

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

Notice of Funding Opportunity Number
DE-FOA-0002910

Procurement Instrument Number
DE-EE0011055

NEPA Control Number
GFO-0011055-002

CID Number
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.

B5.1 Actions to conserve energy or water

(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 changeout); 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.

(b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not:

1.

Have the potential to cause a significant change in manufacturing infrastructure (such as construction of new

manufacturing plants with considerable associated ground disturbance);

2. involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials);
3. have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or
4. have the potential to cause a significant increase in energy consumption in a state or region.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal 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 growth experiments followed by field trials at existing agricultural fields

A previous NEPA Determination (ND) was completed for 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 project activities (GFO-0011055-001; CX A9, B3.6; 05/30/24). This ND applies to all remaining tasks: BP2 Tasks 2.1.3, 2.1.4, 2.1.5, 2.6 – 2.14 as well as BP3, BP4, and BP5 activities.

WSU's Pullman campus (Pullman, WA) would utilize dedicated laboratory space and equipment, and existing plant growth chamber facilities conduct crop yield and quality analyses, produce pilot-scale biochar-based soil amendments, and perform growth chamber experiments. Equipment testing and soil amendment deployment would occur in a total of four agricultural fields at the following three locations in the State of Washington over a six-year period.

1. Yakama Nation Farm (YNF) (Wapato, WA) - The YNF is located west of Toppenish, WA, south of Harrah, WA near 46°23'35"N, 120°31'57"W. Activities at the YNF location would include growth of various crops over the duration of the project and collection field-based data using portable field deployable weather station and manual devices.

2. Colville Reservation Natural Resources Farm (CRNRF) (Keller, WA) - The CRNRF location consists of two fields located south of Keller, WA near 47°54'41"N 118°44'28"W. Planned project activities at CRNRF include the growth of various crops over the duration of the project and the collection of field-based data.

3. Smith Farm (Tekoa, WA) - The Smith Farm is located southwest of Tekoa, WA near 47°11'00"N 117°04'17"W. Planned project activities at Smith Farm include the growth of various crops over the duration of the project and the collection of field-based data.

Award activities would involve the use and handling of various hazardous materials, including industrial solvents, fertilizers/soil amendments, herbicides, fungicides, and insecticides. Existing health, safety, environmental policies and procedures, and the use of personal protective equipment would be followed to mitigate hazards to acceptable levels. Additionally, herbicide, pesticide, fungicide application would be conducted using recommended rates, application methods, and equipment, and following product labeling. Mitigated hazards would pose negligible risks to the public and environment. All activities would comply with existing federal, state, and local laws and regulations.

The YNF and CRNRF are both tribally owned entities. Representatives from both Yakama Nation Farms and the Coleville Reservation Conservation District corresponded with DOE confirming tribal notification and project support. 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 aside from coordination that has already been mentioned.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

EERE is aware of the November 12, 2024, decision in *Marin Audubon Society v. FAA*, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, EERE has nonetheless elected to follow those regulations at 40 C.F.R. Parts 1500-1508, in addition to DOE's procedures/regulations implementing NEPA at 10 C.F.R. Part 1021, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Bioenergy Technologies Office (BETO)
NEPA review completed by James Cherry, 03/31/2025.

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.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Electronically Signed By: Andrew Montano Date: 3/31/2025
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