

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Washington State University

STATE: WA

PROJECT TITLE : Yardsticking the impact of biochar formulations on soil carbon durability and agronomic performance in hemp-based crop rotation systems

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002910	DE-EE0011055	GFO-0011055-001	GO11055

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Washington State University (WSU) to increase durable soil carbon and crop yields while simultaneously decreasing overall carbon intensity and maintaining crop quality in hemp-based crop rotation systems. The award aims to achieve this using various biochar-based and compost-based treatments in laboratory grow experiments followed by fields trials at existing agricultural fields.

This NEPA Determination (ND) only applies to Budget Period (BP) 1 and BP2 Tasks 2.1.1, 2.1.2, 2.2, 2.3.1, 2.3.2, 2.3.3, 2.4, 2.5.1, 2.5.2, and 2.5.3. This ND does not apply to BP2 Tasks 2.1.3, 2.1.4, 2.1.5, 2.6 – 2.14 as well as BP3, BP4, and BP5 activities. DOE will complete the NEPA review for these BPs and tasks when/if it is determined that award activities warrant U.S. Fish and Wildlife consultation to satisfy Section 7 of the Endangered Species Act.

WSU's Pullman campus (Pullman, WA) would utilize dedicated laboratory space and existing plant growth chamber facilities to calibrate and verify the Laser Gas Analyzer, produce pilot-scale biochar-based soil amendments, and perform growth chamber experiments. WSU Puyallup Research and Extension Center in Puyallup, WA would produce compost-based soil amendments in dedicated laboratory space. Biochar and biochar enhanced fertilizer would be produced in existing production facilities at Oregon Biochar Solutions (White City, OR) and Renovo Sustainable Products (Cookeville, TN), respectively. Lastly, Yard Stick PBC (Oakland, CA) would be responsible for design and fabrication of the Yard Stick Spectral Probe. All facilities are preexisting purpose-built facilities for the type of work to be conducted for this award. Facility modifications would not be required.

Award activities would involve typical hazards associated with laboratory and production operations, including handling and use of hazardous materials, operation of potentially hazardous equipment and vehicles, and site-specific environmental hazards. Existing health, safety, and environmental policies and procedures would be followed to mitigate hazards to acceptable levels. Mitigated hazards would pose negligible risks to the public and environment. All activities would comply with existing federal, state, and local laws and regulations.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Budget Period (BP) 1, BP2 Tasks 2.1.1, 2.1.2, 2.2, 2.3.1, 2.3.2, 2.3.3, 2.4, 2.5.1, 2.5.2, and 2.5.3

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

BP2 Tasks 2.1.3, 2.1.4, 2.1.5, 2.6 – 2.14, BP3, BP4, and BP5

Notes:

Bioenergy Technologies Office (BETO)
NEPA review completed by Corrin MacLuckie, 05/30/2024.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) 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 proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action 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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Electronically Signed By: Matthew Blevins Date: 5/30/2024
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager