 2011 agreement with the EPA and other parties to address air emissions. In the EA, temporary construction office and personnel space was analyzed as part of the actions occurring at the project laydown area. As with other actions reviewed by TVA NEPA staff, the analysis found that because placement and use of these structures would be occurring on previously disturbed areas at the existing facility site, the disturbance would be minor and temporary in nature. (TVA, 2014e)

3.39.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include the temporary siting, construction, and operation of trailers and modular buildings on previously disturbed sites at an existing TVA facility. Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, such actions would not have significant environmental effects.

Vegetation and Soils: Minor, short term effects to vegetation and soils could occur from surface disturbing activities. However, covered actions would occur only in previously disturbed locations at existing TVA sites. This limit would reduce the potential that impacts to vegetation and soils would be major. (TVA, 2015f; TVA 2014e)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to transport and/or complete a specific construction activity could occur from the activities under the proposed CE. The total amount of these emissions would be small and would result in minimal effects. Overall, the air quality effect of siting, construction, and operation-related activities would be minor and temporary. Although the construction equipment would also emit greenhouse gases, the effects would also be negligible. (TVA, 2014b; TVA, 2015b)

Water Resources: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from construction work. Wastewaters generated during construction may include construction stormwater runoff, domestic sewage, dewatering of work areas, non-detergent equipment washings. Actions would only occur on previously disturbed sites at existing TVA facilities so stormwater runoff may be controlled utilizing existing conveyances. The proposed facilities would be constructed in accordance with appropriate best management practices and would result in only minor and temporary effects to surface water. (TVA, 2014b) (TVA, 2015f)

Summary: Previous TVA environmental reviews have shown that activities contemplated under this CE could have minor, localized short-term adverse effects for the resources noted above. This is due to the small scale of these activities. Such actions would be limited to only previously disturbed areas on existing TVA sites. TVA concludes that these activities do not cause significant environmental effects.

3.39.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified the following CEs that include actions with a similar nature, scope, and intensity as those included in TVA's proposed CE, including siting of structures such as trailers and prefabricated buildings within an already developed area, and construction and operation of buildings. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage significant numbers of facilities, have responsibilities and mandates to conduct such activities in keeping with requirements to manage natural resource protection and conservation, and have extensive experience with facility construction and management.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Commerce CE A-10 (DOC, 2009)

Siting, construction (or modification), and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). This Categorical Exclusion does not apply where the project must be submitted to the National Capital Planning Commission (NCPC) for review and NCPC determines that it does not have an applicable categorical exclusion.

TVA reviewed DOC's Administrative Record for this CE. DOC substantiated their A-10 by benchmarking the Department of Energy CE B1.15 (10 CFR 1021 Appendix B, CE number B1.15). In addition, DOC cited to two DOE Memoranda for File for relevant projects. Based on DOE's history of environmental analyses and the expert analysis, DOC determined that A-10 would have no significant environmental effects. (DOC, 2009)

Department of Energy CE B1.15 (76 FR 63764, 2011)

Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

DOE has used this CE more than 365 times since April 2009 (DOE, 2015a). Relevant examples include:

- *Replacement of DOE trailers at the Savannah River Site in Aiken, South Carolina, including five new office trailers and one new conference room trailer (DOE, 2014a);*
- *Renovation of 920 Plateau West Parking Lot Drainage System and Wallace Road Curb Installation Project, including demolition of existing broken concrete drainage swale, installation of new concrete curb and catch basins, replacement of existing guardrail, installation of asphalt curb, and embankment protection (DOE, 2014b); and*
- *Pacific Northwest National Lab's activities siting, modifying and operating support buildings and support structures within or contiguous to an already developed area (DOE, 2014c).*

Accordingly, based on its extensive history, DOE states that CE B.1.15 would have no individual or cumulative significant impacts on the environment.

Department of Homeland Security CE E2 (DHS, 2014)

New construction upon or improvement of land where all of the following conditions are met: (a) The structure and proposed use are compatible with applicable Federal, tribal, state, and local planning and zoning standards and consistent with federally approved state coastal management programs, (b) The site is in a developed area and/or a previously disturbed site, (c) The proposed use will not substantially increase the number of motor vehicles at the facility or in the area, (d) The site and scale of construction or improvement are consistent with those of existing, adjacent, or nearby buildings, and, (e) The construction or improvement will not result in uses that exceed existing support infrastructure capacities (roads, sewer, water, parking, etc.).

TVA reviewed DHS's administrative record for the CE. According to DHS's record, E2 is supported by long-standing CEs and ARs brought to DHS by its components that would have

only been developed through a process consistent with NEPA regulatory requirements. DHS supported E2 by benchmarking to CEs from the U.S. Coast Guard, the Federal Emergency Management Agency, (44CFR10.8 (d) (2) (xvi)), and Navy (32CFR775.6 (9)), and by referencing 60 EAs and Supplemental EAs with FONSIIs from the U.S. Border Patrol and Federal Law Enforcement Training Center for construction and siting activities. Based upon the agency's history of environmental analyses and the expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

Rural Utilities Service, Department of Agriculture CE 1970.53(c)(4) and 1970.54(a) (7 C.F.R. Part 25 , 2016)

§1970.53(c)(4) Construction of or substantial improvement to a single-family dwelling, or a Rural Housing Site Loan project or multi-family housing project serving up to four families and affecting less than 10 acres of land;

§1970.54(a) Small-scale site-specific development. The following CEs apply to proposals where site development activities (including construction, expansion, repair, rehabilitation, or other improvements) for rural development purposes would impact not more than 10 acres of real property and would not cause a substantial increase in traffic. These CEs are identified in paragraphs (a)(1) through (a)(9) of this section. This paragraph does not apply to new industrial proposals (such as ethanol and biodiesel production facilities) or those classes of action listed in §§ 1970.53, 1970.101, or 1970.151. (1) Multi-family housing and Rural Housing Site Loans.

(2) Business development.

(3) Community facilities such as municipal buildings, libraries, security services, fire protection, schools, and health and recreation facilities.

(4) Infrastructure to support utility systems such as water or wastewater facilities; headquarters, maintenance, equipment storage, or microwave facilities; and energy management systems. This does not include proposals that either create a new or relocate an existing discharge to or a withdrawal from surface or ground waters, or cause substantial increase in a withdrawal or discharge at an existing site.

....

These CEs apply to financial assistance. An administrative record documenting RUS's substantiation of this CE was not readily available for TVA to review. RUS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Department of the Navy CE 34 (32 C.F.R. § 775, 2004)

New construction that is consistent with existing land use and, when completed, the use or operation of which complies with existing regulatory requirements and constraints, e.g., a building on a parking lot with associated discharges/runoff within existing handling capacities, a bus stop along a roadway, and a foundation pad for portable buildings within a building complex.

The Navy reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Federal Transit Administration (FTA) CEs 9 (23 C.F.R. § 771, 2014)

(9) Assembly or construction of facilities that is consistent with existing land use and zoning requirements (including floodplain regulations), and uses primarily land disturbed for transportation use, such as: buildings and associated structures; bus transfer stations or intermodal centers; busways and streetcar lines or other transit investments within areas of the right-of-way occupied by the physical footprint of the existing facility or otherwise maintained or used for transportation operations; and parking facilities.

The FTA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.39.2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.39-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #39	DOC	DOE	RUS	DHS	Navy	FTA
Siting, construction, and operation of buildings	X	X	X	X		X
Associated infrastructure	X	X		X	X	X

The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. Like TVA’s proposed CE, DOC, DOE, and FTA CEs include siting, construction, and operation of buildings. The RUS CE includes construction of buildings. DOC and DOE’s CEs are most relevant to TVA’s proposed CE because the definition specifically include trailers and prefabricated (modular) buildings. The Navy’s CE includes routine repair and maintenance of buildings, facilities, and equipment associated with existing operations and activities, similar to TVA’s proposed CE language for improvements at an existing facility site. FTA’s CE includes facility construction consistent with existing land use and zoning within the physical footprint of the existing facility. Similar to TVA’s proposed CE, Navy CE 8 concerns buildings and facilities associated with existing operations.

All of the activities included in TVA’s proposed CE would occur within a similar environmental context to those activities performed by the federal agencies listed in and Table 3.39-2 covered by those agencies’ CEs. TVA notes that CEQ has reviewed all of these other agencies’ CEs, and determined that they conform to NEPA and CEQ regulations.

3.39.4 CE Documentation Requirement

TVA staff would not complete a CEC in TVA's ENTRAC database to document when CE #39 is applied. TVA has determined that limitations included in the definition of the CE (i.e., that placement is temporary and occurs only at previously disturbed sites at an existing TVA facility) ensures that the CE would apply to only routine and minor actions that carry little risk of significant environmental effects. As noted above, most TVA facilities are expansive areas which have for decades been active, heavily disturbed industrial areas and numerous projects have occurred at these locations over time for which TVA has completed environmental reviews. Generally, these are disturbed areas which TVA has extensively studied and has a full understanding of any environmental resources and issues present.

3.39.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. The actions covered by the proposed CE would be limited to temporary actions and thus, would be limited in scope. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would not complete a CEC in ENTRAC for each application of the CE.

TVA specialists would not complete a CEC in ENTRAC for each application of the CE because, based on TVA's extensive experience reviewing, documenting, and implementing these routine activities, the preparation of paperwork to document these activities is not necessary to ensure that no significant environmental effects occur.

3.40 CE 40 - DEMOLITION & DISPOSAL OF STRUCTURES

TVA proposes to establish a new CE for demolition and disposal of buildings.

3.40.1 Proposed Categorical Exclusion Text

Demolition and disposal of structures, buildings, equipment and associated infrastructure and subsequent site reclamation, subject to applicable review for historical value, on sites generally less than 10 acres in size.

3.40.2 Background

As previously noted, TVA owns more than 2,500 buildings and leases an additional 35 buildings, equaling about 30 million square feet to manage (as of 2013). Because of this large footprint and changing building space requirements, some of the buildings, structures, and infrastructure owned by TVA are no longer needed and are considered to be excess. TVA regularly demolishes and disposes of buildings, structures, equipment, and associated infrastructure of no historic value.

Since 1983, such demolition and disposal activities have been categorized primarily under TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). By developing this new CE, as well as numerous others, TVA is seeking to better define categories of actions that currently would be included under existing CE 5.2.1. These proposed new CEs are more refined (limited in scope), and provide examples activities within each CE. The proposed CEs would provide TVA specialists with clear guidance on which CE is the best fit for their proposed action. TVA NEPA specialists anticipate that having numerous CEs instead of one broad CE (5.2.1) would save TVA staff time and resources.

CE #40 is designed to address activities that are routine and have little potential for causing significant effects on the environment. The demolition and disposal of structures, buildings, equipment, and associated infrastructure, and subsequent reclamation of sites no more than 10 acres in size are activities that have minor environmental effects. A primary concern associated with conducting these types of activities is ensuring that subject structures, buildings, and infrastructure do not have historical value. Even though impacts to historic properties are screened by TVA staff when reviewing for extraordinary circumstances, the CE definition includes the term “subject to applicable review for historical value” to emphasize to the importance of reviewing proposed actions under this CE to avoid adversely impacting historically valuable structures, in compliance with the National Historic Preservation Act. Based on historic use of CE 5.2.1, TVA NEPA staff anticipates that this proposed CE would be regularly applied.

This proposed CE is intended to address TVA’s need to proactively manage its building inventory by disposing or demolishing non-historic structures, equipment and infrastructure. The activities included in this CE allow TVA to reduce costs associated with maintaining excess facilities, equipment and infrastructure. Based on TVA’s previous experience and the findings of previous EAs conducted by TVA, the demolition or disposal of these facilities, as well as the reclamation of land up to 10 acres in size, would generally be considered minor if it would not

result in a substantial alteration to or change of a land use, facility, or piece of equipment, their operation or performance, or outputs of emissions or waste. As a general rule, a proposed action would not be considered minor if more than 10 acres would be disturbed.

Completion of a CEC when such actions are proposed would ensure that the CE is applied only to actions that would not have major effects on the environment.

3.40.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.40.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in several activities similar to those included in CE #40. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002, TVA has documented over 150 individual actions in its CECs involving the demolition and disposal of structures, buildings, and equipment; as well as site reclamation. A majority (over 90 percent) of the CECs used existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). Examples of CECs relevant to the proposed CE include:

- *CEC 29726: Norris Reservoir. Demolition and disposal of encroachment house, (1/23/2014), CE 5.2.24*
- *CEC 20102: Building Demolitions on Reese Ferry 161-kV Tap Line ROW, (39/2009), CE 5.2.17*
- *CEC 18997: Demolition of the Price House (Tract NOR-208), (9/10/2008), CE 5.2.25*
- *CEC 17272: Demolition of a Small Storage Shed (Herbicide Building Replacement), (12/11/2007), CE 5.2.1*
- *CEC 17011: Demolition of Building Numbers 3, 11, 20, 28, 40, 49, 59, 60, 92, 94, 95, 102, 103, 105, 111, 112, 113, 114, 116, 117 and 131 at the Environmental Research Center (Muscle Shoals Reservation, Alabama), (12/06/2007), CE 5.2.1*
- *CEC 7765: AERCW Cooling Tower Demolition/Removal, (8/03/2004), CE 5.2.1*
- *CEC 2812: COF Structure Demolition, (2/10/2003), CE 5.2.1*
- *CEC 358: Generic WBN Demolition of Buildings, (10/31/2002), CE 5.2.1*
- *CEC 893: Demolition of Kelley Building, (6/21/2002), CE 5.2.1*

3.40.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and Findings of No Significant Impact were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.40-1.

Table 3.40-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
John Sevier Fossil Plant Deconstruction EA	Hawkins County, TN	4/3/2015
Widows Creek Property Disposal EA	Jackson County, AL	3/5/2015
Widows Creek Fossil Plant House Demolition EA	Jackson County, AL	6/21/2013
Demolition and Disposal of Buildings and Structures at the Muscle Shoals Reservation, Colbert County, Alabama EA	Colbert County, AL	5/22/2013
Watts Bar Marina and Resort Deconstruction EA	Rhea County, TN	11/21/2011
Watts Bar Fossil Plant Deconstruction EA	Rhea County, TN	6/22/2011
Demolition of Phosphate Development Works and Return Of Landrights to TVA EA	Colbert County, AL	6/10/1991

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Demolition and Disposal of Buildings and Structures at Muscle Shoals Reservation EA and FONSI: This EA evaluated the removal of several buildings on an approximate 1,000-acre portion of the TVA Muscle Shoals Reservation proposed for sale and redevelopment. (TVA, 2013b) The sale and redevelopment of the area was the subject of an EA included and analyzed demolition of several buildings, old foundations that were still on the facility, and other structures. TVA anticipated minor, short-term effects to wildlife, noise, and air quality from the Proposed Action. Mitigation measures reduced potential effects to endangered bat species. (TVA, 2013b) This EA is directly relevant to the proposed CE #40 because it analyzed the effects of the demolition and disposal of several buildings.

Widows Creek Fossil Plant House Demolition EA and FONSI: This EA is relevant to the proposed CE #40 because it evaluated the demolition of approximately 22 structures, including 13 houses, and the backfill of existing foundations, as well as the redevelopment of the land with native species. Minor short-term effects to wildlife, noise, and air quality were anticipated. (TVA, 2013c)

3.40.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include:

- Demolition of structures, buildings, equipment, and associated infrastructure
- Disposal of structures, buildings, equipment, and associated infrastructure

- Reclamation of sites no more than 10 acres in size

In TVA's review of previous NEPA documents, TVA found the proposed activities could have minor effects on the following:

Vegetation: Reclamation activities could restore native vegetation on the sites of facilities being demolished and reclaimed, and help to repair any minor, short-term disturbance from equipment used for the demolition itself. (TVA, 2013b; TVA, 2013c)

Water Resources and Wetlands: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from demolition activities near wetlands, rivers, streams, and lakes. However, reclamation of disturbed areas could lead to long-term beneficial effects on these areas. Additionally, TVA would continue to comply with the Clean Water Act and Executive Order 11990 (*Protection of Wetlands*) through its environmental review process and apply appropriate mitigation, if necessary. (TVA, 2013c)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment or blasting activities needed to complete a specific demolition activity could occur from the proposed activities. Disposal of materials would have no long-term net effects on air quality. (TVA, 2013b; TVA, 2013c)

Hazardous Waste: There could be a small amount of hazardous waste from demolition activities. Any hazardous waste discovered during the demolition process would be properly disposed, in accordance with all TVA, local, state, and federal regulations. (TVA, 2013b; TVA, 2013c)

Solid Waste: Solid wastes generated from demolition activities would be disposed in accordance with all TVA, local, state, and federal regulations. Proper disposal of any materials would keep effects minimal. (TVA, 2013b; TVA, 2013c)

Cultural Resources: Prior to any demolition and disposal of structures, buildings, equipment and associated infrastructures, TVA staff would review the action to determine whether the affected structures have historical value. Effects to historically valued structures, buildings, equipment, or infrastructure may represent an extraordinary circumstance and it may not be appropriate to apply the proposed CE. Generally, sites and areas where such actions would occur have been previously disturbed or are developed (referring to land that has been changed such that its functioning ecological processes have been and remain altered by human activity), which typically reduces the likelihood that sensitive cultural resources are present. Thus, it is less likely that cultural resources would be affected by such actions. Reclamation activities may cause minor short-term effects to archaeological resources if they are discovered during the reclamation process. If cultural resources are discovered, TVA would handle these resources in accordance with all federal, state, and local guidelines. (TVA, 2013b; TVA, 2013c)

Soils: Short-term, minor effects could include increased erosion and mixing of surface layers of soil due to demolition equipment and any blasting efforts that would need to be conducted under the proposed activities. Over the longer term, soils could benefit from reduced erosion and stabilization resulting from reclamation measures. (TVA, 2013c; TVA, 2013b)

Fish and Wildlife: Similar to water resources, short-term minor effects could occur to fish and other aquatic wildlife if demolition activities occur near wetlands, rivers, streams, or lakes due to short-term water resource effects. Effects to wildlife from demolition activities would be minor and short-term. Reclamation of the site would have a long-term minor beneficial effect on wildlife and aquatic life. Disposal of materials would have no short-term or long-term net effects on either fish or wildlife in the area. (TVA, 2013b; TVA, 2013c)

Visual Resources: Since activities associated with the proposed CE would address properties that are already disturbed or developed, there would be only minor, short-term effects on the visual environment during demolition activities. Demolition and reclamation of sites may lead to beneficial minor effects due to the return to a more natural appearance of the land. (TVA, 2013b; TVA, 2013c)

Summary: Previous TVA environmental reviews support the conclusion that the activities contemplated under this CE could have minor, localized short-term adverse effects for the resources noted above and do not cause significant environmental effects. This is due to the small scale of these activities and their limitation to previously disturbed areas of less than 10 acres.

3.40.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified the following CEs currently in use by other agencies that are similar in the nature, scope, and intensity of included activities to the proposed CE #40, including disposal or demolition of structures, and/or the reclamation of the site. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage properties, including their disposal or demolition. These agencies also have experience with reclamation of land.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Federal Aviation Administration CE 5-6.4i (FAA, 2015)

Demolition and removal of FAA buildings and structures, or financial assistance for or approval of an Airport Layout Plan (ALP) for the demolition or removal of non-FAA owned, on-airport buildings and structures, provided no hazardous substances or contaminated equipment are present on the site of the existing facility. This CATEX does not apply to buildings and structures of historic, archaeological, or architectural significance as officially designated by Federal, state, tribal or local governments.

FAA proposed revisions to CE 5-6.4i (referred to as 310i in the document) in "Proposed Categorical Exclusions for Revision of FAA Order 1050.1E" to include non-FAA structures in

the scope (FAA, 2013). FAA stated, “The potential environmental effects of demolition and removal of buildings and structures, regardless of who owns the building, include minimal air quality effects created by project-related emissions from dust and air pollutants, temporary noise effects from construction or demolition equipment, and minor increases in construction trucks during the demolition.” Furthermore, FAA referenced existing, similar CEs from other agencies (Department of Energy B1.23, Department of Homeland Security E.4, Bureau of Land Management J10, and Federal Emergency Management Agency (xii)), and reviewed existing EAs and FONSI for FAA projects involving “demolition, disposal, or removal of existing facilities and infrastructure.” Based on all the provided information, FAA determined that “there will not be individual or cumulative significant effects from these activities.” (FAA, 2013)

Department of Energy CE B1.23 (76 FR 63764, 2011)

Demolition and subsequent disposal of buildings, equipment, and support structures (including, but not limited to, smoke stacks and parking lot surfaces), provided that there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment.

The DOE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Bureau of Land Management CE J10 (DOI, 2008a)

Removal of structures and materials of no historical value, such as abandoned automobiles, fences, and buildings, including those built in trespass and reclamation of the site when little or no surface disturbance is involved.

The BLM reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Natural Resources Conservation Service CE 6 (7 C.F.R. § 650, 2015)

Removing or relocating residential, commercial, and other public and private buildings and associated structures constructed in the 100-year floodplain or within the breach inundation area of an existing dam or other flood control structure in order to restore natural hydrologic conditions of inundation or saturation, vegetation, or reduce hazards posed to public safety.

The NRCS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

FEMA CE (vii) (44 C.F.R. § 10, 2014)

The acquisition of properties and the associated demolition/removal [see paragraph (d)(2)(xii) of this section] or relocation of structures [see paragraph (d)(2)(xiii) of this section] under any applicable authority when the acquisition is from a willing seller, the buyer coordinated acquisition planning with affected authorities, and the acquired property will be dedicated in perpetuity to uses that are compatible with open space, recreational, or wetland practices.

FEMA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

General Services Administration (GSA) CEs (c), (g), and (j) (GSA, 1999)

(c) Property disposal actions undertaken for another Federal agency, where that agency has already documented compliance with applicable legal requirements such as NEPA, NHPA, CERCLA, and ESA

(g) Disposal of real property required by public law wherein Congress has not specifically exempted the action from the requirements of NEPA

(j) Disposal of properties where the size, area, topography, and zoning are similar to existing surrounding properties and/or where current and reasonable anticipated uses are or would be similar to current surrounding uses (e.g., commercial store in a commercial strip, warehouse in an urban complex, office building in downtown area, row house, or vacant lot in an urban area)

The GSA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Department of Homeland Security CE E4 (DHS, 2006)

Removal or demolition, along with subsequent disposal of debris to permitted or authorized off-site locations, of non-historic buildings, structures, other improvements, and/or equipment in compliance with applicable environmental and safety requirements.

In its supporting documentation, DHS provides an extensive description of its experience and stated that encompassed programmatic activities that inherently did not have individual or cumulative significant impact on the human environment. In the administrative record, DHS cited to existing CEs from U.S. Coast Guard, the Federal Emergency Management Agency, and DOE as relevant benchmarks for their proposed CE.

Comparability of CEs

Table 3.40-2 provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CE.

Table 3.40-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #40	FAA	DOE	BLM	NRCS	DHS	GSA	DHS
Demolition of structures, buildings, equipment, and associated infrastructure	X	X	X	X	X		X
Disposal of structures, buildings, equipment, and associated infrastructure	X		X			X	X
Reclamation of sites			X		X		

As noted, the other agency CEs are comparable because they involve the same or similar activities as TVA's proposed CE. The definitions of the FAA, DOE, BLM, NRCS, DHS and FEMA CEs include demolition activities related to structures and facilities. The GSA CE addresses the disposal of structures and facilities for various reasons. The BLM and FEMA CEs also address reclamation of sites and any potential environmental effects that would be caused by those activities. Notably, the BLM, FAA, and GSA CEs require that the historic value of structures be considered, which is a similar requirement to that which would be included in TVA's proposed CE.

These CEs are relevant to the proposed TVA CE because the agencies involved deal with similar circumstances that TVA does, with facilities that need to be disposed of or demolished on a regular basis. These agencies have a long history of conducting these sorts of activities with limited environmental effects. All of the activities included in TVA's proposed CE would occur within a similar environmental context to those actions performed by the federal agencies listed in Table 3.40-2 and covered by those agencies' CEs. For this CE, the setting would occur in previously disturbed or developed areas for TVA's activities as well as for the other federal agencies.

TVA notes that CEQ has reviewed all of these other agencies' CEs, and determined that they conform to NEPA and CEQ regulations.

3.40.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #40 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.40.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists will complete a CEC in the ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.41 CE 41 - ROAD MAINTENANCE

TVA proposes to establish a new CE for maintenance of roads, trails and parking areas that does not involve new ground disturbance. This is the first of two new CEs relating specifically to existing roads, trails and parking areas (with CE #42).

3.41.1 Proposed Categorical Exclusion Text

Actions to maintain roads, trails, and parking areas (including resurfacing, cleaning, asphalt repairs, and placing gravel) that do not involve new ground disturbance (i.e., no grading).

3.41.2 Background

TVA manages hundreds of miles of roads and trails across the region and dozens of parking areas at public use areas and agency facilities. This infrastructure is crucial to TVA operations and are used and maintained for a variety of uses, including providing public access to TVA-managed public lands, and providing employees access to facilities for TVA power operations, and for natural resource management. These roads and trails may be open or closed to the public, depending on their use, with varied intensities of usage. Some receive thousands of travelers daily while others receive a small number annually. The roads, trails and parking areas have a variety of surfaces (gravel, dirt, asphalt, and concrete). Road, trail and parking area maintenance activities occur in a wide range of settings (e.g., plants, recreation areas, forests) and are routine actions which TVA has extensive experience conducting.

Roads and parking areas are managed by a variety of TVA business units. TVA's Facilities Management group estimates that the group manages approximately 60 million square feet of gravel and base roads and parking, 40 million square feet of asphalt roads and parking lots, and 900,000 square feet of concrete roads and parking. TVA's Natural Resources program maintains additional infrastructure, including approximately 210 miles of forest roads located on reservoir lands throughout the region. These forest roads allow access for a variety of public land users as well as for resource management activities including fire control. Many of these forest roads are located on reservoir lands that TVA manages for natural resource management activities and provide a wide range of benefits (including serving as linear wildlife openings) and recreational opportunities. Some of these forest roads are located on dam reservations and provide access for multiple uses. Not included in the estimated 210 miles of actively maintained forest roads are old roadbeds, old logging roads and skid trails that have been put in layby status and have likely reverted in tree cover through plant succession. Also not included in the total number of roads managed by TVA's Natural Resources program are unauthorized roads and/or trails used by off road vehicles.

CE #41 is designed to address activities that are routine and have little potential for significant effects on the environment, such as the repair, cleaning, resurfacing, or replacement of gravel on existing roads, trails or parking areas. CE #41 would not encompass activities that require grading or new ground disturbance. TVA NEPA staff anticipate this CE being applied on a regular basis and the activities included in the CE are required for TVA to maintain its infrastructure and continue its mission.

The definition of proposed CE #41 is intended to distinguish those actions with little potential to disturb the ground from those actions included in proposed CE #42 that may involve ground disturbance. TVA's objective in establishing CEs #41 and #42 is to separate those routine road/trail/parking area maintenance actions for which TVA has determined documentation is no longer necessary from those which TVA has determined still should be reviewed through the CEC process in ENTRAC. For actions under CE #41, then, TVA determined that these are routine and minor actions that carry little risk of significant environmental effects (e.g., cultural resources would not be expected to be disturbed by non-surface disturbing actions).

Since establishing its NEPA procedures in 1983, minor, non-surface disturbing proposed activities such as those of proposed CE #41 have been reviewed by TVA staff at the CE-level of review. Most commonly, TVA staff have applied TVA CE 5.2.1 (*Routine operation, maintenance and minor upgrading of existing TVA facilities*) when considering such actions. On occasion, the CE for the development of public use areas (5.2.23) or for Section 26a permit actions (5.2.26) were applied, depending on the project.

3.41.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA NEPA records; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.41.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in identifying dozens of activities similar to those included in the proposed CE #41. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

As noted above, in the past TVA staff has typically cited existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*) when conducting road/trail/parking area actions. Examples of CECs relevant to the proposed CE include:

- *CEC 27140: Generic dust suppression for by-products and roads (1/12/2015)*
- *CEC 9797: WBN Repair and Resurface Patrol Roads, (6/3/2005)*
- *CEC 4720: Road maintenance and paving (generic), (11/19/2003), CE 5.2.1*
- *CEC 6153: Paris LMO Repave Parking Lot, (9/3/2004), CE 5.2.1*
- *CEC 8288: Public boat ramp and parking lot improvements, (11/17/2004), CE 5.2.26*
- *CEC 10430: WLH Parking Lot Repair, (8/9/2005), CE 5.2.1*
- *CEC 10920: Sled Creek informal access road maintenance, (1/17/2008), CE 5.2.23*

- *CEC 10921: Gray's Landing Road Maintenance (1/17/2008), CE 5.2.23*
- *CEC 16377: Asphalt sealer and relining - Wheeler employee lot, (7/27/2007), CE 5.2.1*
- *CEC 22955: Claysville Maintenance Base - Apply Perlite to road, (8/30/2010), CE 5.2.1*

These examples support TVA's determination that actions of proposed CE #41 would not result in significant environmental impacts. TVA notes that the examples of CECs relevant to the proposed CE #42 (in Section 3.42 below) also support the proposed #41 because they too are related to road/trail/parking area improvements and address actions with much greater potential to have environmental effects.

3.41.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. TVA did not identify any EAs relevant to the minor, non-surface disturbing road/trail/parking area maintenance actions.

3.41.3.3 Potential Environmental Effects

As indicated in the definition of the proposed CE, activities under the proposed CE which could have environmental effects include actions to maintain roads, trails, and parking areas but would be minor in nature, given the limit that there would be no new ground disturbance such as grading. Examples TVA has included in the definition of the proposed CE include resurfacing, cleaning, asphalt repairs, and placing gravel.

In TVA's review of previous NEPA documents, TVA found that such activities could have minor effects on the environment but that potential for major impacts was limited because actions would be occurring primarily on previously disturbed, developed areas, as summarized below:

Air Quality: Short-term, minor fugitive air emissions (including dust) from the mechanical equipment used to conduct activities could occur or from traffic of work vehicles along gravel or dirt roads.

Water Resources: Minor, short-term effects to water resources could occur if activities were to occur within or adjacent to water sources. However, impacts would be limited because maintenance would occur on previously disturbed surfaces and no surface disturbance would occur.

Fish and Wildlife: Minor, short-term, localized adverse effects to wildlife from increased levels of human disturbance may occur, particularly when actions occur in forest or remote locations. Effects would be minimal since only previously disturbed areas would be affected. No adverse effects to local aquatic life or aquatic habitats would be anticipated from the proposed activities.

Transportation: Maintenance actions may disrupt traffic as work occurs. Impacts would be temporary during duration of such actions. The infrastructure would benefit from such maintenance actions.

Recreation: Although access may be disrupted during actions, such actions to maintain roads/trails/parking areas are beneficial to recreation users and provide for continued use of transportation infrastructure.

Cultural Resources: Under this CE, no surface disturbance would be permitted. One of the key objectives of establishing this CE and CE #42 is to distinguish between actions with little potential to harm cultural resources (CE #41) from those with potential to harm cultural resources (CE #42). Although roads, trails, and parking areas are previously disturbed, there is some potential that older roads/trails/parking areas occur at locations with cultural resources; in this case, CE #42 would be the more appropriate CE. Actions that do not disturb road/trail/parking area surfaces (e.g., regrading or new grading) would be unlikely to disturb cultural resources that may be present.

Summary: Non-surface disturbing actions on existing roadways, trails and parking areas have little potential to impact environmental resources, except minor, localized disturbances during activities.

3.41.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE #41 (and to CE #42, discussed in Section 3.42). Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects as activities that other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Bureau of Land Management CE G(2) (DOI, 2008b)

G(2) Installation of routine signs, markers, culverts, ditches, waterbars, gates, or cattleguards on/or adjacent to roads and trails identified in any land use plan or transportation plan, or eligible for incorporation in such plan.

During the rulemaking process, the BLM found that these activities do not individually or cumulatively result in significant environmental effects, and has implemented them since 2008.

Department of Energy CEs B1.3 (76 FR 63764, 2011)

B1.3: Routine maintenance:

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as

cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

...

(h) Repair of road embankments;

...

(j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;

(k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation)....

DOE's CE addresses pathways, roads, and railroads. DOE proposed clarifying B1.3 in its 2011 Proposed Rule. DOE clarified that "routine maintenance actions may occur as a result of non-routine events (e.g., severe weather, such as hurricanes, floods, and tornadoes, and wildfires)." DOE provided additional examples of activities in the scope, and clarified that the usage of pesticides should be managed to "minimize the possibility of environmental impacts beyond the product's intended application." (DOE, 2011a)

According to DOE's administrative record, DOE had prepared several EAs that analyzed the effects such routine actions which showed that they do not have the potential to cause significant environmental effects (DOE, 2011a). Additionally, DOE declared that these activities, which they termed "routine" activities, "may be addressed in a single categorical exclusion determination after considering the potential aggregated impacts" (DOE, 2011a).

DOE's CE also addresses more intensive road improvement actions such as those of TVA's proposed CE #42.

Department of Homeland Security CE D3 (DHS, 2014)

Repair and maintenance of Department-managed buildings, roads, airfields, grounds, equipment, and other facilities which do not result in a change in functional use or an impact on a historically significant element or setting (e.g. replacing a roof, painting a building, resurfacing a road or runway, pest control activities, restoration of trails and firebreaks, culvert maintenance, grounds maintenance, existing security systems, and maintenance of waterfront facilities that does not require individual regulatory permits).

TVA reviewed DHS's administrative record for this CE. According to DHS's record, the activities in D3 would not individually or cumulatively result in significant environmental effects. Similar to TVA's proposed CE, DHS included examples in the CE that "would be helpful to future users in clarifying the types of activities envisioned by the categorical exclusion. In providing examples, [DHS] did not intend to extend the categorical exclusion to actions including extraordinary circumstances that may result in the activity having significant environmental effects." (DHS, 2006)

DHS substantiated CE D3 with legacy CEs from other agencies, including:

- U.S. Coast Guard (COMDTINST M 16475.1D, Categorical Exclusions 2.q, u, v, w, x, 6.a);
- Federal Emergency Management Agency (FEMA) 44 CFR 10 (x), (xv), (xvi); and
- Animal and Plant Health Inspection Service 7 CFR 372.5 (c)(4). (DHS, 2006)

DHS also substantiated D3 with 15 EAs from the U.S. Customs and Border Protection for its land-based routine maintenance activities. Based upon the agency's history of environmental analyses and on expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

DHS's CE also addresses more intensive road improvement actions such as those of TVA's proposed CE #42.

National Aeronautics and Space Administration (NASA) CE (d)(2)(i) (76 FR 43616, 2011)

§ 1216.304(d)(2): Operations and Management Activities including:

(i) Routine maintenance, minor construction or rehabilitation, minor demolition, minor modification, minor repair, and continuing or altered operations at, or of, existing NASA or NASA-funded or -approved facilities and equipment such as buildings, roads, grounds, utilities, communication systems, and ground support systems, such as space tracking and data systems

According to NASA's Federal Register CE substantiation, this CE consolidates two existing NASA CEs, which the agency had used for routine maintenance and repair activities at facilities it owns and operates. Based on NASA's experience with these types of actions, as demonstrated in NASA environmental documentation which had been completed and monitored by NASA's environmental professional staff, these actions do not result in individually or cumulatively significant environmental effects. In addition, based on a review of the activities covered by other agencies' CEs, NASA determined that it would be conducting similar activities, under similar circumstances, and with similar environmental effects. NASA also substantiated its CE by referring to other agency CEs, including:

- U.S. Army, [CE \(g\)\(1\)\(2\)\(3\)](#). *Routine repair and maintenance building equipment, roads, vehicles, and grounds.*
- EPA, [CE\(a\)\(1\)\(i\)](#). *Actions at EPA facilities involving routine facility maintenance, repair, grounds keeping; minor rehabilitation, restoration, renovation.*

- U.S. Navy, [CE \(8\)](#), *Routine repair and maintenance of buildings, facilities, vessels, aircraft, and equipment.*
- DOE [CE B1.3](#), *Routine maintenance/custodial service for buildings, structures, infrastructure, and equipment.*

Accordingly, based on its own experience and that of other agencies, NASA concluded that its activities under its CE (d)(2)(i) would not result in significant environmental effects and were, therefore, eligible for categorical exclusion. (76 FR 43616, 2011)

NASA's CE also addresses more intensive road improvement actions such as those of TVA's proposed CE #42.

National Park Service CEs C3 and C9 (DOI, 2004a)

(3) Routine maintenance and repairs to non-historic structures, facilities, utilities, grounds, and trails.

(9) Repair, resurfacing, striping, installation of traffic control devices, repair/replacement of guardrails, etc., on existing roads.

The NPS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Forest Service CEs d5 and e1 (36 C.F.R. § 220, 2014)

(d5) Repair and maintenance of recreation sites and facilities. Examples include but are not limited to: ...

(iii) Repaving a parking lot; and....

(e1) Construction and reconstruction of trails. Examples include but are not limited to:

(i) Constructing or reconstructing a trail to a scenic overlook and

(ii) Reconstructing an existing trail to allow use by handicapped individuals

The USFS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Army Corps of Engineers CE b (33 C.F.R. § 230, 2015)

Activities at completed Corps projects which carry out the authorized project purposes. Examples include routine operation and maintenance actions, general administration, equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing structures and facilities such as buildings, roads, levees, groins and utilities, and installation of new buildings utilities, or roadways in developed areas.

The USACE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Generally, all of the other agencies' CEs are similar to the activities in TVA's proposed CE, as indicated in Table 3.41-2. The actions in the benchmarked CEs may be of greater intensity than those minor, non-disturbing actions of the proposed CE #41; the other agencies' CEs are more similar to the proposed CE #42.

Table 3.41-1 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #41	BLM	DOE	DHS	NASA	NPS	FS	USACE
Actions to maintain roads, trails, and parking areas	X	X	X	X	X	X	X

The BLM, DOE, DHS, and NASA CEs each address minor actions which include ground-disturbing activities. The USFS CEs differ somewhat from the other agencies' CEs in that road maintenance is less explicitly addressed. The NPS and DHS CEs are perhaps the most similar to the proposed CE #42 because examples of actions in the definition of the CEs are more minor than examples provided by the other agencies; it is less likely that example actions would involve grading or surface disturbances than example actions of other agencies.

These CEs are also relevant to the proposed TVA CE because the agencies involved deal with circumstances similar to those under which TVA actions are carried out, and these agencies have extensive experience in conducting these types of road/trail/parking area maintenance actions and have documented previously that conducting these sorts of activities have limited environmental effects. Generally, these benchmarked CEs also support TVA's proposed CE #42.

3.41.4 CE Documentation Requirement

TVA staff would not complete a CEC in TVA's ENTRAC database to document the application of CE #41. TVA has determined that limitation included in the definition of the CE (i.e., that no new ground disturbance may occur) ensures that the CE would apply to only routine and minor actions that carry little risk of significant environmental effects.

3.41.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have very few, minor, adverse effects since the activities would occur within previously disturbed or developed areas. Effects would typically be limited to the construction phase with no or negligible long-term impacts and are therefore temporary and limited in scope. TVA specialists would not complete a CEC in ENTRAC for each application of the CE because, based on TVA's extensive experience reviewing, documenting, and implementing these routine activities, the preparation of paperwork to document these activities is not necessary to ensure that no significant environmental effects occur.

3.42 CE 42 - ROAD IMPROVEMENTS

TVA proposes to establish a new CE for improvements to existing roads, trails and parking areas. This is the second of two new CEs relating specifically to existing roads, trails and parking areas (with CE #41).

3.42.1 Proposed Categorical Exclusion Text

Improvements to existing roads, trails, and parking areas, including, but not limited to, scraping and regrading; regrading of embankments; installation or replacement of culverts; and other such minor expansions.

After the Proposed Rule was published in June 2017, TVA staff noticed a typo in the text of the proposed CE and made a minor edit (replacing a comma with a semi-colon after “embankments”). TVA also revised the end of the definition by adding “other such” to clarify that the example actions included in the CE definition are minor in nature.

3.42.2 Background

As described in Section 3.41 above, TVA has a large network of roadways and trails, as well as dozens of parking areas that are used for a wide variety of purposes. TVA has extensive experience since its establishment in the 1930s in conducting routine actions to maintain and improve this critical infrastructure.

The actions categorized in CE #42 include common actions to maintain roads, trails and parking areas which may require additional ground disturbances, from the expansion of the footprint of the road, trail or parking area, or through new grading or the regrading of the facility. TVA NEPA staff anticipate this CE being applied on a regular basis. This proposed CE is intended to address TVA’s need to maintain its current infrastructure, equipment, and facilities and thus, activities included in the CE are required for TVA to continue its mission.

Proposed CE #42 is designed to address activities that are routine and have little chance of significant effects on the environment but which would be more likely to result in potential impacts than the minor actions addressed in the proposed CE #41. As described in Section 3.41.2 above, the objective of TVA in establishing CEs #41 and #42 is to separate those routine road/trail/parking area maintenance actions for which TVA has determined documentation is no longer necessary from those which TVA has determined still should be reviewed through the CEC process in ENTRAC. The word “improvement” is intended to be interpreted by TVA staff as the word is commonly understood, i.e. as an action that makes something better or upgrades the condition of something. Improvements to road/trail/parking infrastructure would include the scraping and regrading of surfaces, regrading of road/trail/parking embankments, the installation or replacement of culverts, and other minor expansions (e.g., widening of roads, additional parking spaces).

While impacts of such actions would generally be greater than actions addressed by proposed CE #41, actions of CE #42 nonetheless have been found not to result in significant environmental impacts. Since establishing its NEPA procedures in 1983, these minor transportation

infrastructure improvements have been reviewed by TVA staff at the CE-level of review. Most commonly, TVA staff have applied TVA CE 5.2.1 (*Routine operation, maintenance and minor upgrading of existing TVA facilities*) when considering such actions.

3.42.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA NEPA records; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE. Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.42.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in identifying hundreds of activities similar to those that would be included in proposed CE #42. A majority of the CECs used existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). In some cases, the CE for the development of public use areas (5.2.23) or for Section 26a permit actions (5.2.26) were cited by staff, depending on the project.

Examples of CECs relevant to road improvements include:

- *CEC 9797: WBN Repair and Resurface Patrol Roads, (6/3/2005)*
- *CEC 5403: Rehabilitation of Failed Roadway and Parking Areas, Cleveland CSC, Cleveland, TN, (9/3/2004), CE 5.2.1*
- *CEC 732: Lower Guntersville Unit Plan Road Rehabilitation, (1/31/2003), CE 5.2.24*
- *CEC 35960: Widening of Coal Conveyor Road (for Well Access) at Gallatin Fossil Plant, (12/5/2016), CE 5.2.1*
- *CEC 35407: Beech Dam Trail Parking Area, (10/7/2016), CE 5.2.23*
- *CEC 35349: Williams Road Dump Site (Regrade portion of road), Tellico, (9/19/2016), CE 5.2.11*
- *CEC 29532: Chickamauga Power Service Center - Gravel Parking Lot (1 acre), (2/12/2014), CE 5.2.1*
- *CEC 15081: Guardrail maintenance (2/12/2007), CE 5.2.23*
- *CEC 31112: Industrial Park Road Improvements (ARC Grant), (09/2/14), CEC 5.2.1*
- *CEC 29321: Expansion of Parking Lot C, (12/5/13), CE 5.2.1*
- *CEC 29283: Honeycomb parking lot and gate (11/27/2013), CE 5.2.1*
- *CEC 28968: Fisher Man's Parking Lot Temporary Expansion, (10/2/2013), CE 5.2.1*
- *CEC 26332: Tupelo Airport Parking Lot Improvements (ARC Grant), (4/26/2012), CE 5.2.28*
- *CEC 23498: Increase the size of parking lot at WBN ball field (7/12/2011), CE 5.2.1*
- *CEC 21478: Parking lot expansion rear of Admin Building (2/18/2010), CE 5.2.1*
- *CEC 21345: Parking lot expansion (2/3/2010), CE 5.2.1*

- CEC 18134: Asphalt existing safe walkways from north parking lot (5/8/2008), CE 5.2.1
- CEC 11635: Kingston Fossil - parking lot expansion (3/15/2005), CE 5.2.1
- CEC 33654: Parking lot expansion (11/3/2003), CE 5.2.1
- CEC 4132: Road repair and improvement project (8/19/2003), CE 5.2.1
- CEC 3047: Road repairs at construction run-off holding pond (2/26/2003), CE 5.2.1
- CEC 2226: Roadway culvert, (11/22/2002), CE 5.2.26
- CEC 1610: Roadway maintenance (9/19/2002), CE 5.2.1

3.42.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. TVA identified numerous EAs for TVA projects that support the proposed CE. Note, however, that no EAs were identified for actions with scopes limited solely to road improvement actions. The example EAs analyzed larger scale projects which included road improvement actions as part of the project's scope. For each project, TVA reach a FONSI. Relevant examples are listed in the following table.

Table 3.42-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
State Route 30 Improvements Near Decatur, Tennessee EA	Rhea County, TN	4/22/2010
Tennessee State Route 66 Widening From Boyds Creek Highway to North Parkway EA	Sevier County, TN	4/29/2009
Kentucky Highway 80 Extension (minor road expansions) EA	Calloway, KY	4/03/2006
North Carolina Department of Transportation Section 26a approvals for crossings and culvert replacements of Bent Creek and Boring Mill Branch associated with the widening of State Route 191, Adoption of FHA EA	Buncombe County, NC	5/01/2002
Jeremy Percy Road Easement on Kentucky Reservoir, Tennessee River Mile 138.9, left bank, Tract No. GIR-8278 and XGIR-938H, Section 26a approval for culvert in Jim's Branch, Archaeological survey EA	Decatur County, TN	2/7/2002
Administration of an Appalachian Regional Commission grant to the City of Boaz for road improvements to Fashion Outlet Center EA	Marshall County, AL	1/21/1999

3.42.3.3 Potential Environmental Effects

Actions to improve existing roads, trails and parking areas have the potential to effect environmental resources. Examples of such actions are listed in the definition of the CE and include: scraping and regrading of surfaces, regrading of embankments along roads, trails or parking areas, installation or replacement of culverts, and other minor expansions.

In TVA's review of previous NEPA documents, TVA found the proposed activities could have effects on the following:

Air Quality: Short-term, minor fugitive air emissions (including dust) from the mechanical equipment used to conduct activities could occur or from traffic of work vehicles along gravel or dirt roads.

Vegetation and Soils: Minor, short term effects to vegetation and soils could occur from surface disturbing activities. Installation of culverts, clearing of ditches, and grading and regrading would remove small vegetation and disturb soils. Activities would be conducted primarily in previously disturbed areas, however.

Water Resources and Wetlands: Minor, short term effects to water resources could occur if surface disturbing activities were to occur within or adjacent to water sources. Actions such as grading embankments or installing culvers may disturb or alter drainage or control runoff or increase turbidity. Actions would be reviewed for potential impacts to water resources and wetlands. The presence of wetlands may present an extraordinary circumstance. TVA would continue to comply with the Clean Water Act and Executive Order 11990, *Protection of Wetlands*, through its environmental review process, and would apply appropriate mitigation, if necessary.

Solid Waste: Solid waste could be generated from some of the activities under the proposed CE. Solid wastes generated would be handled in accordance with applicable TVA, state, and federal regulations and could have minor, if any effects.

Cultural Resources: Surface disturbing actions have the potential to unknown cultural resources. Actions would not take place, however, until TVA Cultural Resources staff conduct a review of the proposal to ensure impacts are avoided or mitigated. TVA would conduct appropriate consultation under Section 106 of the National Historic Preservation Act. The presence of cultural resources at project locations may present an extraordinary circumstance.

Fish and Wildlife: Minor, short-term, localized adverse effects to wildlife from increased levels of human disturbance may occur, particularly when actions occur in forest or remote locations. Effects would be minimal since only previously disturbed areas would be affected, except where expansions occur. Minor expansions of existing roads, trails or parking areas may disturb habitat adjacent to existing infrastructure but would be limited in scope; by their proximity to existing infrastructure, it would be unlikely that such areas serve as high-quality habitat. Increases in water turbidity due to soil disturbance may affect aquatic organisms. Generally, minimal or no adverse effects to local aquatic life or aquatic habitats would be anticipated from the proposed activities.

Transportation: Maintenance actions may disrupt traffic as work occurs. Impacts would be temporary during duration of such actions but the infrastructure would benefit from such maintenance actions.

Recreation: Although access may be disrupted during actions, such actions to maintain and improve roads/trails/parking areas are generally beneficial to recreation users and provide for continued use of transportation infrastructure. Such actions are expected to be of short duration.

Summary: TVA's experience with conducting such routine actions has shown that activities contemplated under the CE could have minor, localized, short-term adverse effects on the environment, due to new surface disturbance. However, these actions would generally be occurring in previously disturbed areas along existing infrastructure, minimizing the potential of any significant impacts.

3.42.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE #42. As noted above, the CEs are directly relevant to TVA activities because these agencies, like TVA, manage public lands and/or facilities as well as networks of roadways and trails. TVA found that it would be conducting activities similar in size and scope under similar resource conditions and likely with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment, either individually or cumulatively, due to extraordinary circumstances.

Bureau of Land Management CE G(2) (DOI, 2008b)

G(2) Installation of routine signs, markers, culverts, ditches, waterbars, gates, or cattleguards on/or adjacent to roads and trails identified in any land use plan or transportation plan, or eligible for incorporation in such plan.

During the rulemaking process, the BLM found that these activities do not individually or cumulatively result in significant environmental effects and has implemented them using CE G(2) since 2008.

Department of Energy CEs B1.3 and B1.13 (76 FR 63764, 2011)

B1.3. Routine maintenance:

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements.

Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal).

Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events.

Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes

installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility.

Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

...

(h) Repair of road embankments;

...

(j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;

(k) Erosion control and soil stabilization measures (such as reseeded, gabions, grading, and revegetation);

B1.13 Pathways, Short Access Roads, and Rail Lines:

Construction, acquisition, and relocation, consistent with applicable right-of-way conditions and approved land use or transportation improvement plans, of pedestrian walkways and trails, bicycle paths, small outdoor fitness areas, and short access roads and rail lines (such as branch and spur lines).

A discussion of TVA's review of DOE's substantiation of CE B1.3 Routine Maintenance, is in Section 3.36.3.4, proposed CE #36.

In its administrative record for CE B1.13, DOE substantiated the lack of significant effects with other agency projects, including, Department of Homeland Security, Bureau of Indian Affairs, and Federal Highway and Transit Administrations. They also cited the following CEs:

DHS (71 FR 16790; April 4, 2006):

E7: Construction of physical fitness and training trails for non-motorized use on Department facilities in areas that are not environmentally sensitive, where run-off, erosion, and sedimentation are mitigated through implementation of best management practices.

Bureau of Indian Affairs categorical exclusion (Department of the Interior Departmental Manual (DOI DM) 516 Chapter 10, Section 10.5):

L(2): Construction of bicycle and pedestrian lanes and paths adjacent to existing highways and within the existing rights-of-way.

Federal Highway and Federal Transit Administrations categorical exclusion (23 CFR 771.117(c)(3)):

(c)(3) Construction of bicycle and pedestrian lanes, paths, and facilities. (DOE, 2011b)

U.S. Forest Service CE e1 (36 C.F.R. § 220, 2014)

(e1) Construction and reconstruction of trails. Examples include but are not limited to:

- (i) Constructing or reconstructing a trail to a scenic overlook and
- (ii) Reconstructing an existing trail to allow use by handicapped individuals

The USFS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Department of Commerce CE A1 (DOC, 2009)

D1: Minor renovations and additions to buildings, roads, airfields, grounds, equipment, and other facilities that do not result in a change in the functional use of the real property (e.g. realigning interior spaces of an existing building, adding a small storage shed to an existing building, retrofitting for energy conservation, or installing a small antenna on an already existing antenna tower that does not cause the total height to exceed 200 feet and where the FCC would not require an environmental assessment or environmental impact statement for the installation).

According to DOC's administrative record for the CE, the CE is supported by "legacy categorical exclusions and EAs from the U.S. Department of Agriculture, Federal Emergency Management Agency, Federal Aviation Administration, U.S. Coast Guard, U.S. Air Force, and the Immigration and Naturalization Services." (DOC, 2009)

Department of Homeland Security CE D3 (DHS, 2014)

Repair and maintenance of Department-managed buildings, roads, airfields, grounds, equipment, and other facilities which do not result in a change in functional use or an impact on a historically significant element or setting (e.g. replacing a roof, painting a building, resurfacing a road or runway, pest control activities, restoration of trails and firebreaks, culvert maintenance, grounds maintenance, existing security systems, and maintenance of waterfront facilities that does not require individual regulatory permits).

The DHS CE is the same as the DOC CE listed above in Section 3.41. According to DHS's administrative record, the activities in D3 would not individually or cumulatively result in significant environmental effects. Similar to TVA's proposed CE, DHS included examples in the CE that "would be helpful to future users in clarifying the types of activities envisioned by the categorical exclusion. In providing examples, [DHS] did not intend to extend the categorical exclusion to actions including extraordinary circumstances that may result in the activity having significant environmental effects." (DHS, 2006)

DHS substantiated CE D3 with legacy CEs from other agencies, including:

- U.S. Coast Guard (COMDTINST M 16475.1D, Categorical Exclusions 2.q, u, v, w, x, 6.a);
- Federal Emergency Management Agency (FEMA) 44 CFR 10 (x), (xv), (xvi); and
- Animal and Plant Health Inspection Service 7 CFR 372.5 (c)(4)). (DHS, 2006)

DHS also substantiated D3 with 15 EAs from the U.S. Customs and Border Protection for its land-based routine maintenance activities.

Based upon the agency's history of environmental analyses and on expert analysis, DHS determined that "actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts" (DHS, 2006).

National Aeronautics and Space Administration CE (d)(2)(i) (76 FR 43616, 2011)

§ 1216.304(d)(2): Operations and Management Activities including:

(i) Routine maintenance, minor construction or rehabilitation, minor demolition, minor modification, minor repair, and continuing or altered operations at, or of, existing NASA or NASA-funded or -approved facilities and equipment such as buildings, roads, grounds, utilities, communication systems, and ground support systems, such as space tracking and data systems

According to NASA's Federal Register CE substantiation, this CE consolidates two existing NASA CEs, which the agency had used for routine maintenance and repair activities at facilities it owns and operates. Based on NASA's experience with these types of actions, as demonstrated in NASA environmental documentation which had been completed and monitored by NASA's environmental professional staff, these actions do not result in individually or cumulatively significant environmental effects. In addition, based on a review of the activities covered by other agencies' CEs, NASA determined that it would be conducting similar activities, under similar circumstances, and with similar environmental effects. NASA also substantiated its CE by referring to other agency CEs, including:

- U.S. Army, [CE \(g\)\(1\)\(2\)\(3\)](#). *Routine repair and maintenance building equipment, roads, vehicles, and grounds.*
- EPA, [CE \(a\)\(1\)\(i\)](#). *Actions at EPA facilities involving routine facility maintenance, repair, grounds keeping; minor rehabilitation, restoration, renovation.*
- U.S. Navy, [CE \(8\)](#). *Routine repair and maintenance of buildings, facilities, vessels, aircraft, and equipment.*
- DOE [CE B1.3](#). *Routine maintenance/custodial service for buildings, structures, infrastructure, and equipment.*

Accordingly, based on its own experience and that of other agencies, NASA concluded that its activities under its CE (d)(2)(i) would not result in significant environmental effects and were, therefore, eligible for categorical exclusion. (76 FR 43616, 2011)

National Park Service CEs C3 and C9 (DOI, 2004a)

(3) Routine maintenance and repairs to non-historic structures, facilities, utilities, grounds, and trails.

(9) Repair, resurfacing, striping, installation of traffic control devices, repair/replacement of guardrails, etc., on existing roads.

The NPS reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

U.S. Army Corps of Engineers CE b (33 C.F.R. § 230, 2015)

Activities at completed Corps projects which carry out the authorized project purposes. Examples include routine operation and maintenance actions, general administration, equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing structures and facilities such as buildings, roads, levees, groins and utilities, and installation of new buildings utilities, or roadways in developed areas.

The USACE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Like benchmarked CEs described in Section 3.41 above, all of the other agencies’ CEs listed here are similar to the activities in TVA’s proposed CE. Although some agency CEs are broadly defined, the actions in the benchmarked CEs address road/trails/parking area maintenance actions and/or improvements that may be ground disturbing. Table 3.42-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.42-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #42	BLM	DOE	FS	DOC	DHS	NASA	NPS	USACE
Improvements to roads, trails, parking areas	X	X	X	X	X	X	X	X
Regrading/scraping		X						
Regrading embankments	X	X						
Culvert installation	X	X						

The BLM and DOE CEs include examples that most closely resemble the actions contemplated under proposed CE #42. The other agencies’ CEs clearly pertained to road improvement projects but lacked specific examples to determine whether ground disturbing activities such as regrading road or parking area surfaces and embankments or installation of culverts were included. Because each CE does address road maintenance and repairs, they are relevant to the proposed TVA CE and support TVA’s finding that such actions would not result in significant environmental impacts. These agencies have extensive experience in conducting these types of road/trail/parking area maintenance actions and have documented previously that conducting these sorts of activities have limited environmental effects.

3.42.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document the application of the CE. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.42.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. Since the proposed CE would be generally limited to previously disturbed areas, there would be little potential for significant environmental impacts. Potential environmental impacts would typically be limited to the construction phase with no or negligible operational impacts and are therefore temporary and limited in scope. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.43 CE 43 - TVA PROPERTY ACCESS

TVA proposes to establish a new CE for minor actions associated with improving and controlling access to TVA property, including the limited construction of new access roads and parking areas.

3.43.1 Proposed Categorical Exclusion Text

Actions to enhance and control access to TVA Property including, but not limited to, construction of new access road and parking area (generally no greater than 1 mile in length and physically disturbing no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed) and installation of control measures such as gates, fences, or post and cable.

After the Proposed Rule was published in June 2017, TVA staff revised the definition of the CE to exclude “and improvements to” access road and parking areas because those actions would be covered under proposed CE #42. The proposed CE #43 would only apply to “new” access road and parking areas. With this edit, the distinction between proposed CEs #42 and #43 is maintained. TVA also revised the spatial limitation to clarify that land disturbance that should be considered is associated with human activity.

3.43.2 Background

Maintaining and controlling the appropriate access to TVA properties is critical to TVA’s responsibilities as an administrator of public lands and the numerous facilities around the Tennessee Valley region. The considerations given to providing access to properties are complex, given the great variety of facilities TVA manages. TVA’s management of public lands requires actions that will ensure opportunities for the public to enjoy public lands under TVA’s control. Management of such lands contrasts to the efforts required to secure the properties surrounding the three nuclear power plants operated by TVA. Enhancing and controlling access to TVA properties is an action that is routine for TVA staff and for which TVA has extensive experience.

Actions under this proposed CE include the construction of new access roads and parking areas. To ensure that CE actions would not have significant environmental effects, TVA is proposing to limit new road construction to no more than 1 mile in length, with a total physical disturbance of less than 10 acres on previously undisturbed lands or 25 acres on previously disturbed lands. TVA access roads are typically small roads with a ROW width suitable for two vehicles. Road construction under this CE would include heavy equipment, grading of roadways and embankments, installation of drainage culverts, placement of fill, hauling of materials, and the paving of roadway. Construction of gravel roadways or single-track roadways are also actions of the proposed CE #43.

CE #43 also includes actions like the installation of control measures such as security fencing, barricades, fences, posts, and cable to restrict access. Such installations are common around many TVA buildings as well as in some of the more remote public lands managed by TVA. For instance, Natural Resources staff routinely install barricades to halt the illegal entry to reservoir

lands or to limit the types of road or trail use. Typically, such measures are installed by hand, with small tools for digging holes. In some limited cases, larger equipment such as a bobcat is used to place larger fencing materials, barricades, or boulders.

The spatial limits proposed for this CE are consistent with those TVA proposes to include in several proposed CEs. Generally, TVA considers a proposal that would not disturb more than 10 acres to typically be minor, except when extraordinary circumstances are present. For CE #43, TVA is also proposing a larger limit on disturbance (generally up to 25 acres) on areas that have previously been disturbed (e.g., TVA plant or dam reservation). In addition to these spatial limits, TVA staff would complete a CEC for every application of this CE to ensure that the CE applies to the proposed action and that no extraordinary circumstances are present in which significant effects on the environment could occur.

3.43.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA NEPA records; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE. Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.43.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in identifying dozens of activities relating to improving TVA property access. The great majority of the CECs used existing TVA CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*). In some cases, the CE for the development of public use areas (5.2.23) or for Section 26a permit actions (5.2.26) were cited by staff, depending on the project.

Examples of CECs relevant to the proposed CE include:

- *CEC 35413: Baumgardner Islands Access Control Measures (barriers, signage), (11/7/2016), CE 5.2.1*
- *CEC 35694: Chandler Park Property Maintenance (Shoreline stabilization, road improvements, signage, and access control measures (guardrails or gates)), (11/18/2016), CE 5.2.1*
- *CEC 27342: GDA/Peninsula Well Monitoring Access Road, (12/3/2012), CE 5.2.1*
- *CEC 35452: Road Construction for CCR Wells Project # 418293, (9/20/2016), CE 5.2.1*
- *CEC 35535: Nickajack Dam Reservation: Access Control, (10/20/2016), CE 5.2.1*
- *CEC 33625: South Holston Dam Reservation Gate Installation, (12/07/2015), CE 5.2.1*
- *CEC 29779: Installation of Access Control Measures (2/26/2014), CE 5.2.23*
- *CEC 29283: Honeycomb Parking Lot and Gate, (11/27/2013), CE 5.2.1*
- *CEC 28709: Pine Bottoms Gate Installation Project, (8/23/2013), CE 5.2.1*
- *CEC 34308: Battery Hill Access Road Improvement, (3/07/2016), CE 5.2.1*

- CEC 34128: LSRMU Access Control, (3/15/2016), CE 5.2.1
- CEC 34108: Rankin Cove Access Control, (3/15/2016), CE 5.2.1
- CEC 4831: Chatuge Hydro Security Fencing, Gates and Signs, (10/01/2003), CE 5.2.1
- CEC 4180: Boone Hydro Plant Security Fencing, Gates and Signs, (9/03/2003), CE 5.2.1
- CEC 1196: Hiwassee Hydro Security Fencing, Gates and Signs, (4/29/2003), CE 5.2.1
- CEC 3298: Nickajack Hydro Plant and Lock, Security Fencing, Gates and Signs, (5/20/2003), CE 5.2.1
- CEC 3059: Guntersville Hydro and Lock, Gates, Fence, and Signs, (4/28/2003), CE 5.2.1
- CEC 2736: Wheeler Hydro and Lock, Gates, Fence, and Signs, (3/25/2003), CE 5.2.1
- CEC 1347: Watts Bar Security Fencing, Gates, and Signs, (3/25/2003), CE 5.2.1
- CEC 1203: Wilson Gates, Fence Modifications, and Signs, (3/25/2003), CE 5.2.1
- CEC 1201: Tellico Gates, Fence Modifications, and Signs, (3/25/2003), CE 5.2.1
- CEC 743: Fontana Gates, Fence Modifications, and Signs, (3/25/2003), CE 5.2.1
- CEC 31731: Bear Creek Maintenance Base Fenced Area, (1/09/2015), CE 5.2.1
- CEC 28956: Fence Installation at Campground, (9/11/2013), CE 5.2.1
- CEC 28853: Unit 2 Cooling Tower Nuisance Fence, (3/28/2016), CE 5.2.1
- CEC 27952: Repair Fence at Jackson Cemetery, (3/05/2013), CE 5.2.23
- CEC 26627: Addition of New Personnel Fence/Sidewalk to Access Turbine Building, (6/21/2012), CE 5.2.1
- CEC 21985: Watts Bar Construction Relocation/Fence Expansion, (4/07/2010), CE 5.2.1
- CEC 21646: Watts Bar Protected Area Fence Modification, (8/17/2010), CE 5.2.11
- CEC 19395: Watts Bar Chain Link Fence (Warehouses A and B), (10/21/2008), CE 5.2.1
- CEC 18414: Watts Bar Generic: Chain Link Fences Outside PMF, PMP, and PA, (5/27/2008), CE 5.2.1
- CEC 13483: Watts Bar Decon Building Fence, (7/24/2006), CE 5.2.1
- CEC 8186: Watts Bar Modification of Security Fence, (11/18/2004), CE 5.2.1
- CEC 2782: Sequoyah – New Fence Around Warehouse, (2/12/2003), CE 5.2.11
- CEC 2418: Sequoyah – Install Fence Around Old Warehouse Slab, (1/21/2003), CE 5.2.1

Proposed CE #43 would include the limited construction of new access roads and parking areas which would be generally no more than 1 mile in length and would not physically disturbing more than 10 acres of undisturbed land or 25 acres of previously disturbed land. The following CECs are relevant:

- CEC 35452: Road Construction for CCR Well, 2 miles. (9/20/2016), CE 5.2.1
- CEC 35643: Paradise Fossil Plant Access Road for Slag Mountain Closure, (11/22/2016), CE 5.2.1
- CEC 34526: Paradise Fossil New Road Connecting Peabody Ash Pond to Riverside Road, 0.2 miles. (4/05/2016), CE 5.2.1
- CEC 34392: Groundwater Wells Road Installation Project, 0.7 miles. (3/22/2016), CE 5.2.1
- CEC 34308: Battery Hill Access Road Improvement – Project: 0.75 miles. (3/07/2016), CE 5.2.1
- CEC 33812: Shellmound Road Project, (1/20/2016), CE 5.2.1

- CEC 33792: Colbert Fossil Ash Disposal Haul Road Project, (3/15/2016), CE 5.2.1
- CEC 33378: Coytee Road Improvements, 0.1 miles. (11/30/2015), CE 5.2.24
- CEC 33055: Dream Ranch – Access Road Restoration, (11/24/2015), CE 5.2.1
- CEC 33053: Ag Tract Access Road Construction, 0.1 mile. (10/07/2016), CE 5.2.24
- CEC 32947: Glendale Road Paving, 0.1 mile. (8/19/2015), CE 5.2.1
- CEC 32855: Access Road to JCT Gas Pipeline Valve Station, (9/18/2015), CE 5.2.1
- CEC 32357: KIF Alternate Ash Haul Road, 0.3 miles. (11/05/2015), CE 5.2.1
- CEC 31791: BOH Laydown Area and Haul Road Construction, (3/09/2015), CE 5.2.1
- CEC 31051: Widening Campground Loop Roads, (12/01/2014), CE 5.2.1
- CEC 31018: Replace Road and Wet Weather Conveyance Culvert, (8/14/2014), CE 5.2.1
- CEC 31339: Construct parking lot for employees (10/10/2014), CE 5.2.1
- CEC 30040: Fort Loudoun Access Control and parking upgrade (3/19/2014), CE 5.2.11
- CEC 29295: Earl Light Road Improvements, (11/01/2013), CE 5.2.1
- CEC 29294: Forks of the River Road Improvements, (12/12/2013), CE 5.2.1
- CEC 29245: Permanent Haul Road (#603879), (11/04/2013), CE 5.2.1
- CEC 28439: Phipps Bend Road, (7/11/2013), CE 5.2.1
- CEC 24506: WCF new parking lot (7/12/2011), CE 5.2.1
- CEC 21771: SCC Parking lot for contractors (6/3/2010), CE 5.2.1
- CEC 10661: Administration parking lot and road (8/23/2005), CE 5.2.1
- CEC 8970: PCC Bunker Parking Lot Addition (2/25/2005), CE 5.2.1
- CEC 19226: Permanent Parking Lots (9/9/2008), CE 5.2.1
- CEC 15523: North Portal Parking Lot (3/23/2007), CE 5.2.1

3.43.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Numerous EAs for road construction projects in which TVA participated were identified; these EAs are relevant to the proposed CE because they address road construction impacts. However, the EAs do not address TVA property access actions specifically; access actions made up only a portion of a larger project. Several of these EAs were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in the following table.

Table 3.43-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Tennessee State Route 15 (U.S. 64)	Hardin County, TN	2/10/2014
Construction of U.S. Highway 321 and Bridges at Fort Loudoun and Tellico Dam Reservations	Loudon County, TN	8/29/2013
Alabama State Route 24 Red Bay Bypass	Franklin County, AL	7/07/2005
Morgan County Industrial Park Expansion - Administration of Appalachian Regional Commission Grant for sewer line, grading, drainage, and access road	Morgan County, TN	12/20/2005
Tennessee State Route 36 Improvements EA	Washington and Sullivan Counties, TN	4/13/2004

Title	Location	Date FONSI Issued
Proposed Industrial Park for Clay County, MacDonald Road EA	Hayesville, NC	1/10/2003
Jeremy Percy Road Easement, Kentucky Reservoir, Tennessee River Mile 138.9 LB EA	Decatur County, TN	2/07/2002
Appalachian Regional Commission grant to the City of Boaz, Marshall County, Alabama, for road improvements to Fashion Outlet Center EA	Marshall County, AL	1/21/1999
Boone Dam Seepage Remediation EA (parking, limited road construction)	Sullivan and Washington Counties, TN	1/7/2016

The following is representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Boone Dam Seepage Remediation EA and FONSI: Although this EA pertains to a construction project at a TVA facility, analysis pertaining to new haul roads and parking area construction and installation of access control fencing and gates is relevant to the actions of the proposed CE. The proposal to remediation seepage at the dam involved extensive construction activities across an 84-acre area and included constructing several laydown areas and parking lots and approximately 1/2 mile of gravel haul roads. The EA identified the potential impacts during those construction actions of increased noise levels, air emission, and soil disturbance. Impacts from the installation of fencing to control access to the site include disturbances to wildlife. (TVA, 2016b) TVA concluded in the FONSI that the project would not have significant environmental impacts.

3.43.3.3 Potential Environmental Effects

Actions to enhance and control access to TVA property and lands have the potential to effect environmental resources. Examples of such actions are listed in the definition of the CE and include:

- Construction of and improvements to access road and parking areas, as limited in the CE
- Installation of gates, fences, or post and cable

In TVA's review of previous NEPA records, TVA found the proposed activities could have similar effects as other limited construction actions (e.g., those of proposed CE #38), including impacts on the following:

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to construct new roadways, trails or parking areas could occur. Such construction could have associated transient air pollutant emissions during the construction phase. The total amount of these emissions would be small and would result in minimal effects. Overall, the air quality effect of siting, construction, and operation-related activities would typically be minor and temporary. Smaller equipment may be used to install control structures (e.g., fence, gates) but such emissions would be negligible. Although the construction equipment would also emit greenhouse gases, the effects would also be negligible. (TVA, 2016b)

Water Resources and Wetlands: Short-term, minor effects could include increased suspended solids, turbidity, and sedimentation from ground disturbances during construction. Drainage and embankments would be designed to ensure adequate runoff and potential impacts to water resources along the road/trail/parking area would be considered. Road, trail and parking facilities would be constructed in accordance with appropriate best management practices and would result in only minor and temporary effects to surface water. Actions would be reviewed for potential impacts to wetlands; the presence of wetlands may present an extraordinary circumstance. TVA would continue to comply with the Clean Water Act and Executive Order 11990 (*Protection of Wetlands*) through its environmental review process. Impacts of installing control measures would be negligible.

Noise: Heavy equipment and vehicles could generate noise during the construction activities. However, these effects would be short-term, minor, and limited to the site area (localized). (TVA, 2016b)

Vegetation: No or negligible impacts may occur from installation of control measures. New road/trail/parking area construction would result in removal of vegetation. Impacts would be limited because of the spatial limitation applied to the activities in the definition of the proposed CE. Many of the activities occurring under the proposed CE would be conducted in previously disturbed areas, further reducing the potential for major impacts.

Soils: Short-term, minor effects from the grading and movement of soils could include increased erosion, runoff, and mixing of surface layers of soil due to road/trail/parking area construction (i.e., grading, excavation). The spatial limitations of the proposed CE would ensure that there is little potential for significant impacts. Impacts from installing control measures such as fencing or gates would be localized, typically in a small area, and negligible. (TVA, 2016a; TVA, 2016b; TVA, 2011a)

Cultural Resources: Surface disturbing actions have the potential to unknown cultural resources. Actions would not take place, however, until TVA Cultural Resources staff conduct a review of the proposal to ensure impacts are avoided or mitigated. TVA would conduct appropriate consultation under Section 106 of the National Historic Preservation Act. The presence of cultural resources at project locations may present an extraordinary circumstance. The spatial limitations of the proposed CE would ensure that there is little potential for significant impacts.

Fish and Wildlife: Minor, short-term, localized adverse effects to wildlife from increased levels of human disturbance may occur, particularly when actions occur in forest or remote locations. No adverse effects to local aquatic life or aquatic habitats would be anticipated from the proposed activities, unless water resources are impacted by construction or sedimentation. (TVA, 2016b)

Summary: Previous TVA environmental reviews support the conclusion that the activities contemplated under this CE would have minor, localized short-term adverse effects for the resources noted above and would not cause significant environmental effects. Impacts associated with new road/trail/parking area construction would generally be greater than those associated

with installation of control measures. However, impacts from all actions of the proposed CE would be insignificant due to the spatial limitations proposed by TVA. Further, the review for extraordinary circumstances conducted by TVA when certain actions are proposed would ensure that actions do not result in significant effects.

3.43.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those relating to maintaining and improving property access. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed CE #43. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage properties, extensive reaches of land, and networks of transportation infrastructure. Based on the review, TVA found that the CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE #43 would not result in significant effects to the environment either individually or cumulatively.

Note, as discussed in Section 3.27 above, three federal agencies have established CEs relating to installation of fencing to protect sensitive natural or cultural resources: DOE (CE B1.20), FWS (CE B.3) and NRCS (CE 10). While these agencies' objectives for fence installation differs from those of TVA for actions under proposed CE #43, potential impacts of fence installation would be similar, and thus, the three CEs discussed in Section 3.27 are relevant here as well.

Department of Energy CEs [B1.11](#) and [B1.13](#) (76 FR 63764, 2011)

B1.11 Fencing:

Installation of fencing, including, but not limited to border marking, that would not have the potential to significantly impede wildlife population movement (including migration) or surface water flow.

B1.13 Pathways, Short Access Roads, and Rail Lines:

Construction, acquisition, and relocation, consistent with applicable right-of-way conditions and approved land use or transportation improvement plans, of pedestrian walkways and trails, bicycle paths, small outdoor fitness areas, and short access roads and rail lines (such as branch and spur lines).

DOE clarifies that the limitation in CE B1.11 applies to fencing that would have the potential to cause significant effects to surface water flow or wildlife populations or migration, as opposed to individual animal movements. DOE explains, "Fencing can and probably often does affect individual movements, but such impacts on individual animals would not be considered significant unless the context and intensity of the impacts would have the potential to cause significant impacts to wildlife populations or migration." (76 FR 63764, 2011)

In its administrative record for CE B1.13, DOE substantiated the lack of significant effects with other agency projects, including, Department of Homeland Security, Bureau of Indian Affairs, and Federal Highway and Transit Administrations. They also cited the following CEs:

DHS (71 FR 16790; April 4, 2006): E7: *Construction of physical fitness and training trails for non-motorized use on Department facilities in areas that are not environmentally sensitive, where run-off, erosion, and sedimentation are mitigated through implementation of best management practices.*

Bureau of Indian Affairs categorical exclusion (Department of the Interior Departmental Manual (DOI DM) 516 Chapter 10, Section 10.5): L(2): *Construction of bicycle and pedestrian lanes and paths adjacent to existing highways and within the existing rights-of-way.*

Federal Highway and Federal Transit Administrations categorical exclusion (23 CFR 771.117(c)(3)): *(c)(3)Construction of bicycle and pedestrian lanes, paths, and facilities.* (DOE, 2011b)

National Aeronautics and Space Administration CE (d)(2)(i) (76 FR 43616, 2011)

§ 1216.304(d)(2): Operations and Management Activities including:

(i) Routine maintenance, minor construction or rehabilitation, minor demolition, minor modification, minor repair, and continuing or altered operations at, or of, existing NASA or NASA-funded or -approved facilities and equipment such as buildings, roads, grounds, utilities, communication systems, and ground support systems, such as space tracking and data systems

According to NASA's Federal Register CE substantiation, this CE consolidates two existing NASA CEs, which the agency had used for routine maintenance and repair activities at facilities it owns and operates. Based on NASA's experience with these types of actions, as demonstrated in NASA environmental documentation which had been completed and monitored by NASA's environmental professional staff, these actions do not result in individually or cumulatively significant environmental effects. In addition, based on a review of the activities covered by other agencies' CEs, NASA determined that it would be conducting similar activities, under similar circumstances, and with similar environmental effects. NASA also substantiated its CE by referring to other agency CEs, including:

- U.S. Army, [CE \(g\)\(1\)\(2\)\(3\)](#). *Routine repair and maintenance building equipment, roads, vehicles, and grounds.*
- EPA, [CE\(a\)\(1\)\(i\)](#). *Actions at EPA facilities involving routine facility maintenance, repair, grounds keeping; minor rehabilitation, restoration, renovation.*
- U.S. Navy, [CE \(8\)](#), *Routine repair and maintenance of buildings, facilities, vessels, aircraft, and equipment.*
- DOE [CE B1.3](#), *Routine maintenance/custodial service for buildings, structures, infrastructure, and equipment.*

Accordingly, based on its own experience and that of other agencies, NASA concluded that its activities under its CE (d)(2)(i) would not result in significant environmental effects and were, therefore, eligible for categorical exclusion. (76 FR 43616, 2011)

Department of Commerce CE A1 (DOC, 2009)

D1: Minor renovations and additions to buildings, roads, airfields, grounds, equipment, and other facilities that do not result in a change in the functional use of the real property (e.g. realigning interior spaces of an existing building, adding a small storage shed to an existing building, retrofitting for energy conservation, or installing a small antenna on an already existing antenna tower that does not cause the total height to exceed 200 feet and where the FCC would not require an environmental assessment or environmental impact statement for the installation).

According to DOC’s administrative record, the CE is supported by “legacy categorical exclusions and EAs from the U.S. Department of Agriculture, Federal Emergency Management Agency, Federal Aviation Administration, U.S. Coast Guard, U.S. Air Force, and the Immigration and Naturalization Services.” (DOC, 2009)

Department of Homeland Security CE D3 (DHS, 2014)

Repair and maintenance of Department-managed buildings, roads, airfields, grounds, equipment, and other facilities which do not result in a change in functional use or an impact on a historically significant element or setting (e.g. replacing a roof, painting a building, resurfacing a road or runway, pest control activities, restoration of trails and firebreaks, culvert maintenance, grounds maintenance, existing security systems, and maintenance of waterfront facilities that does not require individual regulatory permits).

The DHS CE is the same as the DOC CE listed above. According to DHS’s administrative record, the activities in D3 would not individually or cumulatively result in significant environmental effects. Similar to TVA’s proposed CE, DHS included examples in the CE that “would be helpful to future users in clarifying the types of activities envisioned by the categorical exclusion. In providing examples, [DHS] did not intend to extend the categorical exclusion to actions including extraordinary circumstances that may result in the activity having significant environmental effects.” (DHS, 2006)

DHS substantiated CE D3 by benchmarking to legacy CEs from other agencies, including:

- U.S. Coast Guard (COMDTINST M 16475.1D, Categorical Exclusions 2.q, u, v, w, x, 6.a);
- Federal Emergency Management Agency (FEMA) 44 CFR 10 (x), (xv), (xvi); and
- Animal and Plant Health Inspection Service 7 CFR 372.5 (c)(4)). (DHS, 2006)

DHS also substantiated D3 by referencing 15 EAs from the U.S. Border Protection for land-based routine maintenance activities. Based upon the agency’s history of environmental analyses and on expert analysis, DHS determined that “actions of a similar nature, scope, and intensity were performed throughout the Department without significant environmental impacts” (DHS, 2006).

U.S. Army Corps of Engineers CE b (33 C.F.R. § 230, 2015)

Activities at completed Corps projects which carry out the authorized project purposes. Examples include routine operation and maintenance actions, general administration,

equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing structures and facilities such as buildings, roads, levees, groins and utilities, and installation of new buildings utilities, or roadways in developed areas.

The USACE reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.43.2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.43-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #43	DOE	NASA	DOC	DHS	USACE
Actions to enhance and control access to TVA property	X	X	X	X	X
Limited construction of roads, trails or parking areas	X	X			X
Installation of control measures (e.g., fences, gates, barricades, post and cable)	X				

Each of the other agencies’ CEs generally relate to the actions of proposed CE #43 because they pertain to routine maintenance or repairs to agency infrastructure. DOE, NASA and USACE CEs address minor or limited construction of roadways generally and the DOE CE addressed the installation of fencing to mark borders, a similar objective as TVA would have for actions under proposed CE #43.

3.43.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE #43 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.43.5 Conclusion

The review of TVA’s previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs support TVA’s determination that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.44 CE 44 - WASTE MANAGEMENT & CLEANUP

TVA proposes to establish a new CE for waste management and cleanup actions.

3.44.1 Proposed Categorical Exclusion Text

Small-scale, non-emergency cleanup of solid waste or hazardous waste (other than high-level radioactive waste and spent nuclear fuel) to reduce risk to human health or the environment. Actions include collection and treatment (such as incineration, encapsulation, physical or chemical separation, and compaction), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action.

3.44.2 Background

TVA manages an array of different wastes, including municipal solid waste, wastewater, hazardous waste, low- and high-level nuclear waste, other regulated wastes (e.g., asbestos and polychlorinated biphenyls [PCBs]), scrap metal, office waste, and coal-combustion waste, which includes fly ash, bottom ash, and gypsum. TVA has extensive experience in waste management and has established an effective waste management system with day-to-day implementation by trained personnel at the various facilities. Employees help integrate waste-management expertise at every level of TVA to minimize the impact on Tennessee Valley resources. (TVA, 2013d)

Hazardous wastes, as defined by the RCRA, include those that meet the regulatory criteria of ignitability, corrosivity, reactivity, or toxicity. They can include such materials as paints, solvents, corrosive liquids, and discarded chemicals. Toxic Substances Control Act (TSCA) wastes typically present at TVA sites include PCBs, historically used in insulating fluids in electrical equipment. Between 2010 and 2013, TVA facilities (coal, nuclear, hydro, and natural gas plant, and other facilities) produced approximately 35,537 kilograms of hazardous waste. (TVA, 2015b)

The nuclear fuel used for power generation produces liquid, gaseous, and solid radioactive wastes that require storage and disposal. These wastes have two main classifications, high-level and low-level, based on the type of radioactive material, the intensity of its radiation, and the time required for decay of the radiation intensity to natural levels. High-level wastes, which are not included in this proposed CE, consist almost entirely of spent fuel. Low-level waste consists of items that have encountered radioactive materials. At nuclear plants, these wastes consist of solids, spent resins, sludge from tanks and sumps, cloth and paper wipes, plastic shoe covers, tools and materials; liquids such as tritiated waste (i.e., containing radioactive tritium), chemical waste, and detergent waste; and gases such as radioactive isotopes created as fission products and released to the reactor coolant. Nuclear plants have systems for collecting these radioactive wastes, reducing their volume, and packaging them for interim onsite storage and eventual shipment to approved processing and storage facilities. A third category, mixed waste, is dually regulated as radioactive and contains some other component regulated by additional environmental regulations (i.e. RCRA or TSCA). (TVA, 2015b)

TVA has incorporated into its procedures and sustainability goals waste minimization efforts including reuse and recycling, and substitution of less hazardous products. While focusing on compliance with waste requirements, TVA uses a team approach to seek out and implement further waste minimization opportunities. In addition, TVA collaborates with others to identify sustainable solutions for better management of waste. (TVA, 2015b)

3.44.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities conducted during short-term, small scale cleanup operations under RCRA.

Due to the large amount of waste produced from routine operations at TVA, TVA has extensive experience in implementing responsible waste management practices at its facilities. Standard waste management practices and small-scale clean-up activities are minor in nature and have no significant effect on the environment. Establishing the proposed CE for small-scale actions is expected to allow TVA specialists to more efficiently complete environmental review. Potentially, the CE could result in lower waste management costs because TVA specialists may take action more quickly.

When TVA considered how a proposed CE for this category would be defined, TVA evaluated CEs established by other agencies and found that the definition of a Department of Energy CE (DOE B6.1) was similar to the category of activities TVA proposes to include in CE #44. Therefore, TVA's proposed CE is based on the DOE CE and includes similar text in the definition. For instance, the opening text of DOE B6.1 is similar in concept to TVA's proposed CE. ([10 CFR 1021, Appendix B to Subpart D, B 6.1, Cleanup Activities](#)). The DOE CE also relates to small-scale, short-term cleanup activities, under RCRA, to reduce risk to human health or the environment from the release or threat of release of a hazardous substance other than high-level radioactive waste and spent nuclear fuel. DOE recognized that these types of activities result in minor environmental effects, and found, through their experience of projects costing less than \$10 million, along with the other limitations on the scope of the proposed CE, would not have the potential for significant effects. (76 FR 63764, 2011)

The language included in the proposed CE was developed to address only small-scale activities whose environmental effects are minor. Generally, the term "small-scale" would be considered in the context of the particular proposed action, including its proposed location. In assessing whether a proposed action is small, in addition to the actual magnitude of the proposed action, TVA would consider factors such as industry norms, the relationship of the proposed action to similar types of development near the proposed action, and expected outputs of waste.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.44.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in few instances of activities similar to those included in the proposed CE. TVA NEPA staff found similar documented “generic CECs,” which TVA staff has used for routine activities such as changing filters on machines or doing minor, everyday waste management. Commonly, staff cited to CE 5.2.1 (*Routine operation, maintenance, and minor upgrading of existing TVA facilities*) for these activities. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Since 2002, TVA has documented over 30 individual activities involving hazardous waste management and over 30 actions related to cleanup activities. Since waste management activities are considered routine, and repeated so often at TVA without any significant environmental effects, several TVA business units have created generic CECs in the ENTRAC database system as a way to streamline environmental documentation procedures. Generally, a generic CEC was created once for a set of activities at a single facility or multiple similar facilities, and then the generic CEC was referred to each time thereafter that one or more of the activities was proposed. TVA staff recorded the CEC number in their project files before proceeding with the action, rather than creating a new CEC in ENTRAC for each new action. The use of generic CECs is indicative of how routine the activities within the proposed CE are, and how often they are conducted without any individual or cumulative effects on the environment.

Examples of documented TVA CECs that include activities related to involving hazardous waste management:

- CEC 30526, *Muscle Shoals Reservation Newly Discovered SWMUs Project, (6/10/14), CE 5.2.1*
- CEC 25885, *Chemical Clean Unit 3 in 2013, (5/14/2012), CE 5.2.1*
- CEC 10945, *Fuel Tank Paint Removal/Re-paint at Various TVA Facilities, (6/4/2007), CE 5.2.1*
- CEC 2002, *Colbert Unit 1 EDTA Boiler Cleaning, (11/13/2002), CE 5.2.1*

Examples of relevant documented generic CECs that include activities that apply to the proposed CE include (all documented under existing CE 5.2.1):

- CEC 711: *Generic FPG – Removal of Asbestos Material (10/27/2004; 3/26/2012)*
- CEC 23401: *Generic installation of temporary generators, compressors, etc. (4/19/2011)*
- CEC 1193: *Generic SHF-Replace Process Instrumentation on Condensate Cycle (1/20/2003)*
- CEC 1239: *Generic SHF- Pyrite Line Modification (12/31/2002)*
- CEC 2932: *Generic GAF Generator, Refurbishments (3/10/2003)*
- CEC 2303: *Cleanout and Oil Recovery from Oil-Water Collection Tanks (11/18/2002)*
- CEC 895: *Generic FPG - CO₂ Injection Treatment system for pH Control (12/23/2003)*
- CEC 2970: *Generic SHF Boiler Chemical Cleaning with EDTA (4/16/2003)*
- CEC 5627: *Generic SHF - Replace MPT Neutral Reactor and USST Neutral Resister (12/18/2003)*

- CEC 4370: Generic SHF - Plant Intake Maintenance Dredging and Dredge Cell O&M (10/25/2005)
- CEC 10221: Generic Replace Igniters (8/2/2005)
- CEC 675: Fuel Oil Storage Tank Cleaning Projects – Generic CEC (3/9/2004)
- CEC 22836: Generic – RO - Removal of Asbestos Containing Material (8/24/2010)

3.44.3.2 TVA Experience with Relevant EAs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.44-1.

Table 3.44-1 Relevant TVA EAs

Title	Location	Date FONSI Issued
Johnsonville Cogeneration Plant EA	Humphreys County, TN	7/1/2015
Kingston Dry Fly Ash Conversion EA	Roane County, TN	6/18/2010
Johnsonville Fly Ash Disposal - Final Supplemental EA	New Johnsonville, Humphreys County, TN	9/10/2004
Resource Conservation and Recovery Act Corrective Measures Implementation at Phosphorus Development Works Landfill, Solid Waste Management Unit 108, Supplemental EA	Muscle Shoals Reservation, Colbert County, AL	8/6/2001
Capping of the Precipitator Dust Piles Solid Waste Management Units (SWMU) 112 and 194 EA	Muscle Shoals Reservation, Colbert County, AL	4/17/2001
Low Level Radioactive Waste Transport and Storage, Watts Bar and Sequoyah Nuclear Plants EA	Rhea County, TN and Hamilton County, TN	11/22/1999
Closure of Major Production Facilities, Prototype Plant Operation, and Plant Site Cleanup at National Fertilizer Development Center EA	Muscle Shoals Reservation, Colbert County, AL	2/7/1990
Development Of Dredged Ash Disposal Area Paradise Fossil Plant EA	Muhlenberg County, KY	2/1/1989
Supplemental EA for Proposed Construction and Operation of a Low Level Radioactive Waste Melting Facility Affecting Tract No. XWBR-688IE, Watts Bar Reservoir	Rhea County, TN	1/1/1989
Termination of Solid Waste Permit No. 82-16 and Reclamation of Spencer-Richardson Open Pit EA	Fall River County, SD	11/6/1987
EA for Low-Level Radioactive Waste Management, Watts Bar Nuclear Plant	Rhea County, TN	7/11/1980
EA for Low-Level Radwaste Management, Sequoyah Nuclear Plant	Hamilton County, TN	3/11/1980
Low-Level Radioactive Waste Management for the Browns Ferry Nuclear Plant EA	Limestone County, AL	2/28/1980

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Low-Level Radwaste Management, Sequoyah Nuclear Plant EA and FONSI: In 1980, TVA revised its plans for treatment and storage of low-level radioactive wastes (LLRW) at Sequoyah Nuclear Plant. The proposed management plan was threefold, consisting of (1) establishing a temporary LLRW management plan, including temporary storage, (2) installing equipment for volume reduction and solidification of LLRW, and (3) constructing facilities to safely store LLRW for the operational life of the plant. In the EA, TVA concluded that construction and operation of the LLRW facility had no significant effect on the environment. (TVA, 1980) This EA is relevant to the Proposed CE because it involves the transport, treatment, and storage of low-level radioactive waste, and was on a small scale.

Muscle Shoals Reservation EAs: TVA completed two EAs addressing small-scale cleanup activities under RCRA Corrective Actions at its Muscle Shoals Reservation in Colbert County, Alabama: ***Capping of the Precipitator Dust Piles Solid Waste Management Units (SWMUs) 112 and 194 EA and FONSI***, and ***Resource Conservation and Recovery Act Corrective Measures Implementation at Phosphorus Development Works Landfill, Solid Waste Management Unit 108, Supplemental EA and FONSI***. Certain past activities at the Muscle Shoals Reservation released contaminants to the environment, resulting in contamination of soils. TVA assessed the extent of the contamination and determined which sites required corrective measures under RCRA. The RCRA Corrective Action alternatives involved placement of an impermeable cap to affect natural attenuation of the contaminated groundwater and/or containment of contaminated soil to prevent future releases. (TVA, 2001b; TVA, 2001c) The EAs are relevant to the proposed CE because they were short-term actions (between 6-12 months) of limited scope.

Kingston Dry Fly Ash Conversion EA and FONSI: In July 2009, the TVA Board of Directors passed a resolution to review and address systems, controls, and standards related to coal combustion products (CCPs), such as fly ash, bottom ash, and gypsum, which result from the burning of coal to produce electricity. TVA reviewed its practices for handling and storing CCPs at its generating facilities, including its coal-fired Kingston Fossil Plant. The proposed construction of the proposed dry ash handling system occurred on previously disturbed parts of the Kingston site, and the Proposed Action did not affect wetlands, floodplains, wildlife, vegetation, aquatic ecology, endangered or threatened species, natural areas, prime farmland, navigation, recreation or cultural resources. The alternative resulted in air emissions that did not exceed federal and state Prevention of Significant Deterioration thresholds prescribed under the Clean Air Act. TVA determined that the construction and operation of the dry fly ash collection system at the Kingston plant would not result in significant adverse effects, either individually or cumulatively. Dry fly ash disposal must meet at least RCRA Subtitle D Class standards in accordance with applicable state and federal regulations. (TVA, 2010i) This EA is related to the proposed CE because it involves disposal and storage of RCRA waste.

3.44.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include:

- Small-scale, short-term cleanup activities under RCRA or other authorities

- Collection and treatment of waste (e.g., incineration, encapsulation, physical, or chemical separation, and compaction)
- Recovery at existing facilities currently handling the type of waste involved in the action,
- Storage at existing facilities currently handling the type of waste involved in the action,
- Disposal of waste at existing facilities currently handling the type of waste involved in the action

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Air Quality: Potential environmental effects on air quality associated with the cleanup activities could result from equipment, vehicles, power sources, and dust generation associated with the potential cleanup, treatment, recovery, and disposal activities. Treatment and disposal activities could use combustion, generate fugitive dust or volatile organic carbon emissions, or rely on heavy-duty trucks or equipment. Overall, effects from these activities could include short-term, minor increases in smoke, dust, and exhaust from the trucks or equipment used at the cleanup site; and overall less than significant adverse effects on air quality. (TVA, 2001b; TVA, 2001c; TVA, 2010i)

Soil and Water: Short-term cleanup activities could temporarily increase the potential for erosion by removing ground cover, loosening soils, and setting staging locations for construction equipment and vehicles, using unpaved temporary access roads, onsite excavation, and placement of backfill material. Because cleanup or remediation would occur in areas where soils are contaminated, contamination could spread downwind from loosened soil cover and be washed down gradient during rain events. Overall, effects to soils and water would be short-term and minor. (TVA, 2001b; TVA, 2001c; TVA, 2010i; TVA, 1980)

Noise: Potential environmental effects from cleanup and transportation activities could generate noise from the operation of equipment, loading the trucks, the operation of the trucks hauling any necessary materials. This would be localized, short-term, and minor in nature. (TVA, 1980; TVA, 2010i)

Vegetation and Wildlife: Most of the activities addressed in the proposed CE would occur on heavily disturbed facility sites that do not support diverse plant and animal communities or rare species. Potential environmental effects from the activities associated with the proposed CE could include removal of vegetation and short-term disturbance of wildlife populations from noise and human activity in the area. These effects would be minor and localized. Long-term beneficial effects could result from the cleanup of hazardous materials and site reclamation. (TVA, 2001b; TVA, 2001c)

Transportation: During the short-term cleanup efforts, there could be a temporary increase in traffic. However, the traffic effects near the site would be localized, minor, and temporary. (TVA, 1980; TVA, 2010i)

Hazardous Waste: Wastes from maintenance of equipment used during cleanup operations or treatment, such as used oil, filters, and antifreeze would be recycled, or disposed through an existing process in accordance with applicable state and federal regulations in landfills that meet at least RCRA Subtitle D Class standards. Any spills from the equipment would be remediated and the wastes properly disposed. Therefore, hazardous waste treatment, storage, or disposal activities associated with the proposed CE, would not have a significant effect on the environment. (TVA, 2001b; TVA, 2001c)

Human Health and Safety: The proposed CE includes activities are intended to protect human health and minimize the effects of hazardous waste. Workers performing cleanup activities would do so under all applicable federal, state, and local guidelines, including the TVA Occupational Health and Safety Manual implementing these guidelines, thereby mitigating occupational hazards. Occupational doses near the hazardous waste would be minimized by the use of shielding, distance, and reduced stay time around the material during the cleanup efforts. Although cautions would be taken, activities associated with the proposed CE would not have a significant adverse effect on human health. (TVA, 2010i; TVA, 2001b; TVA, 2001c)

Summary: Previous TVA environmental reviews have shown that activities contemplated under this CE could have minor, localized short-term adverse effects for the resources noted above. This is due to the small scale and short-term nature of these activities and their limitation to previously disturbed areas. Cleanup activities could result in long-term beneficial effects to several environmental resources. TVA concludes that these activities do not cause significant adverse environmental effects.

3.44.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other Federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed CE. Specifically, these other agency CEs include activities similar to those of TVA's proposed CEs, including management of hazardous waste, small-scale and short-term cleanup activities associated with RCRA, and treatment, recovery, storage, or disposal of wastes. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, have extensive histories and experience with environmental remediation in accordance with RCRA and Solid Waste Disposal Act as implemented by EPA, and applicable state and local regulation and human health and safety, missions, mandates, and responsibilities.

Similar to TVA, many Federal agencies have highly developed environmental cleanup programs to address environmental liabilities at government sites and facilities. The DOE, for example, has one of the largest environmental liabilities of any federal agency for investigation and remediation of hazardous or radioactive wastes resulting from past practices at its facilities. Currently, DOE has numerous on-going remedial actions being performed at its facilities. The Federal Aviation Administration and U.S. Air Force also have multiple on-going remedial actions at facilities geographically dispersed across the country and are initiating new remedial actions as funding and data to support identification of the appropriate remedial alternative becomes available.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CE B6.1 (76 FR 63764, 2011)

Small-scale, short-term cleanup activities, under RCRA, Atomic Energy Act, or other authorities, less than approximately 10 million dollars in cost (in 2011 dollars), to reduce risk to human health or the environment from the release or threat of release of a hazardous substance other than high-level radioactive waste and spent nuclear fuel, including treatment (such as incineration, encapsulation, physical or chemical separation, and compaction), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action. These activities include, but are not limited to:

- a) Excavation or consolidation of contaminated soils or materials from drainage channels, retention basins, ponds, and spill areas that are not receiving contaminated surface water or wastewater, if surface water or groundwater would not collect and if such activities would reduce the spread of, or direct contact with, the contamination;*
- b) Removal of bulk containers (such as drums and barrels) that contain or may contain hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum or natural gas products, or hazardous wastes (designated in 40 CFR part 261 or applicable state requirements), if such activities would reduce the likelihood of spillage, leakage, fire, explosion, or exposure to humans, animals, or the food chain;*
- c) Removal of an underground storage tank including its associated piping and underlying containment systems in accordance with applicable requirements (such as RCRA, subtitle I; 40 CFR part 265, subpart J; and 40 CFR part 280, subparts F and G) if such action would reduce the likelihood of spillage, leakage, or the spread of, or direct contact with, contamination;*
- d) Repair or replacement of leaking containers;*
- e) Capping or other containment of contaminated soils or sludges if the capping or containment would not unduly limit future groundwater remediation and if needed to reduce migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products into soil, groundwater, surface water, or air;*
- f) Drainage or closing of man-made surface impoundments if needed to maintain the integrity of the structures;*
- g) Confinement or perimeter protection using dikes, trenches, ditches, or diversions, or installing underground barriers, if needed to reduce the spread of, or direct contact with, the contamination;*
- h) Stabilization, but not expansion, of berms, dikes, impoundments, or caps if needed to maintain integrity of the structures;*
- i) Drainage controls (such as run-off or run-on diversion) if needed to reduce offsite migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum or natural gas products or to prevent precipitation or run-off from other sources from entering the release area from other areas;*

- j) Segregation of wastes that may react with one another or form a mixture that could result in adverse environmental effects;*
- k) Use of chemicals and other materials to neutralize the pH of wastes;*
- l) Use of chemicals and other materials to retard the spread of the release or to mitigate its effects if the use of such chemicals would reduce the spread of, or direct contact with, the contamination;*
- m) Installation and operation of gas ventilation systems in soil to remove methane or petroleum vapors without any toxic or radioactive co-contaminants if appropriate filtration or gas treatment is in place;*
- n) Installation of fences, warning signs, or other security or site control precautions if humans or animals have access to the release; and*
- o) Provision of an alternative water supply that would not create new water sources if necessary immediately to reduce exposure to contaminated household or industrial use water and continuing until such time as local authorities can satisfy the need for a permanent remedy.*

As discussed in Section 3.44.3 above, this DOE CE serves as a basis for TVA's proposed CE and addresses many of the same actions TVA proposes to exclude under its proposed CE.

DOE originally proposed CE B6.1 in 1990 and while they have made minor text edits (e.g., update to the dollar amount), their experience over the past 25 years continues to support that the proposed CE would not result in individually or cumulatively significant effects. In their response to comments on the proposed CE ([10 CFR 1021, Appendix B to Subpart D, B 6.1, Cleanup Activities](#)), DOE cited their experience "with excavating contaminated soils from drainage and other areas and capping contaminated soils or sludges, performing both types of activities to reduce contact with, or the migration of, hazardous substances, pollutants, and contaminants" as the primary source for knowing the CE would not have significant effects (DOE, 2011a).

The categorical exclusion determinations listed below from DOE's Savannah River Site illustrate types of activities that have qualified for categorical exclusion B6.1 in the past. TVA anticipates that the proposed CE would apply to similar activities.

- [N-Area Resource Conservation and Recovery Act Closure Activities](#) (CX determination: September 3, 2010).
- [Disposal of Used 55 Gallon Drums](#) (CX determination: June 22, 2010).
- [H-Area Hazardous Waste Management Facility Base and Silver Chloride Injection](#) (CX determination: May 28, 2009).
- [Disposition of Water from the 105-C Disassembly Basin](#) (CX determination: November 19, 2009).

Federal Aviation Administration [CE 5-6.4ff \(80 FR 44208, 2015\)](#)

Remediation of hazardous wastes or hazardous substances impacting approximately one acre or less in aggregate surface area, including siting, site preparation, construction, equipment repair or replacement, operation and maintenance, monitoring, and removal of remediation-related equipment and facilities, on previously developed FAA-owned,

leased, or operated sites. Remedial or corrective activities must be performed in accordance with an approved work plan (i.e., remedial action plan, corrective action plan, or similar document) that documents applicable current industry best practices and addresses, as applicable, permitting requirements, surface restoration, well and soil boring decommissioning, and the minimization, collection, storage, handling, transportation, and disposal of Federal or state regulated wastes. The work plan must be coordinated with, and if required, approved by, the appropriate governmental agency or agencies prior to the commencement of work. Examples of covered activities include:

- *Minor excavation for removal of contaminated soil or containers (drums, boxes, or other articles); and*
- *Installation, operation and maintenance, and removal of in-situ remediation systems and appurtenances, including groundwater wells for treatment and monitoring of soil and water contamination.*

Similar to TVA's proposed CE, FAA's CE includes cleanup and remediation of hazardous substances, a provision that the cleanup be on a small scale, and provides for disposal of wastes. According to FAA's justification package, FAA reviewed seven FAA-led actions, varying in size, from undefined to 56 acres, and two DOE CEs (B6.2 and B6.3). The previously implemented actions involved coordination with appropriate federal or state agencies to ensure and confirm lack of environmental impact from the proposed activities. FAA also relied on professional opinion and judgment to conclude that the activities would not individually or cumulatively have a significant effect on the environment. In its *Categorical Exclusion Justification Package*, FAA clarified that "the activities included in the CATEXs are required for conducting in-situ environmental remediation, with limited removal activities, of hazardous substances, hazardous wastes, or other regulated substances." (FAA, 2013)

Federal Railroad Administration (FRA) CE 25 (78 FR 2713, 2013)

Environmental restoration, remediation and pollution prevention activities in or proximate to existing and former railroad track, infrastructure, stations and facilities conducted in conformance with applicable laws, regulations and permit requirements, including activities such as noise mitigation, landscaping, natural resource management activities, replacement or improvement to storm water oil/water separators, installation of pollution containment systems, slope stabilization, and contaminated soil removal or remediation activities.

Like the proposed TVA CE, the FRA CE includes cleanup activities at existing facilities. In its *Federal Register* notice, the FRA noted, "this CE covers activities specifically undertaken to remediate past environmental degradation, to restore environmental conditions, or to prevent ongoing or potential pollution. As such, most covered activities have environmental benefits..." (78 FR 2713, 2013)

U.S. Air Force CE A2.3.26 (32 C.F.R. § 989, 2001)

Undertaking specific investigatory activities to support remedial action activities for purposes of cleanup of Environmental Restoration Account - Air Force and RCRA corrective action sites. These activities include soil borings and sampling, installation, and operation of test or

monitoring wells. This CATEX applies to studies that assist in determining final cleanup activities when they are conducted in accordance with legal agreements, administrative orders, or work plans previously agreed to by Environmental Protection Agency or state regulators.

The Air Force reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.44-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.44-2 Comparison of Proposed CE Activities to Other Agency CEs

Proposed TVA CE #44	DOE	FAA	FRA	USAF
Small-scale, short-term cleanup (as under RCRA or other authorities)	X	X		X
Collection and treatment (e.g., incineration, encapsulation, physical, or chemical separation, and compaction) of waste	X	X	X	X
Recovery at existing facilities currently handling the type of waste involved in the action	X	X		
Storage at existing facilities currently handling the type of waste involved in the action	X	X		
Disposal of waste at existing facilities currently handling the type of waste involved in the action	X	X		

As noted above, the other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. The DOE, FAA, FRA, and U.S. Air Force CEs include site cleanup or remediation. DOE, FAA, and USAF CEs include small-scale, short-term cleanup under RCRA and DOE and FAA include treatment, recovery, storage, or disposal of wastes as well. All of the activities included in TVA’s proposed CE would occur with similar timing and in a similar environmental context to those actions performed by the federal agencies listed in Table 3.44-2 and covered by those agencies’ CEs.

The Air Force CE includes investigatory activities to support remedial action activities to help determine final cleanup activities. While this is not directly analogous to the proposed TVA CE, the existence of an Air Force CE that excludes investigatory activities in preparation for site cleanup illustrates that the Air Force believes small-scale activities like these are not likely to have a significant environmental impact. (32 C.F.R. § 989, 2001)

3.44.4 CE Documentation Requirement

TVA staff would not document the application of this CE in TVA’s ENTRAC database because the actions carry little risk of significant environmental effects. The activities within the proposed CE are intended to mitigate negative environmental effects of hazardous waste and are unlikely to involve extraordinary circumstances due to the requirements of the Federal (including the Resources Conservation and Recovery Act) and state laws and regulations.

3.44.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs show that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. A review of TVA's NEPA documents showed that EAs prepared for directly analogous projects resulted in a FONSI and generic CECs indicated no significant environmental effect. Therefore, TVA has determined that the actions covered by the proposed CE would not individually or cumulatively have significant environmental effects.

3.45 CE 45 - RENEWABLE ENERGY SOURCES AT EXISTING FACILITIES

TVA proposes to establish a new CE relating to renewable energy sources at existing TVA facilities.

3.45.1 Proposed Categorical Exclusion Text

Installation, modification, and operation of the following types of renewable or waste-heat recovery energy projects which increase generating capacity at an existing TVA facility, generally comprising of physical disturbance to no more than 10 acres of land not previously disturbed by human activity or 25 acres of land so disturbed:

- a. Combined heat and power or cogeneration systems at existing buildings or sites; and*
- b. Solar photovoltaic systems mounted on the ground, an existing building or other structure (such as a rooftop, parking lot or facility and mounted to signage lighting, gates or fences).*

TVA made several important changes to this proposed CE, after publishing the Proposed Rule in June 2017. Five types of renewable energy actions were addressed in the previously defined CE. The revised CE now only addresses combined heat and power or cogeneration systems and solar photovoltaic systems. TVA determined that new wind energy and biomass facilities should not be included in the scope of this CE. These revisions were made after considering public comment and further internal deliberations about whether such actions were foreseeable. TVA also removed methane gas electric generation from the scope of the proposed CE and proposes to establish it as CE #46, as described below. TVA also revised the spatial limitation to clarify that land disturbance that should be considered in verifying acreage thresholds is the disturbance associated with human activity.

3.45.2 Background

As described in its 2015 and 2019 Integrated Resource Plans, TVA manages its power system to provide clean energy from diverse and environmentally responsible sources. Renewable energy from conventional hydro, wind, solar, methane, and biomass co-firing sources makes up an increasingly important component of TVA's energy resource mix. TVA acquires this renewable energy from generating facilities it owns and operates and through long-term power purchase agreements from independent power producers. (TVA, 2015a)

Establishing the proposed CE #45 would reflect the increasingly routine nature of actions taken to advance TVA's renewable energy goals. In its review of NEPA practices, TVA NEPA staff found that TVA specialists have applied CE 5.2.21 (*Minor research, development, and joint demonstration projects*) to certain actions that would be included in proposed CE #45. In the past, TVA staff has also applied CE 5.2.28 (*Actions which were the subject of an EA which concluded that the category of such actions should be treated as a categorical exclusion*) for such actions because TVA has conducted reviews under a programmatic NEPA document (see below). TVA seeks to establish a CE that specifically addresses certain renewable energy power projects occurring at existing facilities and activities that increase the amount of energy produced from renewable sources. It would be clear to TVA staff which proposed actions may fall under

the proposed CE #45, which reduces uncertainty and allows TVA to more efficiently consider and carry out projects to achieve their renewable energy objectives.

The definition of the proposed CE was developed to identify activities with limited environmental effects. Limiting the activities to existing TVA facilities would reduce the potential for new disturbances. TVA proposes spatial limits for actions occurring on previously disturbed or developed land (25 acres) and to undisturbed lands (10 acres). Previously disturbed land refers to land that has been changed such that its functioning ecological processes have been and remain altered by human activity. The phrase encompasses areas that have been transformed from natural cover to non-native species or a managed state, including, but not limited to, utility and electric power transmission corridors and rights-of-way, and other areas where active utilities and currently used roads are readily available. The proposed CE would also limit activities proposed on undisturbed land to 10 acres or less, consistent with other spatial limits proposed by TVA. With these limits included in the definition of the proposed CE, TVA anticipates that the environmental effects of the category of actions would generally be minor.

In addition, completion of a CEC for every application of this CE would ensure that the CEs would not be applied to actions that could have significant effects on the environment.

3.45.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that absent extraordinary circumstances the activities covered by the proposed CE do not individually or cumulatively have a significant effect on the quality of the human environment.

3.45.3.1 TVA Experience with Relevant Existing CEs

A review of the ENTRAC database for documented uses of CEs since 2002 resulted in few activities similar to those proposed in CE #45. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. Since 2002, TVA has documented at least 4 actions related to cogeneration systems and at least 30 activities involving solar photovoltaic systems.

TVA has completed numerous solar photovoltaic projects. While some of the projects were completed at TVA facilities, many relate to power purchase agreements that TVA has established with third-party electricity providers, produced at newly constructed solar facilities. In 2014, TVA completed a Solar Photovoltaic Projects Programmatic EA and FONSI (described in greater detail below) to consider increasing the amount of renewable energy in TVA's portfolio by constructing and operating solar photovoltaic systems and/or purchasing electricity from solar facilities to be constructed within TVA's 170-county power service area. TVA has since 2014 completed numerous power purchase agreements (PPA) relying on the EA's analysis

and verified by completion of a CEC (using CE 5.2.28, *Actions which were the subject of an EA which concluded that the category of such actions should be treated as a categorical exclusion.*). Although these PPA projects were constructed by other entities and not at TVA sites, the impacts would be substantially the same as projects constructed by TVA.

For some projects, TVA staff cited to existing TVA CE 5.2.21 (*Minor research, development, and joint demonstration projects*) as the appropriate CE, which reflected TVA's participation in research projects managed by other entities and not involving construction by TVA. Examples of CECs for projects involving solar photovoltaic and combined heat and power or cogeneration systems include:

- CEC 38469: *Latitude Solar Interconnection Project PPA, (3/22/2018), CE 5.2.28*
- CEC 37575: *NES Music City Solar Project PPA, (12/22/2017), CE 5.2.28*
- CEC 37313: *Wildberry Solar Center Interconnection PPA, (8/21/2017), CE 5.2.28*
- CEC 37271: *Lee Solar Facility PPA, Tupelo, MS, (10/25/2017), CE 5.2.28*
- CEC 37211: *Moulton Solar Facility PPA, (12/22/2017), CE 5.2.28*
- CEC 37062: *Hexagon Energy Solar Project PPA, (9/25/2017), CE 5.2.28*
- CEC 36376: *Rossville Solar Farm PPA, (3/1/2017), CE 5.2.28*
- CEC 36200: *Meagher Solar Farm PPA, (5/23/2017), CE 5.2.28*
- CEC 36113: *Synergetics DCS Solar Farm PPA, (1/10/2017), CE 5.2.28*
- CEC 36371: *TVA Allen CC 6-MW Solar Project, (3/8/2017), CE 5.2.28*
- CEC 35851: *Lebanon Solar Project PPA, (5/11/2018), CE 5.2.28*
- CEC 34033: *College Grove Solar Farm PPA, (4/28/2016), CE 5.2.28*
- CEC 33921: *Electric Power Board Community Solar PPA, (12/30/2015), CE 5.2.28*
- CEC 33830: *Appalachian Community New Market Solar PPA, (12/16/2015), CE 5.2.28*
- CEC 33592: *Lebanon Wastewater Treatment Solar Plant PPA, (2/13/2017), CE 5.2.28*
- CEC 33582: *Mayfield Kentucky Solar Project PPA, (12/21/2015), CE 5.2.28*
- CEC 33239: *Solar Farms in Moulton, Alabama PPA, (9/9/2015), CE 5.2.28*
- CEC 33133: *Dadeni Solar Humboldt Projects PPA, (8/12/2015), CE 5.2.28*
- CEC 33012: *Eastridge Solar Advantage PPA, (12/21/2015), CE 5.2.28*
- CEC 32940: *Wilson and Ledford Solar Farms, (8/12/2015), CE 5.2.28*
- CEC 32333: *Plateau Park Solar Farm PPA, (9/18/2015), CE 5.2.28*
- CEC 32265: *Silicon Ranch Columbus and Walker East PPA, (3/24/2015)*
- CEC 32147: *PPA for Snow Creek Properties LLC, (2/25/2015), CE 5.2.28*
- CEC 31869: *PPA for Energy Source Partners Franklin and Kingston Solar Farms, (1/16/2015), CE 5.2.28*
- CEC 31581: *PPA for 3 Okolona, MS Solar Farms, (11/14/2014), CE 5.2.28*
- CEC 28815: *Kentucky Dam Marina – Solar Panel Installation, (11/8/2013), CE 5.2.26*
- CEC 21969: *Renewable Natural Gas Study, (5/24/2010), CE 5.2.13*
- CEC 8166: *Renewable Energy, Job Creation in the TVA Region, (10/14/2004), CE 5.2.21*
- CEC 28151: *Johnsonville Fossil, Cogeneration Desuperheat Replacement, (4/19/2013), CE 5.2.1*
- CEC 8668: *Cogeneration with Stirling Cycle Engine, (2/26/2005), CE 5.2.21*

3.45.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI. The following relevant NEPA documents address solar photovoltaic projects or combined heat and power or cogeneration systems. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.45-1.

Table 3.45-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
TVA Solar Photovoltaic Projects Programmatic EA	TVA-wide	9/30/2014
Purchase of Power Generated at Marshall Properties Solar Farm EA	Union County, GA	3/17/2014
Strata Solar Farm Project EA	McNairy County, TN	11/14/2013
Power Purchase Agreement for Chattanooga Airport Solar Array EA	Hamilton County, TN	10/14/2011
Cumberland Solar Farm EA	Limestone County, AL	2/7/2018
Five Western North Carolina Solar Farms EA	Cherokee, Clay and Avery Counties, NC	3/28/2014, 4/10/2014
Haywood Solar Farm EA	Haywood County, TN	3/10/2017
Houston, Mississippi Solar Farms EA	Chickasaw County, MS	6/24/2016
Jonesborough Solar Site EA	Washington County, TN	10/24/2017
Latitude Solar Center EA	Hardeman County, TN	8/26/2016
Millington Solar Farm EA (390 acres)	Shelby County, TN	12/15/2017
Naval Air Station Meridian Solar Farm EA	Lauderdale County, MS	5/18/2017
Providence Solar Center EA (118 acres)	Madison County, TN	3/1/2016
Pulaski Energy Park Expansion EA	Giles County, TN	4/24/2014
Selmer North I Solar Project EA	McNairy County, TN	11/1/2016
Selmer North II Solar Project EA	McNairy County, TN	8/11/2016
Starkville Solar Facilities EA	Oktibbeha County, MS	2/18/2014

While many of the listed NEPA documents above are for projects constructed and operated by other entities, the projects involve similar impacts than would be expected under the EA. In fact, because TVA's actions would be limited to previously developed or disturbed areas, it is expected that fewer impacts would result from actions covered under the proposed CE. The following two documents relate to TVA actions and provide relevant support for the proposed CE's actions.

TVA Solar Photovoltaic Projects Programmatic EA and FONSI: This programmatic EA assessed the environmental effects from increasing the amount of renewable energy in TVA's portfolio by constructing and operating solar photovoltaic systems and/or purchasing electricity from solar facilities to be constructed within TVA's 170-county power service area. Potential locations for solar facilities included existing buildings, previously developed sites of 20 acres or less in size, and undeveloped sites of 10 acres or less in public or private ownership within the TVA power service area. TVA assessed effects on resources programmatically and all effects

were expected to be minor and insignificant. (TVA, 2014c) This EA is directly relevant to the proposed CE #45 because it analyzed the installation of renewable energy resources at existing facilities. The FONSI supports TVA's determination that actions conducted under the proposed CE would not result in significant effects.

3.45.3.3 Potential Environmental Effects

As indicated in the text of the proposed CE, activities under the proposed CE that could have environmental effects include the installation, modification, and operation of these types of renewable energy sources which increase generating capacity at an existing TVA facility. Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Wetlands and Water Resources: Typically, installation, modification, and operation of most activities under the proposed CE would not affect groundwater. Installation or modification could cause short-term, minor localized effects such as increased suspended solids, turbidity, and sedimentation of surface water resources, including wetlands, from runoff created by construction equipment. Since the activities would occur only at previously disturbed sites or existing facilities, any effects should be minor. The activities would not include major construction or modification of stream or river channels; therefore, there should be no long-term significant effects to water resources. TVA would comply with requirements under Executive Orders 11990 (*Protection of Wetlands*) and 11988 (*Floodplain Management*), and Section 404 of the Clean Water Act. (TVA, 2014c)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete a specific installation or modification activity could occur from the proposed CE. Operation of cogeneration plants could result in new sources of air emissions, although the size limits on such facilities included in the CE would limit those impacts. The generation sources addressed in the proposed CE could result in reductions in greenhouse gas emissions by increasing the proportion of TVA's generation from no- and low-emitting sources. (TVA, 2014c)

Soils: Short-term, minor effects from installation and modification activities associated with the proposed CE could include increased erosion and mixing of surface layers of soil due to installation of equipment related to activities associated with the proposed CE, as well as from construction equipment that used during activities covered by this CE. However, since the CE includes spatial limits for undisturbed areas and previously disturbed or developed areas, effects on soil should be minor. (TVA, 2014c)

Fish and Wildlife: Short-term, negligible to minor effects could occur on wildlife and fish from activities associated with installation, modification, and operation activities of solar or cogeneration at existing facilities. Since the facilities already exist, however, there should be limited new effects. Fish and other aquatic species may be affected by increased runoff into watersheds from facilities. However, the project limit of 10 or 25 acres for projects covered under this CE, this would reduce the potential effects on fish. Wildlife could be temporarily displaced during installation and modification activities. However, since facilities where this

construction would be occurring are typically considered previously disturbed or developed land, effects would typically be localized, minor, and short-term. (TVA, 2014c)

Visual Resources: Because the sites where the proposed CE would apply are already-existing TVA facilities, installation of additional power-generation equipment would generally have minor effects of the area's visual environment. However, depending on the type of renewable energy source constructed at the facility, some people may have an adverse reaction to the additional energy production equipment. For example, photovoltaic solar facilities may be visible and add to visual disruptions to the natural setting. (TVA, 2014c)

Summary: TVA EAs and EISs have shown that renewable energy power production activities contemplated under this CE could have localized, minor, short-term adverse effects and some minor long-term adverse effects for the natural resources within the Tennessee Valley and do not cause significant environmental effects. Since most activities would occur on previously disturbed land, within an existing facility, or have a spatial limitations to reduce potential environmental effects. In addition, the spatial limits applied to the proposed CE and the review for extraordinary circumstances conducted by TVA when certain actions are proposed would ensure that actions do not result in significant effects.

3.45.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified that are similar in the nature, scope, and intensity of included activities to the proposed CE #45. The CEs of other agencies address the installation and operations of renewable energy facilities, some which are directly relevant to TVA activities. For instance, like TVA, the DOE and RUS construct and operate power production facilities, renewable energy projects, or fund their construction.

TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. Thus, the CEs from other federal agencies are important benchmarks to provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CEs B5.14, B5.16, and B5.17 (76 FR 63764, 2011)

B5.14: Combined heat and power or cogeneration systems

Conversion to, replacement of, or modification of combined heat and power or cogeneration systems (the sequential or simultaneous production of multiple forms of energy, such as thermal and electrical energy, in a single integrated system) at existing facilities, provided that the conversion, replacement, or modification would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources.

B5.16: Solar photovoltaic systems

The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking

lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

A review of DOE's Technical Support document for its proposed CEs 5.14 and 5.16 included a list of eight DOE, Federal Aviation Administration, Department of Labor, and Department of Veterans Affairs EAs with "co-located" or "distributed" solar energy projects generally comprising 10 acres or less, as well as a U.S. Department of Agriculture Rural Utilities Service CE (DOE, 2011b). In addition, DOE cited scientific and industry expert opinion regarding varying scales of solar photovoltaic technologies, including related environmental benefits and environmental impacts to various natural resources, from National Academy of Sciences, National Academy of Engineering, and National Research Council, Committee on America's Energy Future, *America's Energy Future: Technology and Transformation* (National Academies Press, Washington, DC: 2009).

B5.17: Solar thermal systems

The installation, modification, operation, and removal of commercially available small-scale solar thermal systems (including, but not limited to, solar hot water systems) located on or contiguous to a building, and if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

DOE's Technical Support document cites to two environmental reviews for such projects, which substantiate that these activities do not individually or cumulatively result in significant environmental effects.

US Department of Agriculture, Rural Utilities Service [CE 1970.54\(d\)6, 7, and 9 \(81 FR 11000, 2016\)](#)

§1970.54(d) Energy or telecommunication proposals.

The following are CEs that apply to financial assistance for energy or telecommunication proposals:

(6) Siting, construction, and operation of small, ground source heat pump systems that would be located on previously developed land;

(7) Siting, construction, and operation of small solar electric projects or solar thermal projects to be installed on or adjacent to an existing structure and that would not affect the environment beyond the previously developed facility area and are not attached to and will not cause adverse effects to historic properties; ...

(9) Construction of small standby electric generating facilities with a rating of one average megawatt (MW) or less, and associated facilities, for the purpose of providing emergency power for or startup of an existing facility;

In its 2014 Notice of Proposed Rulemaking supporting the CE, the Department cited years of experience in conducting related EAs for such projects with no findings of significant impacts. In addition, the Department stated that the CE is similar to numerous CEs promulgated by the DOE (B5.16 and B5.17) relating to renewable energy projects and that generally the actions would not result in individual or cumulative significant effects. ([79 FR 6760](#), 2014).

Comparability of CEs

Table 3.45-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.45-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #45	DOE	RUS
Installation, modification, and operation of the following types of renewable energy sources which increase generating capacity at an existing facility:	X	X
Combined heat and power or cogeneration systems at existing buildings or sites	X	
Solar Photovoltaic Systems situated on an existing building or other structure (such as a rooftop, parking lot or facility and mounted to signage lighting, gates or fences) or located on land generally comprising less than 10 acres within a previously disturbed or developed area	X	X

The DOE and RUS CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. Both DOE and RUS have experience with installing and operating renewable energy facilities, as well as handling the environmental issues that come along with these installations. DOE handles wide-scale uses of power generating technology, and RUS is similar in scope to TVA. The DOE and RUS CEs include construction and operation of many different renewable energy facility types.

Similar to TVA, the DOE CE B5.17 limits the acreage to less than 10 acres. Limiting the acreage to 10 acres or less, helps to ensure that the potential effects do not individually or cumulatively lead to significant impacts. The lands that would typically be used in these projects are previously disturbed areas on TVA lands and would therefore be similar to those described under the DOE CE. Activities included in TVA’s proposed CE would generally occur with similar timing and in a similar environmental context to those actions performed by the DOE and RUS and covered by those agencies’ CEs. For this proposed CE, the construction involved would occur on only previously disturbed or developed property for TVA’s activities as well as for the other federal agencies.

TVA notes that CEQ has reviewed all of these other agencies’ CEs, and determined that they conform to NEPA and CEQ regulations.

3.45.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document application of CE #45. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.45.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists will complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.46 CE 46 – METHANE GAS ELECTRIC GENERATING SYSTEMS

TVA proposes to establish a new CE for power purchase transactions from methane gas electric generating systems.

3.46.1 Proposed Categorical Exclusion Text

Transactions (contracts or agreements) for purchase of electricity from new methane gas electric generating systems using commercially available technology and installed within an area previously developed or disturbed by human activity.

When published in June 2017, the proposed CE 46 addressed the installation and use of small-scale drop-in hydroelectric systems. TVA withdrew that proposed CE from the final rule based on public comment and internal consideration; generally, such actions are not foreseeable.

The new proposed CE 46 addresses transactions for purchase of electricity from methane generating systems. This category of actions had been listed as item (e) under CE 45 in the proposed rule; thus, it was made available for public comment in the previous Proposed Rule. It was removed from the list because CE 45 addresses actions occurring only at TVA facilities, and TVA experience reflects that power purchase agreements for new methane gas electricity generation does not occur at TVA facilities. Rather, they typically occur at municipal or industrial sites. TVA revised the scope of the new CE 46 to clarify that TVA's action is the purchase of power at such facilities. TVA also removed from the CE the limitation that actions could only occur "on or contiguous to an existing landfill or wastewater treatment plant" because it is unnecessary. TVA also provided clarification that previous land disturbance is the disturbance associated with human activity.

3.46.2 Background

As described in the 2015 and 2019 Integrated Resource Plans, TVA's renewable energy portfolio makes up an increasingly important component of TVA's energy resource mix. In the IRP, TVA groups its methane gas generating sources with other biomass resources, and notes that these types of non-hydro renewable generation are limited (i.e., biomass accounts for 12.4 percent of the Green Power Providers capacity). The power generated from methane gas has been marketed through TVA's Green Power Switch program.

Similar to TVA's involvement in solar photovoltaic generation, TVA generally acquires this renewable power from generating facilities through long-term power purchase agreements from independent power producers. In the past, TVA has established numerous agreements to purchase electricity generated by others from new methane gas electric generating systems at municipal landfills, at wastewater treatments plans, and at animal waste sites. While such power generation is a small source of power for TVA, the additional power to the region supports TVA's renewable energy objectives. These power purchase agreements allow TVA to partner with municipalities and industrial entities to find benefits and uses from the waste stream.

By having specific CEs that address renewable energy power production activities, TVA specialists would be able to more quickly and efficiently consider and carry out projects to expand the renewable energy portfolio of TVA. It aligns with TVA's mission, other TVA plans,

policies, and procedures, and federal regulations. In addition, completion of a CEC for every application of this CE would ensure that the CEs would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances.

3.46.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Since 2002, TVA has documented 11 actions related to methane gas systems analyzed through an EA or by completing CECs. In the three CECs, TVA staff cited to existing TVA CE 5.2.21 (*Minor research, development, and joint demonstration projects*) as the appropriate CE for the proposal because TVA was participating in research projects managed by other entities; the projects involved power purchases and did not result in TVA constructing and operating renewable generating facilities.

Examples of CECs for activities relevant to the proposed CE include:

- *CEC 15091: Cogeneration from Animal Wastes, (2/5/2007), CE 5.2.21*
- *CEC 10974: Microturbine Cogeneration at Landfill, (8/17/2007), CE 5.2.21*
- *CEC 5028: Poultry Litter to Methane, (10/24/2003) CE 5.2.21*

3.46.3.1 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.45-1.

Table 3.46-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Purchase of Power Generated at Bristol, Virginia Sanitary Landfill EA	Washington County, VA	5/19/2014
Purchase of Power Generated at Sand Valley Sanitary Landfill EA	DeKalb County, TN	5/31/2013
Power Purchase Agreement for Renewable Energy from Biogas – Installation of Generating Capacity at Memphis Wastewater Treatment Plant EA	Shelby County, TN	3/7/2012
Installation of Landfill Gas Generators at West Camden Sanitary Landfill EA	Benton County, TN	10/31/2011
Increased Landfill Gas Generating Capacity at Chestnut Ridge Sanitary Landfill EA	Anderson County, TN	12/20/2010

Title	Location	Date FONSI Issued
Purchase of Power Generated at Bi-County Sanitary Landfill EA	Montgomery County, TN	4/28/2013
Purchase of Power Generated at Prairie Bluff Sanitary Landfill EA	Chickasaw County, MS	12/15/2011

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Camden Sanitary Landfill EA and FONSI: In October 2011, TVA completed an EA and issued a FONSI for a proposed power purchase agreement for electricity generated at the West Camden Sanitary Landfill. The Waste Management Renewable Energy LLC constructed and operates three landfill gas-fueled generators with a total capacity of 4.8 megawatts at the facility. The generators were installed in a previously disturbed area adjacent to the existing landfill. The EA evaluates the potential environmental impacts of the construction of the generators and associated auxiliary systems and the operation of the generating facility. (TVA, 2011c)

Power Purchase Agreement for Renewable Energy from Biogas - Installation of Generating Capacity at Memphis Wastewater Treatment Plant EA and FONSI: In March 2012, TVA issued a final EA and FONSI for its actions to enter into a power purchase agreement with the City of Memphis. Under the terms of the agreement, TVA purchases up to 2 megawatts of electricity generated from a biogas-fueled generation system at the local M.C. Stiles Wastewater Treatment Plant. The electricity is delivered through an on-site interconnection with the local power distributor, the Memphis Light, Gas and Water Division. The project involves installation of a reciprocating engine and generator within an existing building, as well as construction of a short underground biogas supply line from the existing central collection point and an on-site overhead transmission line. (TVA, 2012b)

Increased Landfill Gas Generating Capacity at Chestnut Ridge Sanitary Landfill EA and FONSI: In December 2010, TVA completed an EA and issued a FONSI for a power purchase agreement for an increased amount of electricity generated at the Chestnut Ridge Sanitary Landfill. At the time, TVA purchased electricity generated from landfill gas at the Chestnut Ridge landfill, and the company operating the landfill proposed to construct and operate two additional landfill gas-fueled generators, for a total of six generators with a total capacity of 4.8 megawatts at the facility. The new generators were installed in a previously disturbed area adjacent to the existing generators. In the EA, TVA evaluated the potential environmental impacts of the construction of the new generators and associated auxiliary systems and the operation of the enlarged generating facility. (TVA, 2010j)

3.46.3.2 Potential Environmental Effects

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected when TVA enters into an agreement to purchase power from methane gas electricity generating systems, as summarized below. These actions do not have significant environmental effects.

Wetlands and Water Resources: Typically, installation, modification, and operation of methane gas generating systems would not affect groundwater. Installation or modification activities could cause short-term, minor localized effects such as increased suspended solids, turbidity, and sedimentation of surface water resources, including wetlands, from runoff created by construction equipment. Since the activities would occur only at previously disturbed sites or existing facilities that are likely to have existing stormwater capture infrastructure, any effects should be minor. The activities would not include major construction or modification of stream or river channels; therefore, there should be no long-term significant effects to water resources. TVA would comply with requirements under Executive Orders 11990 (*Protection of Wetlands*) and 11988 (*Floodplain Management*), and Section 404 of the Clean Water Act. (TVA, 2014c)

Air Quality: Short-term, minor fugitive air emissions from the mechanical equipment needed to complete a specific installation or modification activity could occur from the proposed CE. Operation of methane plants could result in new sources of air emissions, although the size limits on such facilities included in the CE would limit those impacts. The generation sources addressed in the proposed CE could result in reductions in greenhouse gas emissions by increasing the proportion of TVA's generation from no- and low-emitting sources. (TVA, 2014d; TVA, 2015f)

Soils: Short-term, minor effects from installation and modification activities associated with the proposed CE could include increased erosion and mixing of surface layers of soil during construction and installation of the generation system. However, since the CE includes spatial limits for undisturbed areas and previously disturbed or developed areas, effects on soil should be minor. (TVA, 2014c; TVA, 2015f)

Fish and Wildlife: Short-term, negligible to minor effects could occur on wildlife and fish from activities associated with installation, modification, and operation of methane gas systems at existing facilities. Since the facilities already exist, however, there should be limited new effects. Fish and other aquatic species may be affected by increased runoff into watersheds from facilities; however, the proposed spatial limitation and the limit of actions to existing facilities would reduce the potential effects on fish and wildlife. Since facilities where this construction would be occurring are typically considered previously disturbed or developed land, effects would typically be localized, minor, and short-term. (TVA, 2014c; TVA, 2015f)

Visual Resources: Because the sites where the proposed CE would apply are already-existing facilities, installation of additional power-generation equipment would generally have minor effects of the area's visual environment. Sites where methane gas generating systems are installed are typically already heavily disturbed (e.g., landfills, wastewater treatment plants, animal facilities). It is unlikely that additional infrastructure would alter the visual setting. (TVA, 2014c)

Summary: TVA EAs have shown that the methane gas production activities contemplated under this CE could have localized, minor, short-term adverse effects and few minor long-term adverse effects for the natural resources within the Tennessee Valley. Such actions have been found by TVA not to cause significant environmental effects. Since most activities would occur on previously disturbed land, within an existing facility, and are subject to spatial limitations, there

is little potential for environmental effects. In addition, the review for extraordinary circumstances conducted by TVA when certain actions are proposed would ensure that actions do not result in significant effects.

3.46.3.3 Benchmarking of Other Agencies' Experience

TVA reviewed existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified two that are similar in the nature, scope, and intensity of actions of the proposed CE #46. In fact, TVA has based the proposed CE #46 on the CE established by the Department of Energy, as explained below. TVA identified a CE established by RUS as well, that is relevant to the proposed CE. The DOE and RUS, like TVA, construct and operate power production facilities, renewable energy projects, or fund their construction.

TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. Thus, the CEs from other federal agencies are important benchmarks to provide additional support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment, either individually or cumulatively.

Department of Energy [CE B5.21](#) (76 FR 63764, 2011)

B5.21: Methane gas recovery and utilization systems

The installation, modification, operation, and removal of commercially available methane gas recovery and utilization systems installed within a previously disturbed or developed area on or contiguous to an existing landfill or wastewater treatment plant that would not have the potential to cause a significant increase in the quantity or rate of air emissions. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices

TVA used the definition of DOE B5.21 when it drafted the proposed CE #46. TVA found that the text of DOE CE B5.21 captured and defined this portion of activities TVA wanted to include in their new CE. Thus, the definition of DOE B5.21 is similar to TVA's proposed CE #46. The existence of DOE's long-standing CEs serves as an important benchmark and supports TVA's conclusion that there would be no significant effects from the proposed CE.

US Department of Agriculture, Rural Utilities Service [CE 1970.54\(d\)8](#) (81 FR 11000, 2016)

§1970.54(d) Energy or telecommunication proposals.

The following are CEs that apply to financial assistance for energy or telecommunication proposals: ...

(8) Siting, construction, and operation of small biomass projects, such as animal waste anaerobic digesters or gasifiers, that would use feedstock produced on site (such as a farm where the site has been previously disturbed) and supply gas or electricity for the site's own energy needs with no or only incidental export of energy;

In its 2014 Notice of Proposed Rulemaking supporting the CE, the Department cited years of experience in conducting related EAs for such projects with no findings of significant impacts. In addition, the Department stated that the CE is similar to numerous CEs promulgated by the DOE (B5.16, B5.17, B5.18, B5.19, and B5.20) relating to renewable energy projects and that generally the actions would not result in individual or cumulative significant effects. (79 FR 6760, 2014). The RUS CE definition primarily addresses biomass projects, without specifying projects that capture methane gas to produce power. Animal waste anaerobic digesters or gasifiers primarily produce methane.

Comparability of CEs

Table 3.45-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CE.

Table 3.46-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #45	DOE	RUS
Installation, modification, and operation of methane gas electric generating systems using commercially available technology within a previously disturbed or developed landfill or wastewater treatment plant	X	
Installation, modification, and operation of methane gas electric generating systems using commercially available technology within a previously disturbed or developed area where animal waste is produced/stored.		X

The DOE and RUS CEs are relevant to TVA’s proposed CE. As noted above, the DOE CE was used by TVA as a basis for establishing the proposed CE #46. Both DOE and RUS CEs are comparable because they involve the same or similar activities as TVA’s proposed CE, the capture of gases using systems at existing facilities to generate electricity. Both DOE and RUS have experience with installing and operating renewable energy facilities, as well as addressing environmental issues that come along with these installations. DOE handles wide-scale uses of power generating technology, and RUS is similar in scope to TVA.

The DOE CE specifically addresses installation of methane gas systems at landfills or wastewater treatment plants, whereas the RUS CE addresses small-scale projects capturing gas from animal waste sites. Similar to TVA, the DOE CE B5.21 limits the actions to only commercially available technologies and to previously disturbed or developed areas. TVA decided not to include the limit that actions also occur only “on or contiguous to an existing landfill or wastewater treatment plant” because it was decided that the limited was unnecessary, given the limit relating to previous disturbed or developed areas. Activities included in TVA’s proposed CE would generally occur with similar timing and in a similar environmental context to those actions performed by the DOE and covered by DOE. The relevance of the RUS CE is less evident, however, because it is more general in its definition. However, it clearly applies to small projects to capture biogas from animal waste for power generation.

TVA notes that CEQ has reviewed all of these other agencies’ CEs, and determined that they conform to NEPA and CEQ regulations.

3.46.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #46 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.46.5 Conclusion

Based on TVA's prior experience in implementing agreements with other entities to purchase power from methane gas systems at landfills, wastewater plants, and animal waste sites, TVA finds that the proposed CE would not result in significant environmental impacts. The conclusion is supported by CEs previously established by the DOE and RUS; these benchmarked CEs, especially the DOE CE, affirm TVA's determination that such actions would not result in individually or cumulatively significant effects. TVA specialists would complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.47 CE 47 - MODIFICATIONS TO RATE STRUCTURE

TVA proposes to establish a new CE for certain modifications to TVA's rate structure.

3.47.1 Proposed Categorical Exclusion Text

Modifications to the TVA rate structure (i.e., rate change) that result in no predicted increase in overall TVA-system electricity consumption.

During the public review of TVA's proposed procedures in 2017, TVA received numerous comments from the public about proposed CE #47. Based on public input and further internal deliberations, TVA revised the proposed CE which previously included modifications that result in "only minor increases in peak or base load energy generation" to state that only modifications that result in no predicted increase in electricity consumption system-wide fall within the scope of the CE.

TVA deleted from the definition of the proposed category the text "any associated modifications to contracts for pricing energy or demand for wholesale end users or direct serve customers of TVA power" in order to simplify the definition; the reference to "*associated* modifications" was redundant because associated modifications would be generally encompassed by a modification to the rate structure. TVA also deleted "development of new or modified pricing products" because such actions are contracting actions covered under a separate CE.

Limiting the scope of the CE to rate modifications that would not result in an increase in electricity consumption system-wide ensures that the actions have no significant impact on the environment.

3.47.2 Background

Under the TVA Act of 1933, as amended, Congress tasked TVA with advancing the social and economic welfare of the residents of the Tennessee Valley region (United States Congress, 1933). One of the most important ways that TVA fulfills its congressional mandate is by providing reliable, affordable electric power to its Municipal and Cooperative customers, consisting of 154 distributors (also known as local power companies). These distributors take delivery of electricity generated and transmitted by TVA and perform the local distribution function for their approximately 9.7 million retail consumers of electricity within the seven-state region. TVA also sells power to approximately 57 directly served retail customers with large or unusual power requirements. TVA's wholesale rates for distributors recover its generation and transmission costs, while distributor retail rates recover their wholesale power cost from TVA plus their own system costs of local distribution and delivery to end users.

TVA's ability to serve its customers at competitive power prices is critical to the success of TVA in accomplishing its mission of fostering a strong regional economy and a good quality of life. The TVA Act delegates to the TVA Board of Directors sole responsibility for establishing the rates charged to distributors and other customers for electric power supplied by TVA, as well as broad authority over distributor resale rates and conditions of service. As such, TVA not only provides electrical power to the distributors, but acts in a congressionally-mandated regulatory

retail rate-setting role for them. The TVA Board of Directors exercises its rate responsibility within the framework of the underlying policies and requirements of the TVA Act including those in Sections 10, 11, and 15(d) of the Act. Section 10 of the TVA Act authorizes the TVA Board of Directors “to include in any contract for the sale of power such terms and conditions, including resale rate schedules, and to provide for such rules and regulations as in its judgment may be necessary or desirable for carrying out the purposes of this Act.” (United States Congress, 1933)

Under Section 11 of the TVA Act, power projects are to “be considered primarily as for the benefit of the people” of the region as a whole, particularly the “domestic and rural” consumers to whom the power can economically be made available. As part of the bond financing amendment to the TVA Act in 1959 (TVA Act, Section 15(d)), Congress directed TVA to charge rates that produce gross revenues sufficient to provide funds for operation, maintenance, and administration; provide payments to states and counties in lieu of taxes; provide debt service on bonds; provide payments to the United States Treasury for repayment of past government appropriations plus an additional return; provide additional margin for investment in power system assets; and provide for other purposes connected with TVA’s power business. (United States Congress, 1933)

TVA’s wholesale rate structure and associated programs must change from time to time to reflect cost of service and remain competitive within the market as well as to encourage distributors to manage their peak demands for electricity. Under TVA’s contracts with distributors, there are different processes for making “rate adjustments” and making “rate changes.” A rate adjustment is the process by which TVA increases or decreases rates to match revenue needs. A rate change is a process by which TVA changes the structure of the rates as opposed to the overall level of rates. Rate changes generally are designed to be “revenue neutral” to TVA at the system level, i.e., the changed rates applied to the same billing data are intended to result in the same overall system level revenue being collected by TVA, although revenues paid by individual customers or customer classes may change. While rate adjustments tend to have similar effects across customer classes, rate changes can involve changes in cost allocation and rate structure that can raise power bills for some customers and lower them for others, with an overall revenue neutral effect on TVA.

TVA has changed its rate structures multiple times in recent history, including 1977, 1980, 1992, 2003, 2010, and 2015. Most recently, TVA proposed rate changes in early 2018 that took effect in October 2018. TVA prepared EAs for the 2003, 2010, 2015 and 2018 changes and found that the proposed changes would have no significant environmental effects (see “TVA Experience with Relevant EAs or EISs” below).

Changes in peak load and average annual energy consumption may create new power production, management, transmission, and distribution costs for TVA and its distributors. For instance, a substantive result of energy consumption on power generation and distribution is that the costs to produce power vary by both the time of day and by the season; these costs would change with growth and changes in demand profiles of users. In addition, the competitive and technological nature of the electric utility industry continues to evolve and affect the traditional electric utility business model through distributed generation, energy efficiency, technological

advances, shifts in customer behavior and regulatory requirements. This complex interplay of factors creates a need for TVA to make adjustments in pricing structures. Identifying and appropriately apportioning costs of providing service is an important factor in flexibly addressing this ongoing need.

This proposed CE would improve TVA's ability to change rates to meet its mission of delivering reliable, low-cost electricity. Such changes are policy or program activities and do not directly affect the environment. As discussed below, such changes potentially could have minor indirect effects on the environment. The language of the proposed CE was developed and revised by TVA after the public review to limit the scope of covered activities to those with limited environmental effects. Completion of a CEC for every application of the CE ensures that the CE would not be applied to actions that could have significant effects on the environment due to extraordinary circumstances.

3.47.3 Substantiating Information for Proposed CE

In considering whether the activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CE.

Based on this information and analysis, TVA finds that the activities covered by the proposed CE does not individually or cumulatively have a significant effect on the quality of the human environment.

3.47.3.1 TVA Experience with Relevant Existing CEs

In 1992, TVA applied existing CE 5.2.6 to a proposed change to its rate structure. Since 2002, according to the ENTRAC database, TVA has occasionally applied existing CEs to research and planning projects that address electricity prices. TVA has prepared EAs or EISs for proposals on multiple occasions, as discussed below.

3.47.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI and EISs and RODs were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.47-1.

Table 3.47-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI/ROD Issued
2018 Wholesale Rate Change EA	TVA-wide	5/4/2018
Refining the Wholesale Pricing Structure, Products, Incentives and Adjustments for Providing Electricity to TVA Customers EA	TVA-wide	7/17/2015
Elimination of End-Use Wholesale Rate Structure and Introduction of Time-of-Use Pricing for Electricity at the Wholesale Level EA	TVA-wide	7/29/2010
Rate Change (Modification of Rate Structure) for Pricing of Wholesale Electricity to Distributors within the TVA Power Service Area EA	TVA-wide	8/8/2003
Alternative Electric Power Rate Structures EIS	TVA-wide	3/3/1981
Policies Relating to Electric Power Rates EIS	TVA-wide	1976

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Alternative Electric Power Rate Structures EIS and ROD: This EIS, completed in 1981, evaluated a TVA proposal to adopt and implement alternative rate structures to encourage energy conservation, increase efficient use of facilities and resources, and provide rates that are more equitable for customers. Alternatives included various combinations of rates based on cost of service, eliminating declining block rates, adopting time-of-day rates, adopting seasonal rates, offering interruptible rates to commercial and industrial customers, and a special additional charge for energy-inefficient homes. This EIS is relevant to the proposed CE because it addressed substantial modifications to TVA rate structures. TVA found that implementing alternative rate structures would have no direct effect on the physical environment, any socioeconomic effects would be insignificant, and any indirect physical effects would be insignificant in the short term and positive but probably not significant in the long term. (TVA, 1981)

Rate Change (Modification of Rate Structure) for Pricing of Wholesale Electricity to Distributors within the TVA Power Service Area EA and FONSI: This 2003 EA evaluated different rate structures designed to reallocate cost recovery between residential, commercial, and industrial customers. At the time, TVA's rates for residential and commercial customers were favorable in comparison to other utilities in the region, but rates for industrial customers were about 12 percent higher than the average for neighboring utilities. This EA is relevant because it evaluated rate structure changes, including changes that would affect the distribution of costs to customers. The EA determined that for all alternatives, direct and cumulative environmental effects would be insignificant and any induced environmental effects would be essentially indiscernible. (TVA, 2003)

Elimination of End-Use Wholesale Rate Structure and Introduction of Time-of-Use Pricing for Electricity at the Wholesale Level EA and FONSI: This 2010 EA evaluated a Proposed Action Alternative in which TVA would implement a time-of-use pricing structure at the distributor level and would move away from the current end-use wholesale rate structure. The development of a retail rate structure for customers would become the administrative

responsibility of each distributor. However, TVA would retain its congressionally mandated regulatory authority to approve or disapprove rate structures implemented by the distributors. This EA is relevant because it assessed rate structure changes affecting distributors of TVA power, including changes that could affect peak load energy consumption. TVA found that, because the magnitude of the direct and cumulative effects of the alternative rate structures would be small, any induced indirect environmental effects would be nonexistent or essentially indiscernible for both the No Action Alternative and the Proposed Action Alternative. (TVA, 2010e)

Refining the Wholesale Pricing Structure, Products, Incentives and Adjustments for Providing Electricity to TVA Customers EA and FONSI: This 2015 EA addressed a proposed rate change to refine the structure of TVA's wholesale electric power rates, pricing products, credits and billing adjustments. Some of the changes under the Proposed Action Alternative included movement of wholesale Standard Service customers to a Time of Use pricing structure; introduction of new optional Time of Use and Seasonal Demand and Energy rate structures for Non-Standard Service customers (large commercial and manufacturing); changes to TVA demand response products; and other adjustments. This EA is relevant to the proposed CE because it addressed rate and pricing changes that were expected to alter peak load energy consumption. TVA concluded that implementation of either the No Action or Proposed Action Alternative would result in only minor, insignificant effects to socioeconomics, energy production and use, air resources, water resources, land use or generation of solid and hazardous waste. (TVA, 2015e).

2018 Wholesale Rate Change EA and FONSI: This 2018 EA addressed a proposed wholesale rate change that would reduce the energy rates by \$0.005 per kWh and establish a grid access charge to recover an equivalent amount of revenue. In addition, TVA proposed to decrease Large General Service rates to move them closer to what it costs to serve those customers. This EA is relevant because it evaluated rate structure changes, including changes that could affect the allocation of costs to customer classes. TVA's analysis found that the proposal was likely to alter rates paid by consumers if the change is passed to the customers by local power companies. However, although the analysis found the change would adversely affect most customers, it would benefit some. Furthermore, the predicted bill impacts would be minor and such impacts would not affect customer behavior or necessitate any change in TVA operations or in energy demand in the TVA service area. Therefore, any environmental effects would be negligible or essentially indiscernible from the current conditions. (TVA, 2018).

3.47.3.3 Potential Environmental Effects

Activities under the proposed CEs that could have environmental effects include:

- Modifications to the rate structure (i.e., rate change)
- Modifications to contracts for pricing energy or demand to wholesale end-users or direct serve customers of TVA power

Based on previous NEPA reviews, TVA has found that several environmental resources may be affected by such activities, as summarized below. However, they do not have significant environmental effects.

Energy Use and Production: Changes in electricity rates may change price signals and induce behavioral responses from energy consumers; typically increased energy use with lower prices, or reduced use and adoption of energy-efficient technologies with higher prices (TVA, 2015e). Changes in use may result in changes in energy production by TVA. Historically, TVA has found that its proposed rate structure changes do not have significant effects on energy use and production. For instance, TVA determined that changes assessed in a 2010 proposal were of such small magnitude that there would be no noticeable difference in energy use overall (TVA, 2010f). In a 2015 EA, TVA found that the potential net effect on TVA energy requirements would be somewhere between 0 and -0.1 percent (a decrease). TVA concluded that such small changes would not require construction or retirement of any generation units or facilities, and noted that other factors affecting TVA power supply requirements such as weather conditions and the level of economic activity would be expected to have much larger effects on TVA energy production (TVA, 2015e). The types of changes addressed by the proposed CE are similar to those that TVA has found to have no significant effects on energy use and production.

Socioeconomics: Because energy use and production would not be significantly affected by changes under the proposed CE, socioeconomic effects would be unlikely or minor. For instance, construction of new energy production capacity and resulting increases in jobs would be very unlikely. Effects on net income of the region from new rate structures would be negligible. Rate structures changes may change cost allocations across customer classes, but net changes to any customer class would be small. With respect to environmental justice considerations, consumers within a customer class would be expected to be affected uniformly within that class. Therefore, there would be no disproportionate negative effects on minority or low-income populations. (TVA, 2015e)

Air Resources: As noted above, effects on energy use and production from the proposed CE would be small. Therefore, any changes to air emissions, including release of greenhouse gases, associated with the potential for minor changes in peak demand, and possible minor changes in total energy use, would be so small as to be indiscernible. (TVA, 2015e)

Water Resources: Because effects on energy use and production from the proposed CE would be small, effects on utilization of water for energy production would be indiscernible (TVA, 2015e).

Land Use: As noted above, any minor effects on energy use from rate changes under the proposed CE would not lead to construction or retirement of any generation units or facilities; therefore there would be no effects on land use from such activities. In addition, while rate decreases in some customer classes could make the region more attractive to development by businesses in that customer class, the minor nature of the rate changes would be only a minor influence on development decisions, and much less important than many other factors affecting such decisions. Therefore, there would be no effects on land use from the proposed CE. (TVA, 2015e)

Generation of Solid and Hazardous Waste: As noted above, rate structure changes would have only minor potential effects on industrial development. Changes to net income of other

businesses also would be small. Thus, changes for waste generated in the region by industry and other businesses would be negligible to minor. In addition, changes to waste generation by TVA due to changes in generation resulting from rate structure changes would be negligible to minor. Generally, the generation changes would be in response to small changes to peak demand, and TVA's peaking facilities (typically hydroelectric plants and combustion turbines) generate no coal combustion residues and little to no other solid or hazardous waste. (TVA, 2015e)

Summary: TVA NEPA documents have shown that activities contemplated under the proposed CE could have negligible or minor effects on environmental resources within the Tennessee Valley, but would not cause significant environmental effects. In addition, TVA has noted previously that the comprehensive environmental regulatory programs that exist throughout all Valley states would further ensure that resulting minor environmental effects are insignificant. (TVA, 2003; TVA, 2010f)

3.47.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE #47. Specifically, these other agency CEs include activities similar to those of TVA's proposed CE, including rate and pricing product changes. These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, manage large power production facility portfolios; produce and sell electricity; and set rates charged to electricity customers.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the actions other agencies have categorically excluded. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Energy CEs B1.1 and B4.3 (76 FR 63764, 2011)

(B1.1) Changing rates for services or prices for products marketed by parts of DOE other than Power Marketing Administrations, and approval of rate or price changes for non-DOE entities, that are consistent with the change in the implicit price deflator for the Gross Domestic Product published by the Department of Commerce, during the period since the last rate or price change.

(B4.3) Rate changes for electric power, power transmission, and other products or services provided by a Power Marketing Administration that are based on a change in revenue requirements if the operations of generation projects would remain within normal operating limits.

DOE last modified CE B4.3 in 1996. DOE proposed to eliminate a restriction stating that the rate change must not exceed the rate of inflation because the restriction was "not relevant to the action's potential for environmental impacts." In addition, DOE stated, "any environmental impacts resulting from rate changes would be caused only if the rate change involved associated

changes in the operation of generation resources. Therefore, this categorical exclusion would only apply to those rate changes that would not affect the operation of generation projects.” (76 FR 63764, 2011; DOE, 2011a)

DOE modified CE B1.1 in 2011. It changed the rule “to encompass the setting of ‘prices’ as well as ‘rates’ (prices apply to products, and rates apply to services),” and changed the measure of inflation specified in this CE. (76 FR 63764, 2011)

Bureau of Reclamation CE D5 (DOI, 2008b)

Approval of changes in pumping power and water rates charged contractors by the Bureau for project water service or power.

The BOR reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Comparability of CEs

Table 3.47-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.47-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #47	DOE	BOR
Modifications to the rate structure (i.e., rate change)	X	X

The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CE. For instance, DOE’s CE B4.3 allows for rate changes when the operations of generation projects would remain within normal operating limits. TVA’s experience with rate proposals in the past demonstrates that rate changes within the scope of the proposed CE result in negligible or minor changes in electricity generation, which do not exceed TVA’s pre-existing power generation scenarios (TVA, 2015e). BOR’s CE D5 is a very broadly written CE that encompasses most of the activities in TVA’s proposed CE. Actions included in TVA’s proposed CE would be of similar duration (typically indefinite) and in similar institutional and environmental contexts (e.g., considerable use of hydropower within the generation mix) to those of the federal agencies listed in Table 3.47-2 and covered by those agencies’ CEs.

All of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.47.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE #47 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.47.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. These activities could have minor environmental effects; in many cases, the effects would be negligible. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment. TVA specialists will complete a CEC in ENTRAC for each application of this CE to ensure and document that no extraordinary circumstances exist that could result in significant environmental effects from the activities covered by this CE.

3.48 CE 48 - ASSISTANCE FOR ENERGY & WATER PROGRAMS

TVA proposes to establish a new CE for assistance for energy efficiency or water conservation programs supported by TVA financially but administered by other entities.

3.48.1 Proposed Categorical Exclusion Text

Financial and technical assistance for programs conducted by non-TVA entities to promote energy efficiency or water conservation, including, but not limited to, assistance for installation or replacement of energy efficient appliances, insulation, HVAC systems, plumbing fixtures, and water heating systems.

3.48.2 Background

TVA implements a number of programs to support the region's residents and improve the quality of life. Perhaps no other program implemented by TVA advances each of the three TVA missions of energy, environment, and economic development than the assistance programs supported by TVA that promotes energy efficiency and water conservation. Conserving energy and water resources benefits the environment, saves the public money, and drives down energy production needs and associated costs. TVA actively supports energy and water conservation and efficiency in the Valley. These efforts support economic development by reducing costs for homeowners and businesses, and they serve TVA's mission of providing affordable electricity to the region.

TVA's EnergyRight program provides technical and financial assistance to homeowners, businesses, and industry. The program is carried out in partnership with local power company partners and directly served customers, the Tennessee Valley Public Power Association Inc., and the Tennessee Valley Industrial Committee (TVA, 2015g). Through this program, TVA supports comprehensive in-home energy assessments (conducted by a third party) and provides rebates and financing options to help homeowners who choose to make investments in significant energy efficiency improvements. The specific investments made by homeowners is conducted solely at their discretion and rebates are distributed by non-TVA entities who work with homeowners and verify that improvements have been completed by pre-approved companies.

The proposed CE would include the rebate and loan assistance provided through the programs supported by TVA financially but administered and reviewed by the non-TVA entities. The CE would apply to the programs, rather than the individual actions taking place throughout the program by the non-TVA entity. It would allow TVA to more efficiently implement assistance in support of the programs of regional partners, as well as indirectly support the many participating homeowners, businesses, and communities to save money by reducing energy and water use.

3.48.3 Substantiating Information for Proposed CE

In considering whether the assistance activities covered by the proposed CE could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs

established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.48.3.1 TVA Experience with Relevant Existing CEs

TVA NEPA staff reviewed the ENTRAC database for previous uses of relevant CEs and found many CEC records for activities similar to those included in proposed CE. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

Since 2002, TVA has documented hundreds of individual actions involving grants, loans, and/or rebates for financial assistance for economic development programs. However, TVA NEPA staff found only a limited number of examples within the ENTRAC database of previous applications of TVA CEs related to financial assistance to support energy efficiency or water conservation actions. Several of these were actions for which CE 5.2.21 (*Minor research, development, and joint demonstration projects*) was applied, including a 2015 CEC review of the “Tennessee Valley Smart Energy Communities” program, a 2008 CEC review of a “Near Zero Energy House Community” project (in coordination with the Oak Ridge National Laboratory), and a 2002 CEC review of an Energy Star energy efficiency demonstration program for a residential community in Middle Tennessee. These three programs are notable examples that support the establishment of the proposed CE because they pertain to programs and each are for programs financed by TVA but administered by non-TVA entities.

TVA NEPA staff believe that the relatively low number of CECs completed for assistance to support energy efficiency or water conservation may indicate that TVA business units considered such financial activities to be administrative in nature (CE 5.2.9) or to be simply a disbursement of funds (CE 5.2.5), which are categorically excluded actions that would not require documentation in TVA’s ENTRAC database under current TVA practices. Relevant examples include the following CECs:

- *CEC 29279: Tennessee Valley Smart Energy Communities (8/3/2015), 5.2.21*
- *CEC 2054: Three-tier Energy Star Energy Efficiency Program (Westhaven Residential Development), (10/24/2002), 5.2.21*
- *CEC 17547: Near Zero Energy House Community (Lenoir City, TN), (2/1/2008), CEC 5.2.21*
- *CEC 28020: Evaluating Smart Thermostats for Energy Efficiency and Demand Response (500 homes), (2/27/2013), CE 5.2.21*
- *CEC 29934: Energy Efficiency Demonstration at multiple locations (Evaporative Pre-Cooling for Rooftop Air Conditioning), (2/7/2014), CE 5.2.21*
- *CEC 21250: Shoals Entrepreneurial Center Energy Improvements Project – ARC Grant, (10/16/2009), CE 5.2.21*

- *CEC 14452: New Houlka Water System Improvements Project – ARC Grant, (1/8/2007), CE 5.2.28*

As discussed in greater detail below (CE #49 and #50), TVA has applied existing CEs over 700 times since 2002 for financial assistance actions of TVA business units. Discussions of those proposed CEs further support that financial assistance activities such as those under CE #48 would not result in significant environmental impacts.

3.48.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSIIs were prepared. TVA NEPA staff did not identify any EAs pertaining to TVA assistance for programs conducted by non-TVA entities to promote energy efficiency or water conservation.

One EA completed by TVA, however, is noteworthy. In 2001, TVA completed a programmatic review of economic development activities. Although the Generic EA of Selected Economic Development Activities pertains primarily to the types of economic development assistance addressed under proposed CEs #49 and 50, the EA generally addresses the potential impacts of financial assistance, which is relevant to proposed CE #48. The activities that TVA considered in the EA were to be carried out in partnership with a variety of businesses and development organizations in the TVA region. This 2001 EA evaluated the environmental effects of a proposal to treat the following classes of activities as categorically excluded under NEPA:

- Financial assistance for purchase, renovation, or internal expansion of existing facilities;
- Financial assistance for replacement of existing facilities; and
- Financial assistance for routine and minor, maintenance, upgrade, and extension of infrastructure.

The EA evaluated potential effects on air quality, water quality, solid waste and special materials, land use, visual resources, transportation, noise, surface water, cultural resources, protected species, wetlands or other unique natural features, floodplains, and prime farmland. TVA determined that the identified classes of activities would not have significant effects on these resources. (TVA, 2001a)

In addition, the 2019 Integrated Resource Plan Final EIS programmatic reviews the potential environmental impacts of TVA's current and proposed energy efficiency programs. (TVA, 2019)

3.48.3.3 Potential Environmental Effects

Using the proposed CE, TVA would provide financial and technical assistance for a variety of activities carried out by other entities. Financial assistance includes, but is not limited to, approving and administering grants, loans, and rebates. Financial and technical assistance may have direct, beneficial socioeconomic effects on receiving entities. Such assistance does not by itself have other environmental effects, but may indirectly produce environmental effects through the activities that the assistance enables. Activities that TVA would assist under the proposed CEs that could have environmental effects include, but are not limited to:

- Energy efficiency or water conservation measures such as installation or replacement of energy efficient appliances, insulation, HVAC systems, windows, plumbing fixtures, and water heating systems
- Purchase and replacement of miscellaneous equipment to improve efficiency
- Purchase, renovation, minor upgrading and/or maintenance of existing facilities to improve efficiency
- Routine maintenance, minor upgrading, and/or extension of infrastructure to improve efficiency

TVA NEPA documents for previously proposed actions to provide financial and technical assistance for these types of activities, primarily for economic development purposes, have reviewed a complete range of resources for potential environment effects. In all cases, TVA's previous environmental reviews for financial assistance projects or programs (numbering well over 100 since 1971) found that financial and technical assistance and the activities enabled by that assistance would have minor effects, negligible effects, or no effects on the environment.

The scale of the activities that TVA assists is typically small and projects that implement programs tend to be localized. Further, in many cases, program activities occur within a building, within an already developed area (e.g., industrial park), or on other land that has been previously disturbed. Notably, water conservation and energy efficiency actions may result in beneficial effects on the environment, reducing water use and lowering energy demand, as well as the associated impacts of providing that water and energy. This context reduces the potential for effects on the natural environment and TVA has found that impacts from such programs and activities are small and have little potential to result in significant effects on the environment.

Summary: TVA EAs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and long-term beneficial effects for the natural and human environment within the Tennessee Valley and do not cause significant environmental effects.

3.48.3.4 Benchmarking of Other Agencies' Experience

In addition to numerous CEC reviews completed by TVA since 2002, several CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively. TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE and identified several directly relevant CEs currently in use by other agencies that are similar in the nature, scope, and intensity of included activities to the proposed TVA CE.

These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, have missions that include supporting other public and private entities in the areas of energy and water management, environmental stewardship, facility and infrastructure management, and economic development. These agencies have robust experience providing various forms of technical and financial assistance to other entities for these activities.

Department of Energy CE B5.1 (76 FR 63764, 2011)

(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet change out); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix.

TVA's proposed CE #48 is largely based on this DOE CE. DOE's Proposed Rule discussed the rationale for the adopted changes to B5.1(a) based on DOE's experience. In the 2011 Proposed Rule, DOE proposed to add additional examples of energy conservation actions, including a clarification that building renovations or new structures must occur in a previously developed or disturbed area. DOE also proposed the addition of new language, section B5.1(b), to include "rulemakings that establish energy conservation standards for consumer products and industrial equipment." DOE justified that proposal based on DOE's experience preparing EAs and FONSI's related to such rulemakings, which showed that such standards would not have the potential to cause significant effects. (76 FR 63764, 2011). Unlike TVA's proposed CE #48, this CE applies to actions conducted by DOE; under TVA's proposed CE, non-TVA entities would be primarily responsible for such actions.

TVA also found relevant supporting information in DOE's Final Programmatic EIS analysis for its Hawaii Clean Energy Program (DOE, 2015c). In its analysis of the program, DOE stated that "Activities and technologies in the Energy Efficiency category would have the smallest potential for notable environmental impacts. The small size and, in most cases, minimally disruptive nature of these activities and technologies would result in no or minimal potential impacts across the resource areas." (p. S-22). In fact, DOE found that because there would be no adverse environmental impacts associated with its clean energy and energy efficiency initiatives and programs, there was no need to carry forward those activities into detailed impact analysis in the Programmatic EIS.

Federal Aviation Administration [CE 5-6.4e, 5-6.4f, and 5-6.4h](#) (80 FR 44208, 2015)

(5-6.4e) Federal financial assistance, licensing, or Airport Layout Plan (ALP) approval for the following actions, provided the action would not result in significant erosion or sedimentation, and will not result in a significant noise increase over noise sensitive areas or result in significant impacts on air quality.

- *Construction, repair, reconstruction, resurfacing, extending, strengthening, or widening of a taxiway, apron, loading ramp, or runway safety area (RSA), including an RSA using Engineered Material Arresting System (EMAS); or*
- *Reconstruction, resurfacing, extending, strengthening, or widening of an existing runway.*

This CATEX includes marking, grooving, fillets and jet blast facilities associated with any of the above facilities.

(5-6.4f) Federal financial assistance, licensing, Airport Layout Plan (ALP) approval, or FAA construction or limited expansion of accessory on-site structures, including storage buildings, garages, hangars, t-hangars, small parking areas, signs, fences, and other essentially similar minor development items.

(5-6.4h) Federal financial assistance, licensing, or Airport Layout Plan (ALP) approval for construction or expansion of facilities—such as terminal passenger handling and parking facilities or cargo buildings, or facilities for non-aeronautical uses at existing airports and commercial space launch sites—that do not substantially expand those facilities (see the FAA’s presumed to conform list (72 Federal Register 41565 (July 30, 2007))).

FAA proposed several revisions to CEs within Order 1050.1E in 2013, including CEs 5-6.4e, 5-6.4f, and 5-6.4h. FAA expanded the scope for 5-6.4e and 5-6.4f and clarified 5-6.4h. The revised CE 5-6.4e added a “number of different actions regarding runway and airfield configurations” and the revised CE 5-6.4f included additional “on-site structures” in the list of construction projects. In all cases, FAA determined that the activities associated with the CEs would not have the potential to cause significant environmental impacts (FAA, 2013).

Bureau of Reclamation (BOR) [CE D12](#) (DOI, 2008b)

Conduct of programs of demonstration, educational, and technical assistance to water user organizations for improvement of project and on-farm irrigation water use and management.

The BOR reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Rural Utility Service, Department of Agriculture (Rural Development) [CEs a2, c2, and c13](#) (7 C.F.R. Part 25, 2016)

The following Department of Agriculture’s CEs were established in 2016 and apply to financial assistance for energy efficiency.

§ 1970.53 (a)(2) *Financial assistance for the purchase, transfer, or lease of personal property or fixtures where no or minimal change in operations is reasonably foreseeable. These include: ...*

(iii) Purchase, replacement, or installation of equipment necessary for the operation of an existing facility (such as Supervisory Control and Data Acquisition Systems (SCADA), energy management or efficiency improvement systems (including heat rate efficiency), replacement or conversion to enable use of renewable fuels, standby internal combustion electric generators, battery energy storage systems, and associated facilities for the primary purpose of providing emergency power);

§ 1970.53 (c)(2) *Repair, upgrade, or replacement of equipment in existing structures for such purposes as improving habitability, energy efficiency (including heat rate efficiency), replacement or conversion to enable use of renewable fuels, pollution prevention, or pollution control;*

§ 1970.54 (c) (13) *Modifications or enhancements to existing facilities or structures that would not substantially change the footprint or function of the facility or structure and that are undertaken for the purpose of improving energy efficiency (including heat rate efficiency), promoting pollution prevention or control, safety, reliability, or security. This includes, but is not limited to, retrofitting existing facilities to produce biofuels and replacing fossil fuels used to produce heat or power in biorefineries with renewable biomass. This also includes installation of fuel blender pumps and associated changes within an existing fuel facility.*

The USDA reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects. Also note that TVA has reviewed the RUS 2012 Programmatic EA, which addresses actions very similar to those of TVA’s EnergyRight program. (USDA, 2012a)

Comparability of CEs

Table 3.48.1 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.48-1 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #48	DOE	FAA	BOR	RUS
Financial and technical assistance for energy efficiency or water conservation measures such as installation or replacement of energy efficient appliances, insulation, HVAC systems, windows, plumbing fixtures, and water heating systems	X	X		X
Financial assistance for purchase and replacement of miscellaneous equipment / systems	X	X	X	X
Financial assistance for purchase, renovation, minor upgrading and/or maintenance of existing facilities	X	X		X

Proposed TVA CE #48	DOE	FAA	BOR	RUS
Financial assistance for routine maintenance, minor upgrading, and/or extension of infrastructure		X		
Water conservation programs to improve water use and management practices.			X	X

When it was developing potential CEs, TVA found that the text of DOE CE B5.1 captured the definition of a category of actions for which TVA desired to establish a CE. Further, across the federal family, TVA’s mission and activities are very similar to many aspects of DOE’s mission and activities, as well as some RUS activities. The other agency CEs are comparable because they involve the same or similar activities as TVA’s proposed CEs. The DOE, RUS and BOR CEs encompass technical and/or financial assistance for energy and/or water efficiency and conservation measures. The FAA CE could do so as well, depending on the nature of the equipment involved. The FAA CE encompasses financial assistance for all activities addressed in proposed CE.

Although these CEs are not for programs of assistance administered by others, the CEs are relevant to the types of activities that would occur when the programs are implemented. Program actions would generally occur with similar timing and in a similar environmental context to those actions performed by the federal agencies listed in Table 3.48.1 and covered by those agencies’ CEs. For these particular CEs, the setting would include residences and the locations of facilities and infrastructure managed by businesses, local governments, and non-governmental organizations in the region.

All of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.48.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA’s ENTRAC database to document when CE #48 is applied. As noted above, the proposed CE applies to assistance programs, rather to each implementing action ultimately occurring under the program; those actions will be administered not by TVA. Thus, TVA would not conduct additional CEC reviews per implementing action. By completing a CEC when the program is reviewed, consideration will be given to program-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.48.5 Conclusion

The review of TVA’s previous use of relevant CEs, NEPA analyses conducted by TVA, and of other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment.

3.49 CE 49 - ECONOMIC DEVELOPMENT

TVA proposes to establish a new CE for certain TVA actions which provide financial assistance for economic development.

3.49.1 Proposed Categorical Exclusion Text

Financial assistance including, but not limited to, approving and administering grants, loans and rebates for the renovation or minor upgrading of existing facilities, established or developing industrial parks, or existing infrastructure; the extension of infrastructure; geotechnical boring; and construction of commercial and light industrial buildings. Generally, such assistance supports actions that physically disturb no more than 10 acres of land not previously disturbed by human activity or no more than 25 acres of land so disturbed.

After the Proposed Rule was published in June 2017, TVA staff revised the spatial limitation at the end of this CE to clarify that land disturbance that should be considered in verifying the acreage thresholds is the disturbance associated with human activity.

3.49.2 Background

Economic development, with energy production and environmental stewardship, is one of TVA's core missions. Since 1933, when President Roosevelt signed the Tennessee Valley Authority Act, the need "to provide for the agricultural and industrial development of said valley" has been one of the central purposes of TVA (United States Congress, 1933). From its depression-era roots to its modern focus of service in the fields of energy, environment, and economic development, TVA continues to be a force for prosperity of the Tennessee Valley.

TVA's economic development goals are to increase capital investment and attract and retain better-paying jobs for the people of the region. By partnering with other economic development organizations and working closely with states, communities, distributors and directly served customers, TVA leverages resources and expands their networks to recruit potential investment and support development in the seven-state Tennessee Valley region. TVA's [economic development program](#) engages in several high-level tasks:

- Recruiting major industrial operations to locate in the TVA region;
- Helping communities develop the assets that make them attractive to companies seeking a new location; and
- Offering support to entrepreneurs, women, and minorities working to start new businesses and expand existing businesses.

TVA provides site selection assistance to business and industry, training and facilitation services to communities, and a wide range of technical and financial assistance to local power company partners and directly-served customers, communities, and business and industry. Technical assistance includes engineering and design services. Financial assistance occurs through a variety of programs, currently including the following [Valley Incentive Programs](#):

- Investment Credit: The Investment Credit is a performance-based program where qualifying customers receive credits on monthly power bills over a five-year period. It is available through a partnership between TVA and participating local power companies.
- Loan Funds: TVA provides low-interest loans to help finance capital investments within the Tennessee Valley region. TVA partners with other entities and only loans a portion of the total need. This may include refinancing existing bank loans at competitive rates. The maximum loan amount is \$3 million and is determined primarily by jobs and capital investment. Loan terms may range from five to 20 years based on collateral.
- Performance Grant: TVA awards grants to companies, typically for amounts up to five percent of the applicant's investment. Award amounts are paid directly to the company and are flexible for approved purposes.
- Security Deposit Coverage: The Security Deposit Coverage program allows qualifying businesses to waive electric utility deposits for up to five years as they locate or expand in the TVA region. It is available through a partnership between TVA and participating local power companies.

The proposed CE revises TVA's CE list to include certain specific financial and technical assistance activities, including many activities managed through TVA's economic development program. The CE would allow TVA to more efficiently implement assistance in support of the projects of regional partners, industries, businesses, and communities. The scope of this type of TVA's financial assistance typically includes, but is not limited to activities such as: financial transactions (i.e. refinancing existing loans, credits or incentive rates on power sales); purchasing existing buildings/structures; plant expansions; business incubator development; industrial park development/site improvements; utility and infrastructure improvements; buyouts/retention of existing businesses; minority business development; and construction of new buildings (speculative buildings, etc.).

TVA has internal guidance for projects and programs that are partly or entirely financed by the agency (and with other federal agencies). Factors such as the amount of federal financial assistance, the involvement of other federal agencies at the time TVA proposes to provide funding, and whether the proposed project to alter the environmental status quo are considered in determining the extent to which projects are federalized.

The definition of the proposed CE was developed to identify activities with limited environmental effects. The CE focus on existing facilities and infrastructure, while also encompassing limited new building construction (sites not to exceed 10 to 25 acres) and infrastructure extensions. As a general rule, the disturbance of less than 10 acres of lands not previously disturbed by human activity or 25 acres of lands so disturbed do not result in significant environmental effects absent extraordinary circumstances.

3.49.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other

agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.49.3.1 TVA Experience with Relevant Existing CEs

TVA NEPA staff reviewed the ENTRAC database for previous uses of relevant CEs since 2002, and found many instances of activities similar to those included in proposed CE. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment.

For example, since 2002 TVA has documented hundreds of individual actions involving grants, loans, and/or rebates. TVA also reviewed the actions of TVA business units that are focused on economic development and noted these units applied existing CEs over 700 times. Most of the identified CECs used two existing TVA CEs:

- CE 5.2.27, *Any action which does not have a primary impact on the physical environment.*
- CE 5.2.28, *Actions which were the subject of an EA which concluded that the category of such actions should be treated as a categorical exclusion.*

Applications of CE 5.2.28 were based on the 2001 “Generic EA of Selected Economic Development Activities,” which is discussed below. A sizeable proportion of the CECs addressed TVA’s proposed actions of administering grants for infrastructure improvements and other economic development activities funded by the Appalachian Regional Commission (ARC). Twelve of the identified CECs used existing TVA CE 5.2.21 (*Minor research, development, and joint demonstration projects*).

Examples of relevant applications of TVA’s existing CEs are found in the following CECs:

- CEC 32434: *Economic Development Grant - Pride Mobility Products, (2015), CE 5.2.28*
- CEC 32033: *InvestPrep Grant - Roane Regional Business and Technology Park, (2/5/2015), CE 5.2.28*
- CEC 32028: *InvestPrep Grant - Cates Landing (Lake County, TN), (2/5/2015), CE 5.2.28*
- CEC 31655: *Cherry Glen Industrial Park, Building, Road, Parking, (3/23/2015), CE 5.2.28*
- CEC 31641: *Fannon County (Georgia) Development Authority Building, (6/11/2015), CE 5.2.28*
- CEC 31647: *Interstate 40 Advantage Park Funding, Brownsville, (9/24/2015), CE 5.2.28*
- CEC 31112: *Trion Industrial Park Roadway Improvements – Appalachian Regional Commission (ARC) Grant, (9/2/2014), CE 5.2.28*
- CEC 29678: *Prairie Belt Powersite, Water and Sewer Improvements – ARC Grant, (1/7/2014), CE 5.2.28*

- CEC 25180: *City of West Point Sewer Improvements ARC Grant, (9/23/2011), CE 5.2.28*
- CEC 24516: *Water Valley Industrial Water Tank Restoration ARC Grant, (7/11/2011), CE 5.2.28*
- CEC 22505: *Gordon-Lee House Renovations and Visitor Center – ARC Grant, (6/11/2010), CE 5.2.28*
- CEC 21250: *Shoals Entrepreneurial Center Energy Improvements Project – ARC Grant, (10/16/2009), CE 5.2.21*
- CEC 19024: *Copper Basin Medical Center Telecommunications & Surgical Equipment – ARC Grant, (8/15/2008), CE 5.2.28*
- CEC 17536: *Town of DeKalb Building Purchase Project ARC Grant, (2/5/2008), CE 5.2.27*
- CEC 15962: *City of Martin Speculative Building – Economic Development Loan Fund (EDLF) Loan, (5/21/2007), CE 5.2.28*
- CEC 14452: *New Houlika Water System Improvements Project – ARC Grant, (1/8/2007), CE 5.2.28*
- CEC 10114: *Iuka Airport Infrastructure Improvement ARC Grant, (6/22/2005), CE 5.2.28*
- CEC 1122: *Pocahontas VA Opera House and Exhibition Mine Roof Repair – ARC Grant, (8/30/2002), CE 5.2.28*
- CEC 1082: *Neshoba County Speculative Building – EDLF Loan, (7/9/2002), CE 5.2.28*

3.49.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.49-1.

Table 3.49-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Valley Investment Initiative – Program Expansion and Modification EA	TVA-wide	4/13/2010
Mathias Metal Systems Loan for Equipment Purchase EA	Humphreys County, TN	9/9/2008
Pharma Pac Equipment Loan EA	Kemper County, MS	7/1/2008
Benchmark Industries Building Improvements EA	Grundy County, TN	5/9/2008
ConRon/Plastic Recycling Building and Equipment Purchase EA	Jefferson County, TN	5/7/2007
Fiber Innovation Technology Equipment Purchase EA	Washington County, TN	8/17/2006
Financial Assistance to McMinnville-Warren Industrial Development Board EA	Warren County, TN	3/30/2006
Pierce Metals Industrial Expansion EA	Sullivan County, TN	3/30/2006
Generic EA of Selected Economic Development Activities	TVA-wide	6/18/2001

Title	Location	Date FONSI Issued
Financial Assistance to Industrial Development Boards City of Cullman and Cullman County, Alabama for Construction of an Industrial Spec Building EA	Cullman County, AL	4/8/1998
Nickajack (Tennessee) Port Authority Industrial Speculative Building EA	South Pittsburg, TN	11/14/1997
Loan to the Town of Collierville to Assist Mid-South Metal Products, Inc., in Purchasing and Renovating an Existing Building EA	Shelby County, TN	10/30/1997

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Generic EA of Selected Economic Development Activities and FONSI: The most relevant information which supports the establishment of the proposed CE #49 is the programmatic EA completed by TVA in 2001 addressing economic development activities conducted by TVA. Prior to the development of this EA, TVA issued numerous EAs addressing the actions covered by the programmatic EA and found the actions had little potential for significant environmental impacts. The 2001 EA evaluated the environmental effects of a proposal to treat the following classes of activities as categorically excluded under NEPA (as provided under TVA's current NEPA procedures under CE 5.2.28):

- Financial assistance for purchase of equipment;
- Financial assistance for purchase, renovation, or internal expansion of existing facilities;
- Financial assistance for replacement of existing facilities;
- Financial assistance for construction of speculative (spec) buildings in existing industrial parks; and
- Financial assistance for routine and minor, maintenance, upgrade, and extension of infrastructure.

The activities that TVA would assist under the proposed action were to be carried out in partnership with a variety of businesses and development organizations in the TVA region. The activities in proposed CE #49 are very similar in type and scope to those evaluated in the 2001 EA. As with the current CE proposal, the 2001 EA specified that TVA staff would review each proposed action and would prepare an EA for those actions where special or unique site-specific circumstances warrant a more detailed review. The EA evaluated potential effects on air quality, water quality, solid waste and special materials, land use, visual resources, transportation, noise, surface water, cultural resources, protected species, wetlands or other unique natural features, floodplains, and prime farmland. TVA determined that the identified classes of activities would not have significant effects on these resources. (TVA, 2001a)

Benchmark Industries Building Improvements EA and FONSI: TVA proposed to administer a \$164,800 Appalachian Regional Commission (ARC) grant to Grundy County, Tennessee for the construction of an office addition and other physical improvements to one of their existing industrial buildings. The project allowed Benchmark Industries to expand operations, including addition of new equipment for manufacturing metal components for the automotive industry.

This EA is directly relevant to the “purchase, renovation, minor upgrading and/or maintenance of existing facilities” provision of proposed CE #49, and also relevant to the “purchase and replacement of equipment” provision since the financial assistance indirectly enabled Benchmark Industries to install new equipment. TVA reviewed potential environmental effects of the office expansion, new equipment, increased employees, additional truck traffic to the facility, and additional waste generation, and found that none of these results of the improvements would have significant environmental effects. (TVA, 2008a)

3.49.3.3 Potential Environmental Effects

The proposed category of excluded actions would address financial assistance for a variety of economic development activities carried out by other non-TVA entities. Financial assistance includes, but is not limited to, approving and administering grants, loans, and rebates. Financial assistance may have direct, beneficial socioeconomic effects on receiving entities. Such assistance does not by itself have other environmental effects, but may indirectly produce environmental effects through the activities that the assistance enables. For example, activities that TVA would assist under the proposed CE that could have environmental effects include, but are not limited to:

- Construction of commercial and light-industrial buildings (physically disturbing no more than 10 acres of undisturbed lands or no more than 25 acres of previously-disturbed land)
- Renovation, minor upgrading, and/or extension of existing facilities, industrial parks, or infrastructure

TVA NEPA documents for previously proposed actions to provide financial and technical assistance for these types of activities have reviewed a complete range of resources for potential environment effects. In all cases, TVA’s previous environmental reviews (numbering well over 100 since 1971) found that financial and technical assistance, and the activities enabled by that assistance, would have no effects, negligible effects, or minor effects on the environment. This result occurs because the scale of the activities that TVA assists is small and the projects are very localized. Further, in many cases the activities occur within a building, within an already developed area (e.g., industrial park), or on other land that has been previously disturbed. This context reduces the potential for effects on the natural environment. Supported activities such as purchase of new manufacturing equipment can lead to increased use of water or other resources, increased air emissions, or increases in waste streams. However, in all cases to date, TVA has found that these changes are small and do not result in significant effects on the environment.

TVA’s proposed CE #49 would be defined to limit the general extent of disturbance to a small area (10 acres of previously undisturbed land or 25 acres of previously-disturbed land), further limiting the potential environmental effects.

With respect to cumulative effects, TVA’s previous environmental reviews have also found that no significant cumulative effects would occur from activities such as those encompassed in the proposed CEs. The 2001 Generic EA of Selected Economic Development Activities illustrates the context of and reasons why such activities would not have significant cumulative effects:

TVA financial assistance for classes of minor repetitive actions addressed in this EA can have both potential adverse and beneficial effects. Indirect and cumulative effects

of those classes of actions are difficult to predict, largely because the individual projects are minor actions scattered across the seven-state TVA watershed and power service area. Impacts of construction activities would be insignificant under normal circumstances. Long-term, cumulative operational impacts would be seen as minor increases in waste streams, as well as socioeconomic effects and impacts to some natural features. Further, when considered in light of other development activities, the potential impacts of these classes would be minor and insignificant. Several billion dollars are spent annually by state and local governments and the private sector on development projects throughout the region each year compared to approximately 20 million dollars in TVA funds. (TVA, 2001a)

Summary: TVA EAs have shown that activities contemplated under the proposed CE could have minor, localized short-term adverse effects and long-term beneficial effects for the natural and human environment within the Tennessee Valley and do not cause significant environmental effects. These findings are supported by the extensive CEC reviews completed by TVA when considering proposed actions since 2002.

3.49.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those included in TVA's proposed CE. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity of included activities to the proposed TVA CE. Specifically, these other agency CEs include activities similar to those of TVA's proposed CE, including technical and financial assistance for purchases, renovation, upgrades, maintenance, and construction of buildings and other facilities; and maintenance, upgrading, and extension of infrastructure.

These agencies' CEs are also directly relevant to TVA activities because these agencies, like TVA, have missions that include supporting other public and private entities in the areas of facility and infrastructure management, and economic development. These agencies have robust experience providing various forms of technical and financial assistance to other entities for these activities.

Based on this review, TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the CEs of other federal agencies. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Rural Utilities Service, Department of Agriculture [Multiple CEs \(7 C.F.R. Part 25, 2016\)](#)

The RUS provides financial assistance under categorical exclusions for a lengthy list of activities, many of which are similar in nature and/or scope as those that would be addressed by the proposed CE #49. The Rural Utilities Service and other programs at the Department of Agriculture administers a number of programs that provide financial assistance to rural communities for public infrastructure and infrastructure improvements. Notably, included in the RUS CEs are acreage limits similar to those proposed by TVA for CE #49 (10 acres of disturbance). The following activities are selected from the section of the CFR pertaining to RUS

categorical exclusions. Some require documentation with an Environmental Report (ER), others do not.

7 CFR §1970.53 CEs involving no or minimal disturbance without an environmental report.

(c) Minor construction proposals.

...

- (2) Repair, upgrade, or replacement of equipment in existing structures for such purposes as improving habitability, energy efficiency (including heat rate efficiency), replacement or conversion to enable use of renewable fuels, pollution prevention, or pollution control;
- (3) Any internal modification or minimal external modification, restoration, renovation, maintenance, and replacement in-kind to an existing facility or structure;
- (4) Construction of or substantial improvement to a single-family dwelling, or a Rural Housing Site Loan project or multi-family housing project serving up to four families and affecting less than 10 acres of land;
- (5) Siting, construction, and operation of new or additional water supply wells for residential, farm, or livestock use;
- (6) Replacement of existing water and sewer lines within the existing right-of-way and as long as the size of pipe is either no larger than the inner diameter of the existing pipe or is an increased diameter as required by Federal or state requirements. If a larger pipe size is required, applicants must provide a copy of written administrative requirements mandating a minimum pipe diameter from the regulatory agency with jurisdiction;
- (7) Modifications of an existing water supply well to restore production in existing commercial well fields, if there would be no drawdown other than in the immediate vicinity of the pumping well, no resulting long-term decline of the water table, and no degradation of the aquifer from the replacement well;
- (8) New utility service connections to individual users or construction of utility lines or associated components where the applicant has no control over the placement of the utility facilities;

(d) Energy or telecommunication proposals. The following are CEs that apply to financial assistance for energy or telecommunication proposals:

- (1) Upgrading or rebuilding existing telecommunication facilities (both wired and wireless) or addition of aerial cables for communication purposes to electric power lines that would not affect the environment beyond the previously-developed, existing rights-of-way;
- (2) Burying new facilities for communication purposes in previously developed, existing rights-of-way and in areas already in or committed to urbanized development or rural settlements whether incorporated or unincorporated that are characterized by high human densities and within contiguous, highly disturbed environments with human-built features. Covered actions include

associated vaults and pulling and tensioning sites outside rights-of-way in nearby previously disturbed or developed land;

§1970.54. CEs involving small-scale development with an environmental report. *The CEs in this section are for proposals for financial assistance that require an applicant to submit an ER with their application to facilitate Agency determination of extraordinary circumstances. ...*

(a) Small-scale site-specific development. The following CEs apply to proposals where site development activities (including construction, expansion, repair, rehabilitation, or other improvements) for rural development purposes would impact not more than 10 acres of real property and would not cause a substantial increase in traffic. These CEs are identified in paragraphs (a)(1) through (a)(9) of this section. This paragraph does not apply to new industrial proposals (such as ethanol and biodiesel production facilities) or those classes of action listed in §§ 1970.53, 1970.101, or 1970.151.

(1) Multi-family housing and Rural Housing Site Loans.

(2) Business development.

(3) Community facilities such as municipal buildings, libraries, security services, fire protection, schools, and health and recreation facilities.

(4) Infrastructure to support utility systems such as water or wastewater facilities; headquarters, maintenance, equipment storage, or microwave facilities; and energy management systems. This does not include proposals that either create a new or relocate an existing discharge to or a withdrawal from surface or ground waters, or cause substantial increase in a withdrawal or discharge at an existing site.

(5) Installation of new, commercial-scale water supply wells and associated pipelines or water storage facilities that are required by a regulatory authority or standard engineering practice as a backup to existing production well(s) or as reserve for fire protection.

The discussion provided by the Department of Agriculture in the Notice of Proposed Rulemaking in 2014 provided supporting statements for each CE, citing to agency experience completing multiple EAs and benchmarking to the experience of other federal agencies.

Department of Energy CE B5.1 (76 FR 63764, 2011)

(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency

improvements for vehicles and transportation (such as fleet change out); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix.

Although this DOE CE is most applicable to TVA's proposed CE #48, it also provides support for the proposed CE #49 because it includes financial assistance relating to economic development and modification of existing buildings and infrastructure. As noted above, DOE's Proposed Rule discussed the rationale for the adopted changes to B5.1(a) based on DOE's experience. In the 2011 Proposed Rule, DOE proposed to add additional examples of energy conservation actions, including a clarification that building renovations or new structures must occur in a previously developed or disturbed area. DOE justified that proposal based on DOE's experience preparing EAs and FONSI's related to such rulemakings, which showed that such standards would not have the potential to cause significant effects. (76 FR 63764, 2011).

Federal Aviation Administration CE 5-6.4e, 5-6.4f, and 5-6.4h (80 FR 44208, 2015)

(5-6.4e) Federal financial assistance, licensing, or Airport Layout Plan (ALP) approval for the following actions, provided the action would not result in significant erosion or sedimentation, and will not result in a significant noise increase over noise sensitive areas or result in significant impacts on air quality.

- *Construction, repair, reconstruction, resurfacing, extending, strengthening, or widening of a taxiway, apron, loading ramp, or runway safety area (RSA), including an RSA using Engineered Material Arresting System (EMAS); or*
- *Reconstruction, resurfacing, extending, strengthening, or widening of an existing runway.*

This CATEX includes marking, grooving, fillets and jet blast facilities associated with any of the above facilities.

(5-6.4f) Federal financial assistance, licensing, Airport Layout Plan (ALP) approval, or FAA construction or limited expansion of accessory on-site structures, including storage buildings, garages, hangars, t-hangars, small parking areas, signs, fences, and other essentially similar minor development items.

(5-6.4h) Federal financial assistance, licensing, or Airport Layout Plan (ALP) approval for construction or expansion of facilities—such as terminal passenger handling and parking facilities or cargo buildings, or facilities for non-aeronautical uses at existing airports and commercial space launch sites—that do not substantially expand those facilities (see the FAA's presumed to conform list (72 Federal Register 41565 (July 30, 2007))).

FAA proposed several revisions to CEs within Order 1050.1E in 2013 that pertain to financial assistance to develop infrastructure and assist non-Federal entities, including CEs 5-6.4e, 5-6.4f, and 5-6.4h. FAA expanded the scope for 5-6.4e and 5-6.4f and clarified 5-6.4h. The revised CE 5-6.4e added a “number of different actions regarding runway and airfield configurations” and the revised CE 5-6.4f included additional “on-site structures” in the list of construction projects. In all cases, FAA determined that the activities associated with the CEs would not have the potential to cause significant environmental impacts (FAA, 2013).

Comparability of CEs

Table 3.49-2 provides a comparison of the activities included in other federal agencies’ CEs to the activities in TVA’s proposed CEs.

Table 3.49-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #49	RUS	DOE	FAA
Financial assistance for purchase and replacement of miscellaneous equipment	X	X	X
Financial assistance for purchase, renovation, minor upgrading and/or maintenance of existing facilities	X	X	X
Financial assistance for construction of speculative buildings on sites not to exceed 10 acres	X		X
Financial assistance for routine maintenance, minor upgrading, and/or extension of infrastructure	X		X

The other agency CEs are comparable because they involve providing financial assistance for the same or similar activities as TVA’s proposed CEs. The DOE CE encompass technical and/or financial assistance for energy and/or water efficiency and conservation measures; while these measures are typically not the explicit subject of TVA’s economic development activities, they are within the scope of TVA’s activities (the FAA and RUS CEs could do so as well, depending on the nature of the equipment involved). The FAA and RUS CEs encompass financial assistance for all activities addressed in proposed CE #49. TVA notes that the RUS CEs encompass a wide range of activities for which TVA provides assistance, or conducts on its own. The types of limitations in RUS’s CEs are similar to those that TVA would consider, when determining whether to apply one of the proposed CEs, as special or unique site-specific circumstances that would warrant non-application of the CE and preparation of a more detailed review.

The activities included in TVA’s proposed CE would occur with similar timing and in a similar environmental context to those actions performed by the federal agencies listed in Table 3.49-2 and covered by those agencies’ CEs. For these particular CEs, the setting would include residences and the locations of facilities and infrastructure managed by businesses, local governments, and non-governmental organizations in the region. All of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.49.4 CE Documentation Requirement

TVA staff would complete a CEC in TVA's ENTRAC database to document when CE #49 is applied. By completing a CEC, consideration will be given to project-specific conditions to verify that no extraordinary circumstances exist that would require further analysis. Such a review ensures that the CE is not applied when the action could have significant effects on the environment due to extraordinary circumstances.

3.49.5 Conclusion

The review of TVA's previous use of relevant CEs, NEPA analyses conducted by TVA, and of other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CEs. These activities could have minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment.

3.50 CE 50 - ECONOMIC ASSISTANCE

TVA proposes to establish a new CE for certain minor economic assistance actions. Covered actions under this CE are similar to those under CE #49, although TVA would not require that documentation be completed when actions in this category occur because these actions would not result in significant environmental effects.

3.50.1 Proposed Categorical Exclusion Text

Financial assistance for the following: approving and administering grants, loans and rebates for continued operations or purchase of existing facilities and infrastructure for uses substantially the same as the current use; purchasing, installing, and replacing equipment or machinery at existing facilities; and completing engineering designs, architectural drawings, surveys, and site assessments (except when tree clearing, geotechnical boring, or other land disturbance would occur).

3.50.2 Background

As described in the discussion of proposed CE #49, economic development is one of TVA's core missions and TVA's economic development goals are to increase capital investment and attract and retain better-paying jobs for the people of the Valley. By partnering with other economic development organizations and working closely with states, communities, distributors and directly served customers, TVA leverages resources and expands their networks to recruit potential investment and support development in the seven-state Tennessee Valley region.

TVA provides site selection assistance to business and industry, training and facilitation services to communities, and a wide range of technical and financial assistance to local power company partners and directly served customers, communities, business and industry. Technical assistance includes engineering and design services. As described above, under CE #49, financial assistance includes a variety of programs occurs through a variety of programs, currently including the Valley Incentive Programs involving investment credits, loan funds, performance grants, and security deposit coverage. Among the assistance provided by TVA to companies or organizations in the Valley is support for the purchase of a new facility to continue its current operations, assistance to allow companies or organizations to continue its operations, assistance to purchase equipment or machinery to continue its operations, and assistance that allows companies or organizations to complete project planning activities, including those that do not involve physical disturbance (e.g., engineering design work, drafting architectural drawings, completing site assessments, and other actions that does not lead to any physical disturbances).

The proposed CE #50 is similar to proposed CE #49 in that covered actions include financial assistance to support economic development. However, the actions included in proposed CE #50 are far less likely than those covered under proposed CE #49 to result in physical effects on the environment. TVA would not require CEC documentation for actions of CE #50.

3.50.3 Substantiating Information for Proposed CEs

In considering whether the activities covered by the proposed CEs could be categorically excluded, TVA staff used the following information for review: TVA application of relevant existing CEs since 2002; relevant TVA EAs and EISs; comparison with CEs established by other agencies; and professional judgment, expert opinion, or scientific analysis regarding the environmental effects of activities covered by the proposed CEs.

Based on this information and analysis, TVA finds that the activities covered by the proposed CEs do not individually or cumulatively have a significant effect on the quality of the human environment.

3.50.3.1 TVA Experience with Relevant Existing CEs

TVA NEPA staff reviewed the ENTRAC database for previous uses of relevant CEs since 2002, and found many instances of activities similar to those included in proposed CE #50. Previous application of TVA CEs to such activities indicates that these activities were considered to produce no significant harm to the quality of the human environment. Note, many of the projects reviewed since 2002 provide supporting justification for both CEs #49 (discussed above) and #50.

TVA has documented hundreds of individual actions since 2002 involving grants, loans, and/or rebates. TVA also reviewed the actions of TVA business units that are focused on economic development and noted these units applied existing CEs over 700 times. Most of the identified CECs used two existing TVA CEs:

- CE 5.2.27, *Any action which does not have a primary impact on the physical environment.*
- CE 5.2.28, *Actions which were the subject of an EA which concluded that the category of such actions should be treated as a categorical exclusion.*

Twelve of the identified CECs used existing TVA CE 5.2.21, *Minor research, development, and joint demonstration projects*. Applications of CE 5.2.28 were based on the 2001 “Generic EA of Selected Economic Development Activities,” which is discussed below. Examples of relevant applications of TVA’s existing CEs are found in the following CECs:

- CEC 24516: *Water Valley Industrial Water Tank Restoration – ARC Grant, (7/11/2011), CE 5.2.28*
- CEC 22505: *Gordon-Lee House Renovations and Visitor Center – ARC Grant, (6/11/2010), CE 5.2.28*
- CEC 21250: *Shoals Entrepreneurial Center Energy Improvements Project – ARC Grant, (10/16/2009), CE 5.2.21*
- CEC 19024: *Copper Basin Medical Center Telecommunications & Surgical Equipment – ARC Grant, (8/15/2008), CE 5.2.28*
- CEC 1122: *Pocahontas VA Opera House and Exhibition Mine Roof Repair – ARC Grant, (8/30/2002), CE 5.2.28*

3.50.3.2 TVA Experience with Relevant EAs or EISs

TVA NEPA staff and other specialists with environmental compliance responsibilities conducted a review of previous TVA activities for which EAs and FONSI were prepared. Several of these were used as sources of information for the discussion of potential environmental effects below. Relevant examples are listed in Table 3.50-1.

Table 3.50-1 Relevant TVA NEPA Documents

Title	Location	Date FONSI Issued
Valley Investment Initiative – Program Expansion and Modification EA	TVA-wide	4/13/2010
Mathias Metal Systems Loan for Equipment Purchase EA	Humphreys County, TN	9/9/2008
Pharma Pac Equipment Loan EA	Kemper County, MS	7/1/2008
Benchmark Industries Building Improvements EA	Grundy County, TN	5/9/2008
ConRon/Plastic Recycling Building and Equipment Purchase EA	Jefferson County, TN	5/7/2007
Fiber Innovation Technology Equipment Purchase EA	Washington County, TN	8/17/2006
Financial Assistance to McMinnville-Warren Industrial Development Board EA	Warren County, TN	3/30/2006
Pierce Metals Industrial Expansion EA	Sullivan County, TN	3/30/2006
Generic EA of Selected Economic Development Activities	TVA-wide	6/18/2001
Loan to the Town of Collierville to Assist Mid-South Metal Products, Inc., in Purchasing and Renovating an Existing Building EA	Shelby County, TN	10/30/1997

The following NEPA documents are representative of those listed in the table above, and illustrative of the relevance of the activities and findings in these documents to the proposed CE.

Generic EA of Selected Economic Development Activities and FONSI: This 2001 EA evaluated the environmental effects of a proposal to treat the following classes of activities as categorically excluded under NEPA:

- Financial assistance for purchase of equipment;
- Financial assistance for purchase, renovation, or internal expansion of existing facilities;
- Financial assistance for replacement of existing facilities;
- Financial assistance for construction of speculative (spec) buildings in existing industrial parks; and
- Financial assistance for routine and minor, maintenance, upgrade, and extension of infrastructure.

The activities in proposed CE are similar to those evaluated in the 2001 EA. However, activities addressed by the Generic EA would generally be more likely to result in environmental disturbance than those actions under proposed CE #50. The EA does address actions such as the

replacement and purchase of equipment and routine and minor maintenance of existing infrastructure and facilities, which are actions that have very little potential to cause significant effects to the environment. The EA evaluated potential effects on air quality, water quality, solid waste and special materials, land use, visual resources, transportation, noise, surface water, cultural resources, protected species, wetlands or other unique natural features, floodplains, and prime farmland. TVA determined that the identified classes of activities would not have significant effects on these resources. (TVA, 2001a)

Mathias Metal Systems Loan for Equipment Purchase EA and FONSI: TVA proposed to make a loan to Mathias Metal Systems (MMS) to purchase equipment for its fabrication facility located within an existing industrial park in Waverly (Humphreys County), Tennessee. MMS was completing this new facility on a 7-acre site in the industrial park. The equipment to be purchased with the loan included various press brakes and related dies, a plasma cutter, two forklift trucks, two compressors, two welders, band saws, and other tools and material handling equipment. The purchase of the equipment would assist the company in expanding its operations and allow MMS to increase employment by 50 jobs to a total of 56 employees. This EA is directly relevant to purchases, installations and replacements of equipment at existing facilities (under proposed CE #50) and to the continued operations of existing facilities. TVA determined that the company's manufacturing process would result in no air emissions or industrial wastewater effluents and generate no hazardous waste; thus, the new facility would have little, if any, additional effects on air and water quality. The facility would be connected to city water and sewer systems with adequate capacity. Minor waste streams would be readily handled by a licensed waste management company and licensed recycler. Because the facility would be located within an existing industrial park with adequate capacity on nearby roads, traffic effects from the additional employees and the anticipated tractor-trailer trips would be insignificant. (TVA, 2008b)

3.50.3.3 Potential Environmental Effects

Using the proposed CE, TVA would provide financial assistance to support economic development across the TVA region. Financial assistance includes, but is not limited to, approving and administering grants, loans, and rebates which are intended to have direct, beneficial socioeconomic effects on receiving entities. Such assistance does not by itself have other environmental effects, but may indirectly produce environmental effects through the activities that the assistance enables. In comparison to actions under proposed CE #49, assistance under the proposed CE #50 would be limited to supporting the purchase existing facilities for continued use or the continued operation of existing facilities, which are activities that do not change the environmental status quo. In addition, the proposed CE would include minor, non-disturbing actions regarding design, surveys, drawings, and assessments of sites.

As noted above, assistance under proposed CE #49 would be more likely to have environmental impacts and TVA staff would be instructed to document the review in a CEC in ENTRAC; under CE #50, such a review would not be documented in a CEC.

Activities that TVA would assist under the proposed CEs that could have environmental effects include, but are not limited to:

- Purchase and replacement of miscellaneous equipment
- Purchase and continued operation of existing facilities
- Completion of engineering designs, architectural drawings, surveys and site-assessments, as long as there are no land disturbances.

TVA NEPA documents for previously proposed actions to provide financial and technical assistance for these types of activities have reviewed a complete range of resources for potential environment effects. In all cases, TVA's previous environmental reviews (numbering well over 100 since 1971) found that financial and technical assistance, and the activities enabled by that assistance, would have minor, negligible or no effect on the environment. This result typically occurs because the activities that TVA assists are small scale, and the projects are very localized. Further, in many cases the activities occur within a building, within an already developed area (e.g., industrial park), or on other land that has been previously disturbed. This context reduces the potential for effects on the natural environment. Supported activities such as purchase of new manufacturing equipment can lead to increased use of water or other resources, increased air emissions, or increases in waste streams. However, in all cases to date, TVA has found that these changes are small and do not result in significant effects on the environment.

With respect to cumulative effects, TVA's previous environmental reviews have also found that no significant cumulative effects would occur from activities such as those encompassed in the proposed CEs. The 2001 Generic EA of Selected Economic Development Activities illustrates the context of and reasons why such activities would not have significant cumulative effects:

TVA financial assistance for classes of minor repetitive actions addressed in this EA can have both potential adverse and beneficial effects. Indirect and cumulative effects of those classes of actions are difficult to predict, largely because the individual projects are minor actions scattered across the seven-state TVA watershed and power service area. Impacts of construction activities would be insignificant under normal circumstances. Long-term, cumulative operational impacts would be seen as minor increases in waste streams, as well as socioeconomic effects and impacts to some natural features. Further, when considered in light of other development activities, the potential impacts of these classes would be minor and insignificant. Several billion dollars are spent annually by state and local governments and the private sector on development projects throughout the region each year compared to approximately 20 million dollars in TVA funds. (TVA, 2001a)

Summary: TVA EAs have shown that activities contemplated under these CEs could have minor, localized short-term adverse effects and long-term beneficial effects for the natural and human environment within the Tennessee Valley and do not cause significant environmental effects.

3.50.3.4 Benchmarking of Other Agencies' Experience

TVA reviewed and evaluated existing CEs of other federal agencies for activities similar to those pertaining to this type of financial assistance. The following CEs currently in use by other agencies are similar in the nature, scope, and intensity to proposed CE #50. These agencies' CEs are directly relevant to TVA activities because these agencies, like TVA, have missions that

include supporting other public and private entities in the areas of economic development. These agencies have robust experience providing various forms of technical and financial assistance to other entities for these activities.

TVA found that it would be conducting activities similar in size and scope under similar resource conditions and with similar environmental effects to the CEs of other federal agencies. The CEs from other federal agencies provide support for TVA's conclusion that its activities under the proposed CE would not result in significant effects to the human environment either individually or cumulatively.

Department of Housing and Urban Development (HUD) CE b14 CFR. § 50.19(b)(4) (24 C.F.R. § 58, 2014)

(14) Economic development activities, including but not limited to, equipment purchase, inventory financing, interest subsidy, operating expenses and similar costs not associated with construction or physical expansion of existing facilities; however, in the case of equipment purchase, compliance with § 50.4(b)(1) is required.

This HUD CE is very similar to the proposed CE, in that actions include assistance for purchase of equipment and operating costs of existing facilities. This CE also limits covered actions and does not include potentially larger scale projects involving construction or expansion of facilities and operations. The HUD reviewed the environmental effects of these activities and substantiated that these activities do not individually or cumulatively result in significant environmental effects.

Department of Energy CE B5.1 (76 FR 63764, 2011)

(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet change out); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions

do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix.

Although actions covered under these DOE CEs are more relevant to proposed CE #48, the covered actions include assistance provided for new equipment at existing facilities or buildings. The types of actions addressed under these CEs would be more likely to have environmental impacts than those that would be under the proposed TVA CE #50. As described above, DOE's Proposed Rule discussed the rationale for the adopted changes to B5.1(a) based on DOE's experience.

Rural Utilities Service, Department of Agriculture [Multiple CEs](#) (7 C.F.R. Part 25 , 2016)

As noted above, the RUS provides financial assistance under categorical exclusions for a lengthy list of activities, including several types of actions that are the same or substantially similar to the actions of proposed CE #50. Listed below are those RUS CEs which support TVA's proposal to establish the proposed CE #50, including categories pertaining to equipment purchase and replacement, the purchase of existing facilities or a portion thereof where use or operation will remain unchanged, and assistance to complete studies or management plans for projects. Note that RUS does not require preparation of ERs for these CEs; similarly, TVA would not require documentation for the proposed actions.

§1970.53 CEs involving no or minimal disturbance without an environmental report.

The CEs in this section are for proposals for financial assistance that involve no or minimal alterations in the physical environment and typically occur on previously disturbed land. ...

(a) Routine financial actions. The following are routine financial actions and, as such, are classified as categorical exclusions identified in paragraphs (a)(1) through (7) of this section.

(1) Financial assistance for the purchase, transfer, lease, or other acquisition of real property when no or minimal change in use is reasonably foreseeable.

(i) Real property includes land and any existing permanent or affixed structures.

(ii) "No or minimal change in use is reasonably foreseeable" means no or only a small change in use, capacity, purpose, operation, or design is expected where the foreseeable type and magnitude of impacts would remain essentially the same.

(2) Financial assistance for the purchase, transfer, or lease of personal property or fixtures where no or minimal change in operations is reasonably foreseeable.

These include:

(i) Approval of minimal expenditures not affecting the environment such as contracts for long lead-time equipment and purchase options by applicants under the terms of 40 CFR 1506.1(d) and 7 CFR 1970.12;

(ii) Acquisition of end-user equipment and programming for telecommunication distance learning;

- (iii) Purchase, replacement, or installation of equipment necessary for the operation of an existing facility (such as Supervisory Control and Data Acquisition Systems (SCADA), energy management or efficiency improvement systems (including heat rate efficiency), replacement or conversion to enable use of renewable fuels, standby internal combustion electric generators, battery energy storage systems, and associated facilities for the primary purpose of providing emergency power);*
- (iv) Purchase of vehicles (such as those used in business, utility, community, or emergency services operations);*
- (v) Purchase of existing water rights where no associated construction is involved;*

- ...
- (3) Financial assistance for operating (working) capital for an existing operation to support day-to-day expenses.*
 - (4) Sale or lease of Agency-owned real property, if the sale or lease of Agency-owned real property will have no or minimal construction or change in current operations in the foreseeable future.*
 - (5) The provision of additional financial assistance for cost overruns where the purpose, operation, location, and design of the proposal as originally approved has not been substantially changed.*

(c) Minor construction proposals.

- ...
- (2) Repair, upgrade, or replacement of equipment in existing structures for such purposes as improving habitability, energy efficiency (including heat rate efficiency), replacement or conversion to enable use of renewable fuels, pollution prevention, or pollution control;*
 - (3) Any internal modification or minimal external modification, restoration, renovation, maintenance, and replacement in-kind to an existing facility or structure;*

The discussion provided by the Department of Agriculture in the Notice of Proposed Rulemaking in 2014 provided supporting statements for each CE, citing to agency experience completing multiple EAs and benchmarking to the experience of other federal agencies.

Comparability of CEs

The table below provides a comparison of the activities included in other federal agencies' CEs to the activities in TVA's proposed CEs.

Table 3.50-2 Comparison of Proposed TVA CE Activities to Other Agency CEs

Proposed TVA CE #50	HUD	DOE	RUS
Financial assistance for purchase and replacement of miscellaneous equipment	X	X	X
Financial assistance for purchase, renovation, minor upgrading and/or maintenance of existing facilities		X	X
Financial assistance for routine maintenance and minor upgrading			X

TVA found that the text of several RUS CEs was most relevant to the proposed CE #50. Across the federal family, TVA’s mission and activities to promote economic development are similar to many aspects of RUS’ mission and activities. The other agency CEs are comparable because they involve the related to or similar activities as TVA’s proposed CE. TVA notes that the RUS CEs encompass a wide range of activities for which TVA provides assistance, or conducts on its own. The types of limitations in RUS’s CEs are similar to those that TVA would consider, when determining whether to apply the proposed CE, as special or unique site-specific circumstances that would warrant non-application of the CE and preparation of a more detailed review. The HUD and DOE CEs are also relevant because they address financial assistance for equipment purchases at existing facilities.

Generally, the activities included in TVA’s proposed CE would occur within a similar environmental context to those actions performed by the federal agencies listed in Table 3.50.2 and covered by those agencies’ CEs. As previously stated, such actions would have very limited potential to result in significant environmental effects. All of these other agencies’ CEs have been reviewed by CEQ and were determined to be in compliance with NEPA and CEQ regulations.

3.50.4 CE Documentation Requirement

TVA staff would not complete a CEC in TVA’s ENTRAC database to document when CE #50 is applied. TVA has determined that the actions of this category are routine and minor actions that carry little risk of significant environmental effects. The definition of the CE includes limits to the scope of actions covered, thereby further ensuring that actions would have no significant impact.

3.50.5 Conclusion

The review of TVA’s previous use of relevant CEs, NEPA analyses conducted by TVA, and of other agency CEs shows that no individually or cumulatively significant effects are attributable to the types of activities included in the proposed CE. These activities could have minor adverse short-term and minor beneficial long-term effects. Accordingly, TVA determined that the proposed CE encompasses activities that do not have individual or cumulative significant effects on the human environment.

4 RATIONALE FOR ELIMINATION OF EXISTING CATEGORICAL EXCLUSIONS

The Council on Environmental Quality instructs federal agencies to periodically review their policies and procedures (40 C.F.R. § 1506.6). The CEQ 2010 guidance on CEs instructs agencies, when reviewing their current CEs for applicability, to consider “changed circumstances, how frequently the categorical exclusions are used, the extent to which resources and geographic areas are potentially affected, and the expected duration of impacts.” (CEQ, 2010) During its review of its NEPA implementing procedures, TVA found that nine existing CEs should be eliminated, based on CEQ’s criteria for review.

TVA proposes to eliminate three CEs because such activities are no longer regularly performed by TVA. Two other CEs that are broadly defined would be replaced by multiple, more defined CEs. Two CEs would be eliminated because the actions are reasonably covered under a broader existing CE. TVA also found that two CEs should be eliminated because the category does not reflect standard practices for applying categorical exclusions. These proposed changes are discussed further below.

4.1 EXISTING CE 5.2.1

Text: Routine operation, maintenance, and minor upgrading of existing TVA facilities.

Background and Rationale for Elimination:

This CE has been one of most frequently used by TVA specialists because it broadly encompasses many of the most common actions performed at TVA facilities. A review of TVA’s ENTRAC database revealed that this CE has been documented 5,600 times since the database was created in 2001.

TVA proposes to eliminate the broadly defined CE and replace it with several new CEs that more clearly and specifically define the types of routine activities that would be eligible for categorical exclusion. Under its revised list of CEs, routine actions would be included in multiple new CEs that are more specific and limited in scope. Many routine actions are included in the proposed CEs 36 and 37, and many other proposed CEs would address actions that TVA staff have previously considered to fall under existing CE 5.2.1.

Eliminating CE 5.2.1 and replacing it with multiple CEs represents one of the greatest changes to TVA’s procedures on the use of CEs. TVA NEPA staff anticipates that having multiple, clearly defined CEs instead of one broad CE (5.2.1) would improve clarity about the applicability of the action and would reduce the potential for misapplication or misinterpretation of the CE.

4.2 EXISTING CE 5.2.7

Text: *Activities related to the promotion and maintenance of employee health.*

Reason for Elimination:

TVA proposes to eliminate CE 5.2.7 because activities relating to employee health are typically administrative in nature and generally pertain to human resources management. Such actions are reasonably considered to fall under CEs for personnel actions (existing 5.2.3 and proposed CE 3) and for administrative actions (existing 5.2.9 and proposed CE 7).

TVA NEPA staff does not require CEC documentation when CE 5.2.7 is applied; there are no records in TVA's ENTRAC database that the CE has been applied since 2002.

4.3 EXISTING CE 5.2.8

Text: *Activities of TVA's Equal Employment Opportunity staff.*

Reason for Elimination:

TVA proposes to eliminate CE 5.2.8 for same reason it proposes to eliminate CE 5.2.7. Activities of TVA's Equal Employment Opportunity (EEO) staff are typically administrative in nature and are generally related to human resources and personnel management. Such actions are reasonably considered to fall under the CE for personnel actions (existing 5.2.3 and proposed CE 3) and the CE for administrative actions (existing 5.2.9 and proposed CE 7).

TVA NEPA staff does not require CEC documentation when CE 5.2.8 is applied; there are no records in TVA's ENTRAC database that the CE has been applied since 2002. Although TVA proposes to eliminate a CE specific to EEO program activities, TVA's EEO program continues to serve essential functions within TVA to address workplace discrimination and ensure opportunities are afforded to all employees and applicants.

4.4 EXISTING CE 5.2.14

Text: *Exploration for uranium, including hydrologic investigations.*

Reason for Elimination:

TVA no longer conducts these types of mineral exploration activities, rendering this CE no longer relevant to TVA's operations. TVA NEPA staff members are unaware of any applications of this CE; a review of TVA's ENTRAC database confirms that this CE has not been documented since 2001. Because these activities no longer occur, TVA proposes to eliminate this obsolete CE.

4.5 EXISTING CE 5.2.17

Text: *Transmission line relocation, tap-ins, or modifications or substation alterations due to conflicts such as new highway projects and projects requiring acquisition of minor amounts of additional substation property or transmission line right-of-way easements.*

Reason for Elimination:

As noted above in the description of TVA’s proposed CE #17, the existing CE 5.2.17 would be eliminated and a new CE would be established to address similar actions relating to modifications and alterations of existing transmission infrastructure.

A review of TVA’s ENTRAC database revealed that this CE has been documented 546 times since February 2002. TVA NEPA staff propose to eliminate the current CE and address its activities with new CE #17 as well as several other new CEs relating to the transmission system. TVA NEPA staff anticipate that having multiple, clearly defined CEs for transmission actions instead of one broad CE (5.2.17) would clarify for TVA specialists which activities may be appropriately excluded, thereby saving specialists time and resources. Additionally, TVA NEPA staff found that some TVA specialists, when determining whether an action was covered by a CE, found the text of the existing CE to be unclear. The new CE is intended to improve clarity and ensure that appropriate application of the CE.

4.6 EXISTING CE 5.2.19

Text: *Backslope agreements involving properties on which TVA holds an interest between operators and other adjacent mining companies.*

Reason for Elimination:

This CE does not reflect current TVA operations. The CE reflects TVA’s earlier business model, when TVA directly engaged in mineral development, mining, and extraction. The current definition of the CE is no longer clear and is easily misunderstood (e.g., backslope is not a commonly used term by TVA staff). A review of TVA’s ENTRAC database revealed that this CE has not been documented since the database was created in 2001. Accordingly, TVA proposes to eliminate this CE.

4.7 EXISTING CE 5.2.22

Text: *Construction of visitor reception centers.*

Reason for Elimination:

Even though TVA has a number of visitor centers at its facilities, this CE is rarely applied. A review of TVA’s ENTRAC database revealed that this CE has been documented only twice since the database was established in 2001. Accordingly, TVA NEPA staff proposes to eliminate the existing CE. Construction of visitor reception centers may fall under one or more proposed

CEs addressing construction or improvements to existing facilities (e.g., proposed CEs 37 and 38).

4.8 EXISTING CE 5.2.27

Text: *Any action which does not have a primary impact upon the physical environment.*

Reason for Elimination:

This CE is broad in scope and TVA NEPA staff has observed that the CE's definition has caused confusion over the years. Because its definition lacks specificity, the CE could be inappropriately or inconsistently applied by TVA staff. For instance, some staff may not understand what typically constitutes a "primary" impact on the physical environment, given the word "primary" to describe an impact is not clearly defined in the context of NEPA and CEQ regulations). As discussed above, TVA proposes to establish CEs that are specific and clearly defined to improve clarity and ensure that CEs are applied appropriately.

This CE has been used frequently because the current CE text is broad in scope and many TVA actions do not have a primary impact on the physical environment. A review of TVA's ENTRAC database revealed that this CE has been documented 453 times since February 2002.

4.9 EXISTING CE 5.2.28

Text: *Actions which were the subject of an EA which concluded that the category of such action should be treated as a categorical exclusion.*

Reason for Elimination:

The CEQ's implementing procedures define how agencies may establish categorical exclusions (40 CFR 1507.3). TVA proposes to eliminate this CE to comply with these requirements.

A review of TVA's ENTRAC database revealed that this CE has been documented 502 times since the database was created in 2001. In practice, TVA applied this CE after an EA (usually programmatic in nature) had been completed to analyze the potential impacts of a proposed action, set of activities, or program. TVA staff can only cite to CE 5.2.28 after verifying that the EA provides an adequate NEPA analysis for the proposed action. The CE documentation for these actions served as a determination of NEPA adequacy. In the future, TVA will find alternative means to review and document that previous NEPA analyses adequately address a proposed action.

In addition to eliminating CE 5.2.28, TVA proposes to revise its NEPA procedures addressing the use of generic EAs to establish new CEs (currently section 5.3.5).

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6 QUALIFICATIONS OF PREPARERS

Tennessee Valley Authority

Matthew S. Higdon

Education: M.S., Urban and Regional Planning, emphasis in Environmental Planning, University of Tennessee-Knoxville; NEPA Certification, Utah State University; B.A., History, University of Tennessee-Knoxville.

Experience: Over 16 years of experience in NEPA compliance and natural resources planning.

Involvement: TVA Project Manager, NEPA compliance and policy development. Principal document writer, reviewer and preparer.

Charles P. Nicholson (Retired)

Education: Ph.D. Ecology and Evolutionary Biology, University of Tennessee-Knoxville; M.S., Wildlife Management, University of Maine; B.S., Wildlife and Fisheries Science, University of Tennessee-Knoxville.

Experience: Over 22 years in NEPA compliance, 17 years in wildlife and endangered species management.

Involvement: NEPA compliance, policy development and document review.

Dana Vaughn

Education: M.A., Education and B.A., Biology, Carson-Newman University

Experience: Over 13 years of experience in natural resources and environmental compliance.

Involvement: NEPA compliance. Document review.

W. Doug White

Education: B.S., Forestry, University of Tennessee-Knoxville.

Experience: Over 4 years of experience in NEPA compliance and 16 years in natural and water resource management.

Involvement: NEPA compliance. Document review.

Amy B. Henry

Education: M.S., Zoology and Wildlife, Auburn University; B.S., Biology, Wake Forest University.

Experience: Over 21 years of experience in NEPA compliance, natural resources planning, and biological surveys.

Involvement: NEPA compliance and policy development. Document review.

Booz Allen Hamilton

Steven Buchanan

Education: Graduate Studies, Technology Management, University of Maryland; B.S., Chemistry and Biology, Old Dominion University.

Relevant Training/Certifications: EPA-Certified NPDES and SDWA Compliance Inspector.

Experience: Over 28 years of experience in the areas of environmental, health, and safety (EHS) management program development, implementation, and enhancement. Subject matter expertise in environmental policy, regulatory compliance, NEPA.

Involvement: NEPA Compliance. Review of selected sections.

Richard Pinkham

Education: M.S., Natural Resources Policy, minor in Resource Economics, Cornell University; B.S., Geography, Dartmouth College.

Relevant Training/Certifications: Certified Project Management Professional; National Renewable Energy Laboratory Energy Executive (multi-month energy training program).

Experience: Over 24 years of experience in economic analysis, socioeconomics, and environmental and energy management and policy. Over 12 years of experience in NEPA document preparation. Subject matter expertise in water and watershed management.

Involvement: Review of TVA experience in financial management and assistance, rate actions, and power contracts. Document preparation and review.

Rachel Schneider

Education: PhD, Environmental Science and Engineering and Coastal Oceanography, and hydrology certificate, Oregon Health and Science University; M.S., Environmental Science and Engineering, Oregon Health and Science University; B.A., Chemistry with Environmental Studies, Goucher College.

Relevant Training/Certifications: HAZWOPER 40-hour and ISO 9001:2000 standard certifications; Air Force Environmental Liabilities training; Remedial Action Cost Engineering and Requirement training. USACE certified wetland delineator.

Experience: Over 15 years of NEPA experience and environmental regulatory analysis, including document preparation in accordance with RCRA and CERCLA; wetland identification and delineation; terrestrial flora and fauna sampling; and Clean Water Act technical areas (including stormwater, sampling and analysis, pretreatment and NPDES permit applications and compliance, zero discharge permitting, and hydrologic and water quality modeling).

Involvement: Drafting and/or technical guidance. NEPA compliance. Document preparation and review.

Timothy Killian

Education: J.D., Tulane Law School; M.P.H., Environmental Health Sciences, University of South Carolina; B.S. Psychology, University of South Carolina.

Experience: Over 20 years of experience in NEPA and hazardous waste and materials management and fuel storage tank management.

Involvement: Sections addressing waste management and cleanup. Document preparation.

Barbara Johnson

Education: M.P.P., focus in Environmental Policy, Harvard University; A.B. International Relations, Stanford University.

Experience: Over 22 years of experience in environmental and natural resources policy at Federal and Congressional agencies.

Involvement: Sections addressing siting, construction and operation of buildings, waste management and clean, and aquatic ecosystem, riparian and wetland actions. Document preparation.

Adam Turbett

Education: B.S., Environmental Studies, Bucknell University.

Experience: Over 13 years of experience in noise, air quality, cultural and historic resources, and environmental and energy management. Over 12 years of experience in NEPA document preparation. Subject matter expertise in noise, air quality, and cultural and historic resources.

Involvement: Sections pertaining to demolition and disposal, renewable energy, construction of transmission and interconnections, and maintenance and repair of existing transmission assets. NEPA compliance. Document preparation.

Pamela Middleton

Education: M.A.S., Environmental Policy and Management, University of Denver; B.A., Biology, emphasis in Botany, Sonoma State University.

Relevant Training/Certifications: U.S. Fish and Wildlife Service Writing Biological Assessments Training; U.S. Army Corps of Engineers Wetland Delineation Training; Bureau of Land Management NEPA and Land Use Planning Training.

Experience: Over 12 years of NEPA experience. Subject matter expertise in threatened and endangered species, wildlife, fisheries, riparian resources, water resources, livestock grazing, vegetation, invasive and non-native plants, and visual resources.

Involvement: Sections pertaining to land management and stewardship actions, recreation, and facilities management, maintenance and upgrades. and Modifications. Document preparation and review of selected sections.

Sari Atchue

Education: B.S., Environmental Science, University of Mary Washington.

Relevant Training/Certifications: OSHA 40-Hour HAZWOPER.

Experience: Over 7 years of experience providing environmental, energy, and conservation programs for defense and civilian agencies.

Involvement: Document preparation.

Brian Wooldredge

Education: B.S., Environmental Studies, Physics, Gettysburg College.

Experience: Over 4 years of experience providing environmental compliance support and NEPA document preparation for defense agencies.

Involvement: Document preparation. Administrative Record.

ATTACHMENT A: TVA CATEGORICAL EXCLUSION CHECKLIST

(Sample)

Categorical Exclusion Checklist for Proposed TVA Actions

Categorical Exclusion Number Claimed	Organization ID Number	Tracking Number <i>(NEPA Administration Use Only)</i>
Form Preparer	Project Initiator/Manager	Business Unit
Project Title		Hydrologic Unit Code
Description of Proposed Action <i>(Include Anticipated Dates of Implementation)</i>		<input type="checkbox"/> Continued on Page 3 <i>(if more than one line)</i>
Initiating TVA Facility or Office		TVA Business Units Involved in Project
Location <i>(City, County, State)</i>		

Parts 1 through 4 verify that there are no extraordinary circumstances associated with this action:

Part 1. Project Characteristics

Is there evidence that the proposed action...	No	Yes	Information Source for Insignificance
1. Is major in scope?			
2. Is part of a larger project proposal involving other TVA actions or other federal agencies?			
* 3. Test 1?			
* 4. Involves non-routine mitigation to avoid adverse impacts?			
5. Is opposed by another federal, state, or local government agency?			
* 6. Has environmental effects which are controversial?			
* 7. Is one of many actions that will affect the same resources?			
8. Involves more than minor amount of land?			

*If "yes" is marked for any of the above boxes, consult with NEPA Administration on the suitability of this project for a categorical exclusion.

Part 2. Natural and Cultural Features Affected

Would the proposed action...	No	Yes	Permit	Commitment	Information Source for Insignificance
1.Potentially affect endangered, threatened, or special status species?					
2.Potentially affect historic structures, historic sites, Native American religious or cultural properties, or archaeological sites?					
3.Potentially take prime or unique farmland out of production?					
4.Potentially affect Wild and Scenic Rivers or their tributaries?					
5.Potentially affect a stream on the Nationwide Rivers Inventory?					
6.Potentially affect wetlands, water flow, or stream channels?					
7.Potentially affect the 100-year floodplain?					
8.Potentially affect ecologically critical areas, federal, state, or local park lands, national or state forests, wilderness areas, scenic areas, wildlife management areas, recreational areas, greenways, or trails?					
9.Contribute to the spread of exotic or invasive species?					
10.Potentially affect migratory bird populations?					
11.Involve water withdrawal of a magnitude that may affect aquatic life or involve interbasin transfer of water?					
12.Potentially affect surface water?					
13.Potentially affect drinking water supply?					
14.Potentially affect groundwater?					
15.Potentially affect unique or important terrestrial habitat?					
16.Potentially affect unique or important aquatic habitat?					

Part 3. Potential Pollutant Generation

Would the proposed action potentially (including accidental or unplanned)...	No	Yes	Permit	Commitment	Information Source for Insignificance
1.Release air pollutants?					
2.Generate water pollutants?					
3.Generate wastewater streams?					
4.Cause soil erosion?					
5.Discharge dredged or fill materials?					
6.Generate large amounts of solid waste or waste not ordinarily generated?					
7.Generate or release hazardous waste (RCRA)?					
8.Generate or release universal or special waste, or used oil?					
9.Generate or release toxic substances (CERCLA, TSCA)?					
10.Involve materials such as PCBs, solvents, asbestos, sandblasting material, mercury, lead, or paints?					
11.Involve disturbance of pre-existing contamination?					
12.Generate noise levels with off-site impacts?					
13.Generate odor with off-site impacts?					
14.Produce light which causes disturbance?					
15.Release of radioactive materials?					
16.Involve underground or above-ground storage tanks or bulk storage?					
17.Involve materials that require special handling?					

Part 4. Social and Economic Effects

Would the proposed action...	No	Yes	Commitment	Information Source for Insignificance
1.Potentially cause public health effects?				
2.Increase the potential for accidents affecting the public?				
3.Cause the displacement or relocation of businesses, residences, cemeteries, or farms?				
4.Contrast with existing land use, or potentially affect resources described as unique or significant in a federal, state, or local plan?				
5.Disproportionately affect minority or low-income populations?				
6.Involve genetically engineered organisms or materials?				
7.Produce visual contrast or visual discord?				
8.Potentially interfere with recreational or educational uses?				
9.Potentially interfere with river or other navigation?				
10.Potentially generate highway or railroad traffic problems?				

Part 5. Other Environmental Compliance/Reporting Issues

Would the proposed action...	No	Yes	Commitment	Information Source for Insignificance
1.Release or otherwise use substances on the Toxic Release Inventory list?				
2.Involve a structure taller than 200 feet above ground level?				
3.Involve site-specific chemical traffic control?				
4.Require a site-specific emergency notification process?				
5.Cause a modification to equipment with an environmental permit?				
6.Potentially impact operation of the river system or require special water elevations or flow conditions?				
7.Involve construction or lease of a new building or demolition or renovation of existing building (i.e. major changes to lighting, HVAC, and/or structural elements of building of 1000 sq. ft. or more)?				

Parts 1 through 4: If "yes" is checked, describe in the discussion section following this form why the effect is insignificant. Attach any conditions or commitments which will ensure insignificant impacts. Use of non-routine commitments to avoid significance is an indication that consultation with NEPA Administration is needed.

An EA or EIS Will be prepared.

Based upon my review of environmental impacts, the discussion attached, and/or consultations with NEPA Administration, I have determined that the above action does not have a significant impact on the quality of the human environment and that no extraordinary circumstances exist.

Therefore, this proposal qualifies for a categorical exclusion under Section 5.2. _____ of TVA NEPA Procedures.

Project Initiator/Manager		Date
TVA Organization	E-mail	Telephone

Environmental Concurrence Reviewer

Preparer Closure

Signature

Signature

Other Environmental Concurrence Signatures (as required by your organization)

Signature

Signature

Signature

Signature

Other Review Signatures (as required by your organization)

Signature

Signature

Signature

Signature

Signature

Signature

Attachments/References

CEC General Comment Listing

CEC Comment Listing

CEC Permit Listing

CEC Commitment Listing

