PMC-EF2a
(20402)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: South Dakota State Unversity **STATE:** SD

PROJECT TITLE : Improving production, resilience, and biodiversity of perennial grass mixtures and monocultures as biofuel feedstocks across environmentally heterogeneous landscapes

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
CDP	G088073	GFO-GO88073-031	0

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

CX, EA, EIS APPENDIX AND NUMBER:
Description:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

B3.8 Outdoor ecological and other environmental research (including siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis) in a small area (generally less than five acres) that would not result in any permanent change to the ecosystem.

Rational for determination:

The DOE proposes to fund South Dakota State University (SDSU) to conduct biofuel feedstock productivity research using switchgrass to establish whether monoculture is more productive than polyculture in varying edaphic conditions. This research would be conducted on the 650 acre, SDSU-leased Prairie Farm located at 46786 232nd Street, Colman, SD 570017. The project has three objectives:

• Compare biomass production of different warm season grass plantings.

• Compare biomass production of switchgrass monoculture versus diverse species polyculture.
o Also measure ecosystem goods and services across environmental gradients.

• Conduct co-existence studies combining switchgrass in various combinations with other species.

The field site would be located in an agricultural landscape two miles north of the town of Coleman, and due north of Highway 232 between County Highway O on the west and County Highway M on the east. The property would include a farm house and a cluster of several outbuildings. The majority of the property comprises a mosaic of cultivated grains and soybeans, and pothole wetlands on an undulating surface with approximately 30 feet of relief per mile. Surface water drains south from the site into Bachelor Creek.

The following issues were considered:

•No genetically modified organisms would be utilized for this research.

•Prime farmland would not be converted to other uses as a result of this research .

•Cultural Resources would not be affected because the study area has been heavily disturbed by agricultural cultivation; therefore SHPO consultation is not required.

•Pesticide applications would be conducted by trained, licensed commercial vendors. SDSU safety and chemical disposal policies would be followed. Hazardous waste would not be generated as a result of this project.

•Wetlands. Although wetlands are present on the research property, no wetlands would be affected by this research. Waterfowl Production Area (WPA) acreage is adjacent to the property that would be used for this research, but the proposed project would have no effect on these conservation areas. In addition, FEMA flood insurance rate map

#480235 (Panel 0175C) shows no streams with designated floodplains on the property.

•Endangered Species. The endangered Topeka shiner (Notropis topeka) inhabits perennial streams in southeastern South Dakota, including Moody County where the subject project would be located. However, this species is not known to occur where the SDSU cropland for this project would be located; thus no potential for impact would exist.

This project involves small-scale conservation and renewable energy research of perennial grasses produced for biofuel feedstock; as well as outdoor ecological research to determine ecosystem functions of a variety of biofuel feedstock stands. As such the B5.1 and B3.8 CXs apply.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

John A. DuWaldt 10-13-2011

DOE Funding: $647,395
Cost Share:$149,138
Total Funding: $796,533

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 10/17/11
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

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

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