



# U.S. Department of Energy

## Categorical Exclusion Determination Form

Proposed Action Title: Clinch River Environmental Studies Organization (CRESO) 2012 Education/Research Program Activities (CX-CRESO-2012-001)

Program or Field Office: Oak Ridge Reservation

Location(s) (City/County/State): Oak Ridge, Tennessee

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Proposed Action Description:

The Clinch River Environmental Studies Organization (CRESO) is an education/research program with a mission of: (1) providing middle, high school, and undergraduate students opportunities for unique field research and extended learning experiences in areas of data management and analysis; research design and protocols; ecology and related sciences including resources conservation and management strategies, and (2) promoting community outreach and education through student driven presentations and publications. CRESO is supported by the U.S. Department of Energy (DOE), Anderson County Schools (ACS), and Oak Ridge Schools (ORS). The University of Tennessee Forest Resources Research & Education Center (UTFRC) became a primary partner in 1997. Research focuses on inventory and long-term monitoring of the population status and activity patterns of selected species in Anderson County, TN. Examples include bird banding of breeding migrants, monitoring terrestrial and aquatic amphibians and reptiles, including radio-telemetry of turtles, and using trained canines for determining population densities, age structure, and health status of the Eastern Box Turtle, the TN state reptile. Students share their project findings and conservation ideas at science fairs, professional meetings, in scientific journals, the CRESO website, and through outreach workshops including K-12 classrooms and community groups such as Oak Ridge Institute for Continued Learning (ORICL). The proposed activities would be conducted following all Tennessee Wildlife Resources Agency (TWRA) requirements, and results of the research data would be provided in annual reports to the TWRA.

This categorical exclusion would be for continuation of five environmental monitoring and research activities that would occur during CY 2012 for which CRESO would receive funding through a grant with DOE:

- (1) **Demography and Spatial Analysis of the Eastern Box Turtle at the University of Tennessee Resources Research and Education Center (UTFRC) with Special Emphasis on survivorship of individuals in Pre-Post Regeneration Units**—Canines would be used to locate box turtles in pre and post-timber harvest sites and radiotelemetry studies on approximately eight turtles each year. Objectives focus on research and conservation which would include (1) comparisons of population density, age structure, microhabitat, health status, and dispersal patterns among box turtles in selected habitats; 2) population dynamics of box turtles in pre/post regeneration harvest sites and other potentially impacted areas; 3) radiotelemetry for detecting movement patterns of box turtles in pre and post timber harvest sites; and 4) curriculum development and community outreach involving K-12 and the general public.
- (2) **Using PITTS to Study the Snake Assemblage at the UTFRC**—Captured snakes > 8 cm snout-vent length (SVL) would be tagged with Destron identity tags (11.5 mm x 2.5 mm or about the size of a grain of rice). Mark-recapture (m-r-r is a standard procedure for estimating population size by recapturing marked or tagged individuals over time) provides information on snake assemblage, growth rates, predation, landscape use, and long-term changes in assemblage demographics. Coverboards along with opportunistic captures are the primary technique for capturing snakes. Under TWRA requirements, no snake is housed longer than 24 hours. Most are released within 15 minutes of capture. All snakes are released at their original capture site.
- (3) **Aquatic Turtle Monitoring at Solway Bend in Oak Ridge, TN**—Students and staff with the Clinch River Environmental Studies Organization (CRESO) would continue (this activity has been ongoing since 2007) to conduct inventory and monitoring studies at the Solway Bend site. The monitoring (using hoop nets) would focus on aquatic turtles. The two adjacent pond habitats at Solway Bend would provide valuable layers of opportunity for young researchers (middle school through college) to develop the skills needed to conduct detailed field studies. Much effort has been put into collecting consistent metrics on the assemblage of aquatic turtles (5 species) at Solway Bend. CRESO students and partners would continue to monitor the aquatic turtle to benefit both young researchers and the populations they study, and such studies require well-protected field sites.
- (4) **Monitoring Avian Productivity and Survival (MAPS)**—The MAPS program comprises a continent-wide network of hundreds of constant-effort mist netting stations (CRESO is one of those stations). Analyses of the resulting banding data would provide critical information relating to the ecology, conservation, and management of North American landbird populations and the factors responsible for changes in their populations. The program is overseen by The Institute for Bird Populations and requires adherence to strict protocols.
- (5) **Wetland Inventory and Monitoring of Semi-permanent Schoolyard Wetlands**—This activity would be for CRESO and its partners to continue study of schoolyard wetlands in Anderson County which are used primarily by elementary students to study wetland functions and biodiversity. CRESO researchers would monitor these wetlands over the summer months. Metrics include water quality, macroinvertebrate diversity/density (funnel traps, leaf-litter bags, and sweep netting are the primary capture techniques), quantitative visual surveys of amphibian egg masses, and quantitative Anuran call surveys. An effort is also made to quantify opportunistic discoveries such as number of breeding pairs of anurans (in amplexus) at a given time and wetland location (phenology data).

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Categorical Exclusion(s) Applied:

B3.3 - Research related to conservation of fish, wildlife, and cultural resources

Choose an item.

Choose an item.

Choose an item.

Choose an item.

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For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

**Program Point of Contact:** Susan Borthwick

**Date Determined:** 3/2/2012

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

**NEPA Compliance Officer:** Gary S. Hartman

**Date Determined:** 3/5/2012