



**Environmental Review Form for Argonne
National Laboratory**

Form:	ANL-985
Version:	5
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Created By:	Sedivy, Colleen Renee

Creator

Badge:	271137	Name:	Sedivy, Colleen Renee
Cost Center:	167	Division:	EVS
Job Title:	Bioenergy and Ecosystem Services Specialist	Employee Type:	Regular Full-Time Exempt
Building:	240	Lab Extension:	2-8893

General Information

Project/Activity Title: Generic CX - Scaling Up Decarbonization and Sustainability
ASO NEPA Tracking No.: Type of Funding: DOE/EERE/BETO
B & R Code: Identifying Number: ASO-CX-281r
SPP Proposal Number: CRADA Proposal Number:
Work Project Number: ANL Accounting Number: 22598/PRJ1010933 (Item 3a in Field Work Proposal)
Other (explain):
List appropriate NEPA Owners:
Division: EVS NEPA Owner:

Financial Plans

To select a Financial Plan, click the magnifying glass icon to open a search window.
Cost Center: Project: Phase: Task:

Description of Proposed Action

This is a NEPA renewal for an existing project (ASO-CX-281r). New field sites have been added. The objectives of this project are to investigate, design and scale-up the assessment of the benefits of bioenergy buffers to provide a comprehensive understanding of the adoption of perennial bioenergy crops to help support the bioeconomy. This offsite field work monitors pre-existing agricultural fields planted with perennial bioenergy crops. Field activities would include walking the site to observe and collect samples and data such as vegetation, soil, water, greenhouse gases and weather parameters. Argonne staff would supervise contract or non-Argonne workers to collect soil samples, manage crops via planting, maintenance, and or harvest, and end-of-project plant removal. All work would be confined to field locations as identified by the project and aligned with this NEPA approval. All work would be done with the permission of the landowners and operators. Contacting the national 811 Dig is required prior to digging to any depth and any work will be permitted only in areas that have been cleared for underground utilities. Soil core borings and willow stump removal would be conducted using excavation techniques and would disturb the soil in areas necessary to complete the tasks.

Description of Affected Environment

The field project would be conducted at an existing farm field in Illinois, Iowa, as well as other locations in the United States for characterization or monitoring on behalf of the DOE. Field sites activities would typically be conducted at sites including but not limited to agricultural sites, existing natural areas, remediation sites and sites identified as primary areas to conduct environmental sciences research. A map of the field sites and crop production areas as applicable would be available for reference as part of the supporting documentation for any existing project work locations or new locations as identified. At the close of project work that involve ground disturbance, areas would be restored to their prior condition or otherwise as directed by the landowner. The project activities would not adversely impact wetlands, floodplains, streams, archaeology sites, historic structures, or parts thereof. All planned activities would be verified to fall within the assigned CX or another appropriate environmental evaluation document. Any actions planned that do not meet the project parameters or fall within the scope described shall require additional NEPA review.

Potential Environmental Effects

- Attach explanation for each "yes" response near bottom of form.
- See Instructions for Completing Environmental Review Form.

Section A (Complete For All Projects)		Yes	No	Explanation
1.	Project evaluated for Pollution Prevention and Waste Minimization opportunities and details provided under items 2, 4, 6, 7, 8, 16, and 20 below, as applicable	<input checked="" type="radio"/>	<input type="radio"/>	Any chemicals used in the field are normal to the site and a routine process for the maintenance of the land. Waste produced would be recycled as biofuel or reincorporated into the land for ground nourishment. Additional information is held within the applicable questions below.
2.	Air Pollutant Emissions	<input type="radio"/>	<input checked="" type="radio"/>	
3.	Noise	<input type="radio"/>	<input checked="" type="radio"/>	
4.	Chemical/Oil Storage/Use	<input checked="" type="radio"/>	<input type="radio"/>	Chemical use may involve commonly used fertilizers. Fertilizers would be applied by the farming operator as normal management of the crops. Applications would follow usual farming practices.
5.	Pesticide Use	<input checked="" type="radio"/>	<input type="radio"/>	Pesticides/herbicides would be applied by the farming operator as normal management of the crops.
6.	Toxic Substances Control Act (TSCA) Substances			
6a.	Polychlorinated Biphenyls (PCBs)	<input type="radio"/>	<input checked="" type="radio"/>	
6b.	Asbestos or Asbestos Containing Materials	<input type="radio"/>	<input checked="" type="radio"/>	
6c.	Other TSCA Regulated Substances	<input type="radio"/>	<input checked="" type="radio"/>	
6d.	Import or Export of Chemical Substances	<input type="radio"/>	<input checked="" type="radio"/>	
7.	Biohazards	<input type="radio"/>	<input checked="" type="radio"/>	
8.	Effluent/Wastewater (If yes, see question #12 and contact Peter Lynch (HSE) at 2-4582 or lynch@anl.gov)	<input type="radio"/>	<input checked="" type="radio"/>	
9.	Waste Management			
9a.	Construction or Demolition Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9b.	Hazardous Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9c.	Radioactive Mixed Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9d.	Radioactive Waste	<input type="radio"/>	<input checked="" type="radio"/>	

	9e.	Asbestos Waste	<input type="radio"/>	<input checked="" type="radio"/>	
	9f.	Biological Waste	<input checked="" type="radio"/>	<input type="radio"/>	If the bioenergy crop root or stump material cannot be easily cut and reincorporated back into the soil during willow removal, then the woody material may need to be removed from the field site in order to return the land back to its original conditions. Material removed would be non-hazardous.
	9g.	No Path to Disposal Waste	<input type="radio"/>	<input checked="" type="radio"/>	
	9h.	Nano-material Waste	<input type="radio"/>	<input checked="" type="radio"/>	
10.		Radiation	<input type="radio"/>	<input checked="" type="radio"/>	
11.		Threatened Violation of ES&H Regulations or Permit Requirement	<input type="radio"/>	<input checked="" type="radio"/>	
12.		New or Modified Federal or State Permits	<input type="radio"/>	<input checked="" type="radio"/>	
13.		Siting, Construction, or Major Modification of Facility to Recover, Treat, Store, or Dispose of Waste	<input type="radio"/>	<input checked="" type="radio"/>	
14.		Public Controversy	<input type="radio"/>	<input checked="" type="radio"/>	
15.		Historic Structures and Objects	<input type="radio"/>	<input checked="" type="radio"/>	No field work would commence until the consultation process with the IA SHPO has been resolved to their satisfaction.
16.		Disturbance of Pre-existing Contamination	<input type="radio"/>	<input checked="" type="radio"/>	
17.		Energy Efficiency, Resource Conserving, and Sustainable Design Features	<input checked="" type="radio"/>	<input type="radio"/>	The goal of this project is to promote the adoption of perennial bioenergy crops to support the bioeconomy while providing carbon sequestration and other ecosystem services (ES). Field studies will use best management practices as applicable.
Section B (For Projects that Occur Outdoors)			Yes	No	
18.		Threatened or Endangered Species, Critical Habitats, and/or other Protected Species	<input type="radio"/>	<input type="radio"/>	
19.		Wetlands	<input type="radio"/>	<input type="radio"/>	
20.		Floodplain	<input checked="" type="radio"/>	<input type="radio"/>	The Fairbury, IL Site: Part of the site is in a 100-year floodplain, according to the Livingston County Soil and Water Conservation District (SWCD), and purposefully so as the goal of this work is to determine the suitability of this type of land to support biofuel production. The Livingston County SWCD is a partner on this project. We are determining the environmental benefits of new management practices compared to current corn production methods. The project would not impact the floodplain more negatively than what is currently ongoing with traditional agricultural crops. The extent of the floodplain within field boundaries are included as an attachment. Any additional site locations identified within floodplain areas would not conduct project work that would adversely impact the location.
21.		Landscaping	<input type="radio"/>	<input checked="" type="radio"/>	
22.		Navigable Air Space	<input type="radio"/>	<input checked="" type="radio"/>	
					The Fairbury, IL site: Excavation is needed for willow root sampling. Excavation areas are small, short-term, and once root processing is complete, soil is returned with minimized

23.	Clearing or Excavation	<input checked="" type="radio"/>	<input type="radio"/>	disturbance to surrounding soil. At the end of the project, to return the land back to its original condition, the biofuel buffers would need to be removed. The non-hazardous aboveground material would be harvested and transported off-site as part of a study objective for use in producing bioenergy or a bio-product. The remaining stumps and surface roots would need to be ground and either reincorporated back into the soil, composted off-site, or used for other purposes. We expect this disturbance would be less than or equal to the disturbance traditionally caused by tillage under traditional row crop production management practices. Any additional site locations that involve excavation would follow the documented scope around ground disturbances.
24.	Archaeological Resources	<input type="radio"/>	<input checked="" type="radio"/>	No field work would commence until the consultation process with the IA SHPO has been resolved to their satisfaction.
25.	Underground Injection	<input type="radio"/>	<input checked="" type="radio"/>	
26.	Underground Storage Tanks	<input type="radio"/>	<input checked="" type="radio"/>	
27.	Public Utilities or Services	<input type="radio"/>	<input checked="" type="radio"/>	
28.	Depletion of a Non-Renewable Resource	<input type="radio"/>	<input checked="" type="radio"/>	
Section C (For Projects Outside of ANL)		Yes	No	
29.	Prime, Unique, or Locally Important Farmland	<input checked="" type="radio"/>	<input type="radio"/>	Fairbury IL, Site: According to the Livingston County SWCD, this land is prime farmland, however none of the proposed activities affect this land use and definition, rather this will help find ways to better protect it and test the benefits of alternative crops that are proposed as biofuel crops. Activities are not expected to adversely impact soil quality and the land will be returned its original state. Any site locations with this designation or other comparable designations would not be adversely impacted as a result of project field work and would be returned to its original state at project completion or otherwise as directed by the landowner.
30.	Special Sources of Groundwater (such as sole source aquifer)	<input type="radio"/>	<input checked="" type="radio"/>	
31.	Coastal Zones	<input type="radio"/>	<input checked="" type="radio"/>	
32.	Areas with Special National Designations (such as National Forests, Parks, or Trails)	<input type="radio"/>	<input checked="" type="radio"/>	
33.	Action of a State Agency in a State with NEPA-type Law	<input type="radio"/>	<input checked="" type="radio"/>	
34.	Class I Air Quality Control Region	<input type="radio"/>	<input checked="" type="radio"/>	

Categorical Exclusion

Other (Use field below to enter other categorical exclusion)

10 CFR 1021, Subpart D, Appendix B 3.8 Outdoor ecological/environmental research in small areas

ANL NEPA Reviewer Use Only

My approval is the final approval necessary

This form requires additional approval from DOE

To be Completed by DOE/ASO

Section D		Yes	No
Are there any extraordinary circumstances related to the proposal that may affect the significance of			

the environmental effects of the proposal?	<input type="radio"/>	<input checked="" type="radio"/>
Is the project connected to other actions with potentially significant impacts or related to other proposed action with cumulatively significant impacts?	<input type="radio"/>	<input checked="" type="radio"/>
If yes, is a categorical exclusion determination precluded by 40 CFR 1506.1 or 10 CFR 1021.211?	<input type="radio"/>	<input type="radio"/>
Can the project or activity be categorically excluded from preparation of an Environment Assessment or Environmental Impact Statement under Subpart D of the DOE NEPA Regulations?	<input checked="" type="radio"/>	<input type="radio"/>
If yes, indicate the class or classes of action from Appendix A or B of Subpart D under which the project may be excluded: This project may be excluded under the following classes of action from Appendix B: B 3.1 Site characterization and environmental monitoring, and B 3.8 Outdoor terrestrial ecological and environmental research.		
If no, indicate the NEPA recommendation and class(es) of action from Appendix C or D to Subpart D to Part 1021 of 10 CFR.		

Attachments

File Description: Maps [View Attachment](#)

File Description: Previous NEPA for 281r [View Attachment](#)

Comments

On 2/27/2024, discussed action with Andrew Montano, a NEPA Compliance Officer with the Office of Energy Efficiency and Renewable Energy. He agreed to use this form for NEPA compliance. He also concurred that a CX determination was appropriate for this action.

Add Approver

Approver Name	Approver Badge	Reason	Delete
Harris, Shana E	311196	ESH Coordinator	
Quinn, John	37193	Project PI	

Notifications

The approval notification email will be copied to the people listed below.

Badge	Name	Division	Delete

ASO-CX Number

ASO-CX- 405

Comments:

This DOE NEPA CX approval is tracked as ASO-CX-405. Please include the figure showing the extent of the floodplain within field boundaries as an attachment (ERF Item 20) .

Approval

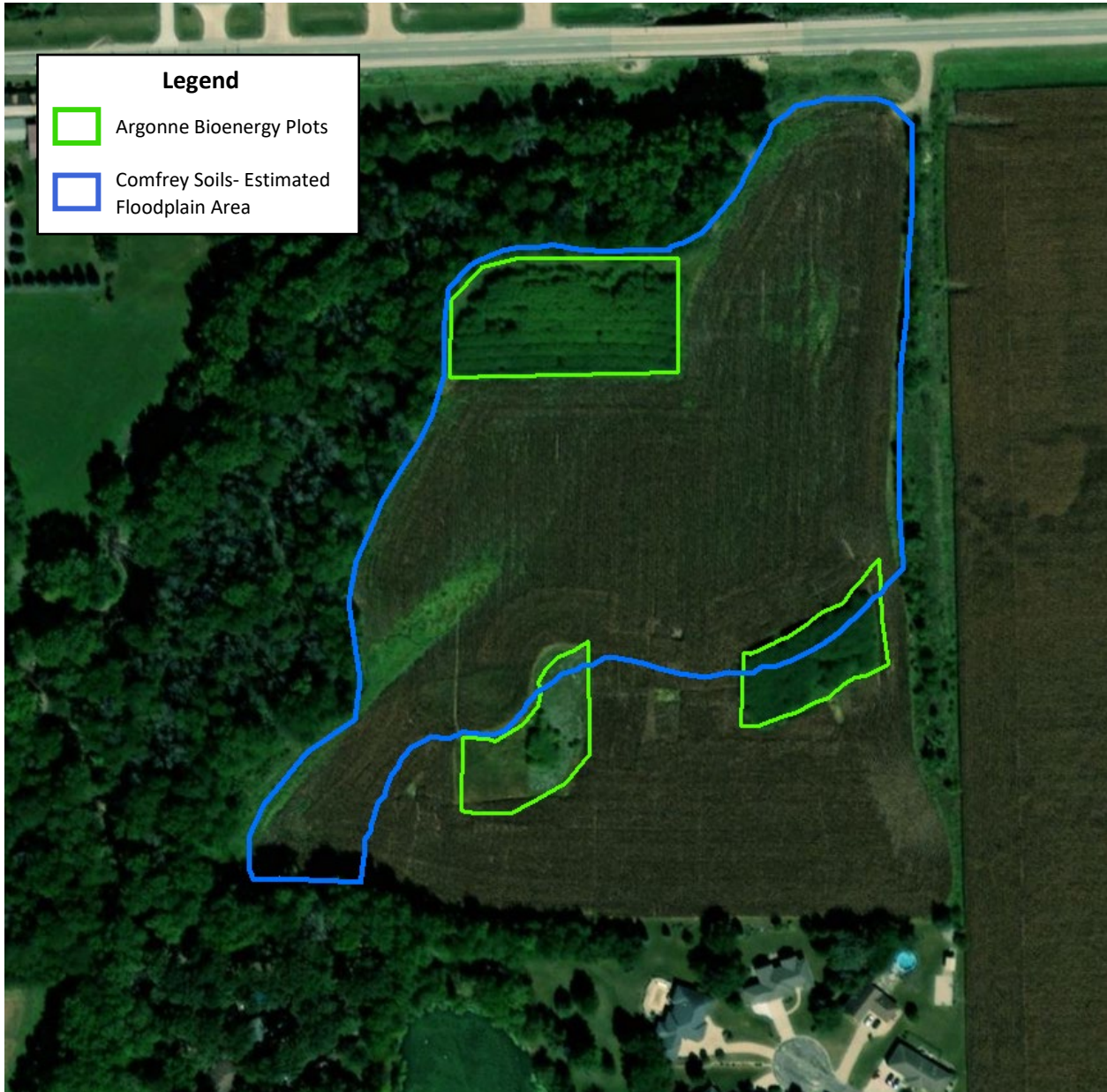
<u>Approver</u>	<u>Action</u>	<u>Date Routed</u>	<u>Action Date</u>	<u>Approval Reason / Comments</u>	<u>Approval Type</u>
Sedivy, Colleen Renee	APPROVED	2023-10-25	2023-10-25 10:43:56.0	Creator :	PRIMARY
Sedivy, Colleen Renee	APPROVED	2023-10-25	2023-10-25 10:43:56.0	Project Manager :	PRIMARY
Quinn, John	APPROVED	2023-10-25	2023-10-25 10:53:39.0	Project PI :	PRIMARY
Harris, Shana E	APPROVED	2023-10-25	2023-10-25 12:41:15.0	ESH Coordinator : Updated Title and added site map(s) and previously approved CX 281r.	PRIMARY
Wozny, Bryan M.	APPROVED	2023-10-25	2023-10-25	NEPA Owner Approval for Argonne	PRIMARY

Andersen, Karyn Elizabeth Schoch for Ptak, Jill S.	APPROVED	2023-10-25	17:14:08.0 2023-10-26 17:02:38.0	Environmental Review : ANL NEPA Reviewer :	DELEGATE
Dunn, Michael W. for Hellman, Karen Sue	APPROVED	2023-10-26	2023-10-30 17:41:52.0	ANL-985 Review and Approval :	DELEGATE
Dunn, Michael W.	APPROVED	2023-10-30	2023-11-07 07:13:09.0	ANL-985 ANL Deputy COO Review and Approval :	PRIMARY
Joshi, Kaushik N.	APPROVED	2023-11-07	2024-01-17 15:08:32.0	ANL-985 DOE-ASO Review and Approval : This DOE NEPA CX approval is tracked as ASO-CX-405.	PRIMARY
Siebach, Peter Rudolf	APPROVED	2024-01-17	2024-02-27 15:33:10.0	ANL-985 DOE NEPA Compliance Officer Review and Approval : Discussed action with Andrew Montano, and NCO with the Office of Energy Efficiency and Renewable Energy. He agreed to use the Argonne/Argonne Site Office ERF NEPA compliance process and concurred on the action/determination. Incorrectly assigned tracking number ASO- CX-404 edited for accuracy to: ASO-CX-405	PRIMARY

Attachment 1: Field Layouts

Location: Field Site in Fairbury, IL

Map shows the 15-acre field site with the existing Argonne bioenergy crop plots outlined in green and the estimated floodplain of the Indian Creek outlined in blue (only showing the floodplain within the boundary of the 15-acre field). The floodplain is estimated to be about 65% of the field and the plots managed by Argonne staff within the floodplain is about 13% or less of the field.



Location: Iowa Farm - Bill Belden's Field

Map shows the field location in Iowa (6123 270 PI, Moravia, IA 52571), located in Monroe County. The boundaries represent the three separate fields of interest for ecosystem service monitoring.



The field area is not listed in a flood zone based on the maps provided by the Iowa flood center

