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MAY 2024

Indiana Conservation Reserve Enhancement Program Programmatic Environmental Assessment

Prepared for Indiana State Department of Agriculture
on behalf of U.S. Department of Agriculture Farm Service Agency

CONTRACT NUMBER: 0081100

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Proposed Action: The United States Department of Agriculture (USDA), Commodity Credit Corporation (CCC) and the State of Indiana propose to expand the existing Indiana Conservation Reserve Enhancement Program (CREP) to a targeted maximum enrollment of 100,000 acres in 38 watersheds in all or portions of 92 counties throughout the state of Indiana. USDA is provided the statutory authority by the provisions of the Food Security Act of 1985, as amended (16 United States Code § 3830 et seq.), and the Regulations at 7 Code of Federal Regulations (CFR) Part 1410. In accordance with the 1985 Act and the Agricultural Improvement Act of 2018 (Public Law [PL] 115-334; the 2018 Farm Bill), USDA/CCC is authorized to enroll lands. CREP is a voluntary land conservation program for agricultural producers.

Type of Document: Draft Programmatic Environmental Assessment (PEA)

Lead Agency: USDA Farm Service Agency (FSA) on behalf of CCC

Sponsoring Agency: Indiana State Department of Agriculture (ISDA)

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Comments: This PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) (PL 91-190); Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500-1508); and Farm Service Agency NEPA regulations (7 CFR Part 799).

The Draft PEA is being made available for a 30-day public review and comment period from May 28, 2024 to June 27, 2024. The Draft PEA is available online for review and download on FSA's website at https://www.fsa.usda.gov/state-offices/Indiana/index and ISDA's website at https://www.in.gov/isda/divisions/soil-conservation/conservation-reserve-enhancement-program/. Public and agency comments on the Draft PEA will be considered in the Final PEA.

Written comments on the Draft PEA should be sent to:

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BMP	best management practice
CAP	criteria air pollutant
CCC	Commodity Credit Corporation
CEC	Commission for Environmental Cooperation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CP	Conservation Practice
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CWA	Clean Water Act
DHPA	Division of Historic Preservation and Archaeology
EE	environmental evaluation
E.O.	Executive order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FSA	Farm Service Agency
GHG	greenhouse gas
gpm	gallons per minute
HUD	U.S. Department of Housing and Urban Development
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
ISDA	Indiana State Department of Agriculture
IWF	Indiana Wildlife Federation
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASS	National Agricultural Statistic Service
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act

NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PCB	polychlorinated biphenyl
PEA	Programmatic Environmental Assessment
PM	particulate matter
PM_{10}	particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$	particulate matter equal to or less than 2.5 microns in diameter
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
TMDL	Total Maximum Daily Load
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

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1 Purpose and Need

1.1 Introduction

The U.S. Department of Agriculture (USDA) Commodity Credit Corporation (CCC), in coordination with the Indiana State Department of Agriculture (ISDA), has prepared this Programmatic Environmental Assessment (PEA) to analyze the potential environmental impacts from the Proposed Action to expand the existing Indiana Conservation Reserve Enhancement Program (CREP) to a targeted enrollment of up to 100,000 acres in 38 watersheds in all or portions of 92 counties throughout the state of Indiana. The Proposed Action would also add USDA Farm Service Agency (FSA) *Conservation Practice (CP)* 9, *Shallow Water Areas for Wildlife*, to the inventory of eight CPs currently available to eligible landowners under the existing Indiana CREP. The expanded CREP, if implemented, would continue to be administered by the FSA.

1.2 Background

On behalf of the CCC, the USDA FSA administers the Conservation Reserve Program (CRP), the federal government's largest private land environmental improvement program. CRP is a voluntary program that supports the implementation of long-term conservation measures designed to improve the quality of ground and surface waters, control soil erosion, and enhance wildlife habitat on environmentally sensitive agricultural land. As of December 2023, 184,831 acres on 16,058 farms in Indiana were enrolled in CRP (USDA FSA, 2023). Of these 184,831 acres, 22,221 are enrolled in the existing CREP.

CREP was established in 1997 under the authority of the CRP to address agriculture-related environmental issues by establishing CPs on agricultural lands using funding from federal, state, and tribal governments as well as non-government sources. CREP addresses State-designated high priority conservation issues in defined geographic areas such as watersheds. Producers who voluntarily enroll their eligible lands in CREP receive financial and technical assistance for establishing CPs on their land. In addition, property owners receive annual rental payments based on the enrolled acreage. Once eligible lands are identified, site-specific environmental reviews, including agency consultations and acquisition of applicable permits, are conducted in accordance with FSA Handbook, *Environmental Quality Programs for State and County Offices, 1-EQ Revision 3* (USDA FSA, 2016).

The Indiana CREP was initially established in 2004 with a targeted enrollment of up to 7,000 acres in three watersheds (Highland-Pigeon, Tippecanoe, and Upper White River) in all or portions of 28 counties. In 2009, the program was expanded to a targeted enrollment of up to 26,250 acres within eight additional watersheds (Upper Wabash, Middle Wabash-Deer, Middle Wabash-Little Vermillion, Middle Wabash-Busseron, Lower Wabash, Lower White, Lower East Fork White, and Upper East Fork White) in all or portions of 65 counties. The geographic extent of the current Indiana CREP is shown on **Figure 1-1**. The initial establishment of the Indiana CREP in 2004 and the 2009 expansion were previously evaluated in accordance with the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 United States Code [U.S.C.] § 4321 et seq.) and determined to have no significant environmental impacts (USDA FSA, 2004; USDA FSA, 2009). NEPA requirements are further discussed in **Section 1.3**.

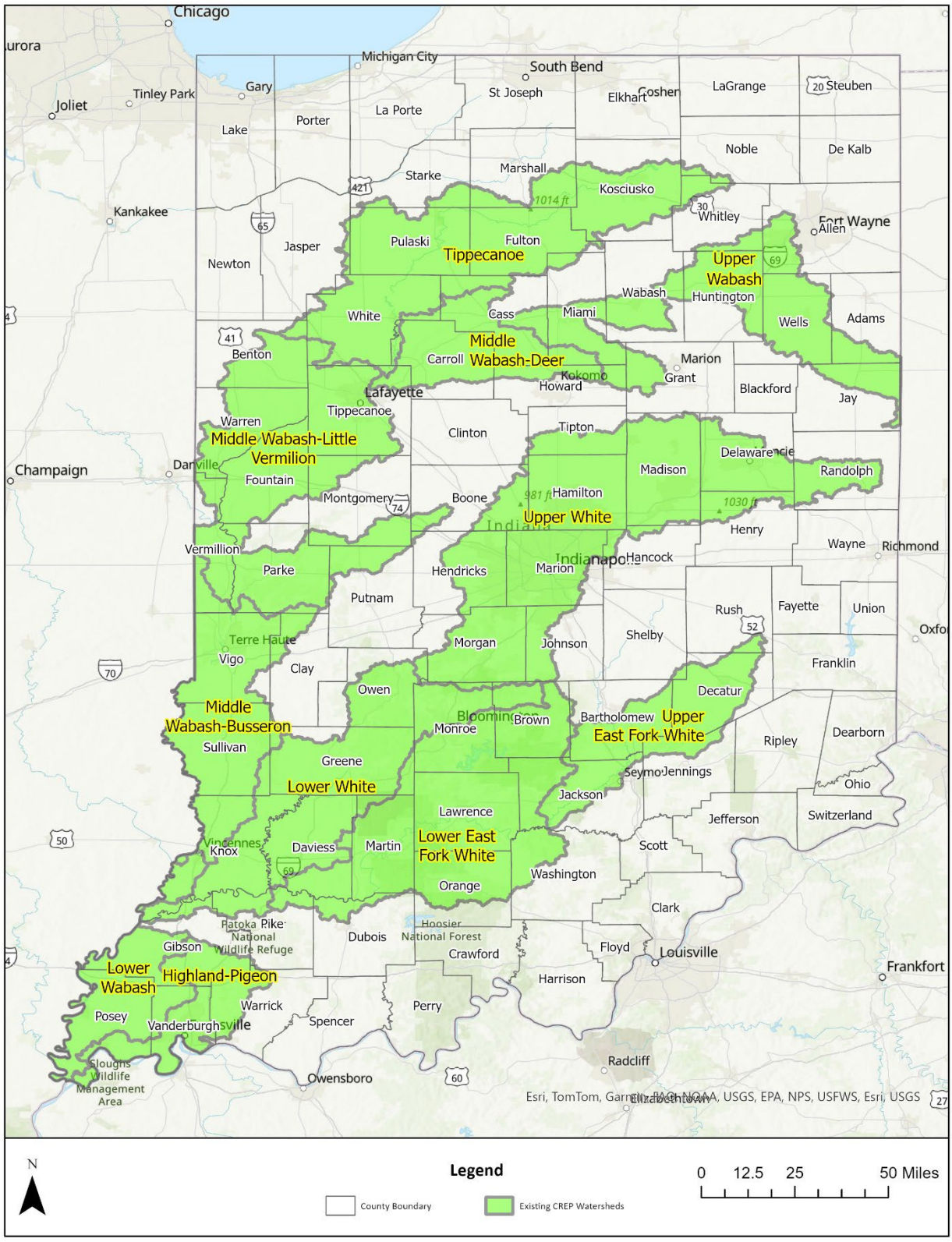

Figure 1-1 Watersheds and Counties in the Current Indiana Conservation Reserve Enhancement Program

Eight CPs are currently available under the Indiana CREP. These CPs are briefly described in **Table 1-1**.

Table 1-1 Summary of Conservation Practices Included in the Proposed Action

Conservation Practice	Description
CP-2, Establishment of Permanent Native Grasses	The purpose of this CP is to establish a permanent vegetative cover of native grasses. Planted areas may be used for both managed and emergency haying and grazing as authorized.
CP-3A, Hardwood Tree Planting	The purpose of this CP is to establish stands of predominately hardwood trees. Planting of certain softwood trees is acceptable to ensure survivability of hardwoods. This would enhance environmental benefits to less than the soil loss tolerance.
CP-4D, Permanent Wildlife Habitat, Noneasement	The purpose of this CP is to establish permanent wildlife habitat cover to enhance benefits for wildlife in the planted and surrounding areas. The development of a wildlife conservation plan is required for land enrolled in this CP.
CP-21, Grassed Filter Strips	The purpose of this CP is to remove nutrients, sediment, organic matter, pesticides and other pollutants from surface runoff and subsurface flow by deposition, absorption, plant uptake, denitrification and other processes. This would reduce pollution and protect surface and subsurface water quality.
CP-22, Riparian Buffer	The purpose of this CP is to remove nutrients, sediment, organic matter, pesticides and other pollutants from surface runoff and subsurface flow, create shade to lower water temperature to improve aquatic habitat, and provide a source of detritus and large woody debris for aquatic organisms and habitat for wildlife. This would reduce pollution and protect surface and subsurface water quality.
CP-23, Wetland Restoration, Floodplain	The purpose of this CP is to restore the functions and values of wetland ecosystems that have been devoted to agricultural use. The level of restoration of the wetland ecosystem is determined by the producer in consultation with NRCS or TSP.
CP-23A, Wetland Restoration, Non-Floodplain	The purpose of this CP is to restore the functions and values of wetland ecosystems that have been devoted to agricultural use. The level of restoration of the wetland ecosystem is determined by the producer in consultation with NRCS or TSP.
CP-31, Bottomland Timber Establishment on Wetlands	The purpose of this CP is to provide for the long-term viability of bottomland hardwood stands of trees that would control surface erosion, reduce water, air, and land pollution, restore the functions and values of wetlands, promote carbon sequestration, and restore and connect wildlife habitat that has been devoted to agricultural use

Notes:
Sources: USDA FSA, 2024
CP = Conservation Practice; NRCS = Natural Resources Conservation Service; TSP = technical service provider

CP2, CP3A, CP4D, CP21, and *CP22* must be installed on former cropland adjacent to an eligible stream, river, or water body and meet additional minimum and maximum buffer width requirements. *CP23, CP23A,* and *CP31* are not required to be adjacent to a stream, river or

waterbody; however, *CP 23* and *CP31* are required to be located in the 100-year floodplain (ISDA, 2024a).

Lands proposed for enrollment in the CREP are required to meet cropland and owner eligibility criteria in accordance with policy set forth in the Agricultural Improvement Act of 2018 (Public Law 115-334; the 2018 Farm Bill), and detailed in FSA Handbook, *Agricultural Resource Conservation Program 2-CRP Revision 6*. Additional requirements for each CP are summarized in **Appendix B.2**. A fact sheet summarizing elements of the current Indiana CREP is provided in **Appendix B.3**.

1.3 Regulatory Compliance

The Proposed Action considers expanding the current CREP agreement to an extent where a new CREP agreement will be developed. As required in FSA's NEPA Implementing Regulation (7 CFR § 799.41), new CREP agreements require the development of an environmental assessment. Therefore, this PEA has been prepared in accordance with NEPA; Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508); FSA NEPA regulations (7 CFR Part 799); and FSA Handbook, *1-EQ*. NEPA is intended to inform the public about the Proposed Action and provide opportunities for public involvement during the decision-making process. NEPA also helps agency officials consider environmental and socioeconomic factors when making decisions related to the Proposed Action.

The requirements of other laws, regulations, and Executive orders (E.O.'s) are also addressed during the NEPA process, including but not limited to the following:

- National Historic Preservation Act (NHPA)
- Endangered Species Act (ESA)
- Clean Water Act (CWA)
- E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations
- E.O. 11988, Floodplain Management
- E.O. 11990, Protection of Wetlands

1.4 Indiana Conservation Reserve Enhancement Program Goals and Objectives

The general goals of both the current Indiana CREP and Proposed Action are to provide farmers and ranchers in the state with the opportunity to voluntarily set aside agricultural land to restore riparian buffers, wetlands, and floodplain areas through financial aid and technical assistance; and increase the amount of wetland acreage in eligible watersheds for erosion control, sediment reduction, stormwater retention, nutrient uptake, and wildlife habitat. Under CREP, farmers and ranchers voluntarily enter into contracts with the federal government for 14 to 15 years, agreeing to remove enrolled lands from agricultural production and plant them to an approved CP, or restore both floodplain and non-floodplain wetlands.

The Proposed Action is intended to meet specific regional conservation goals and objectives related to agriculture. Specific objectives in Indiana include:

- Increase the acres of wetlands in the watersheds for erosion control, sediment reduction, stormwater retention, and nutrient uptake.
- Protect a minimum of 4,000 linear miles of watercourses through the installation of buffer practices.
- Enroll up to 100,000 acres of eligible cropland including frequently flooded agricultural lands and restorable wetlands.
- Reduce the amount of sediment and nutrients in agricultural runoff by 4,900 tons per year for sediment, 4,800 tons per year for phosphorus, and 9,400 tons per year for nitrogen.

1.5 Purpose and Need

The purpose of the Proposed Action is to expand the existing Indiana CREP to a statewide program. The Proposed Action is needed to:

- Improve water quality in streams, rivers, and other watercourses by reducing the amount of sediment, pesticides, and nutrients in agricultural runoff.
- Enhance wildlife habitat, including habitat for federally and state-listed threatened and endangered species.
- Reduce nonpoint source nutrient losses.

The Proposed Action would expand the existing Indiana CREP from 11 to 38 watersheds in all or portions of 92 counties in the state and protect an additional 1,000 linear miles of watercourses by reducing pollutants in agricultural runoff.

1.6 Public Involvement

In accordance with NEPA, FSA and ISDA are providing opportunities for the public and other stakeholders to review and comment on the Proposed Action analyzed in this PEA. The Draft PEA is available for a 30-day public review and comment period from May 28, 2024 to June 27, 2024. A Notice of Availability announcing the 30-day Draft PEA public comment period was published in the *Indianapolis Star* and *Times of Northwest Indiana*. Letters announcing the availability of the Draft PEA for review and requesting comments were sent to multiple federal, state, and local agencies and officials, organizations, and Native American tribes with ancestral ties to lands in Indiana. These agencies, officials, and tribes are listed in **Appendix A**.

An electronic version of the Draft PEA is available for review and download on FSA's website at https://www.fsa.usda.gov/state-offices/Indiana/index and ISDA's website at https://www.in.gov/isda/divisions/soil-conservation/conservation-reserve-enhancement-program/. Printed copies of the Draft PEA are available for review upon request at local county USDA Service Centers. Addresses, driving directions, and contact information for local USDA Service Centers in Indiana are available on USDA's website at https://offices.sc.egov.usda.gov/locator/app?state=in&agency=fsa.

In accordance with Section 7 of the ESA, FSA is consulting with the U.S. Fish and Wildlife Service (USFWS) regarding federally listed threatened, endangered, and candidate species and federally designated critical habitat that could potentially be affected by the Proposed Action. FSA is also consulting with the Indiana Department of Natural Resources (IDNR) Division of Historic

Preservation and Archaeology (DHPA) in accordance with Section 106 of the NHPA regarding the Proposed Action's potential effects on historic properties. Copies of correspondence relevant to the Proposed Action evaluated in this PEA are provided in **Appendix A**.

Comments on the Draft PEA will be addressed in the Final PEA, as applicable.

1.7 Scope and Organization of the Programmatic Environmental Assessment

This PEA analyzes the potential effects of the Proposed Action and No Action Alternatives on the following resources: biological resources, cultural resources, water resources, air quality, soils and topography, other protected resources, socioeconomics and recreation, and environmental justice. Resources dismissed from detailed analysis because the Proposed Action would have no potential to affect them are briefly described in **Section 3.2**.

Chapter 1 of this PEA provides background information on the Indiana CREP and presents the Purpose and Need for the Proposed Action. The Proposed Action and alternatives for implementing the Proposed Action, including the No Action Alternative, are described in **Chapter 2**. **Chapter 3** describes the affected environment (i.e., existing conditions) and potential effects from the Proposed Action on the environmental resources listed above. References consulted during the preparation of this PEA are listed in **Chapter 4**. Additional information relevant to the preparation of this PEA, including copies of correspondence with federal, state, and local agencies and Native American tribes, is provided in **Appendix A** through **Appendix E**.

2 Description of the Proposed Action and Alternatives

2.1 Proposed Action

2.1.1 Overview

The FSA and ISDA proposes to expand the Indiana CREP to a targeted enrollment of up to 100,000 acres in 38 watersheds in all or portions of 92 counties in the state of Indiana. The Proposed Action would also add *CP9, Shallow Water Areas for Wildlife* to the inventory of CPs currently available to eligible landowners under the existing Indiana CREP. The 11 watersheds and 8 CPs currently included in the Indiana CREP would continue to be included in the expanded program **(**see **Section 1.2** and **Table 1-1)**. Landowners participating in the CREP would receive support for the costs of installing and maintaining CPs, as well as annual rental payments for those specific lands enrolled in the program. Program participation would continue to be voluntary; therefore, the locations and sizes of specific parcels that would be enrolled under the expanded CREP are not currently known. Once specific parcels and proposed CPs are identified, local USDA Natural Resources Conservation Service (NRCS) conservation planners will conduct site-specific environmental evaluations (EEs) on behalf of FSA. FSA will review and approve these EEs and ensure compliance with FSA's NEPA implementing regulations (7 CFR Part 799) prior to implementing any new CREP contracts.

Primary components of the existing Indiana CREP and the Proposed Action are summarized in **Table 2-1**. Additional watersheds and counties that would be included in the expanded CREP under the Proposed Action are shown on **Figure 2-1**. A full list of watersheds and counties that are included in the existing Indiana CREP and those that would be added to the CREP under the Proposed Action is provided in **Appendix B.1**.

Table 2-1 Comparison of Existing Indiana CREP and Proposed Action

CREP Component	Existing Indiana CREP	Proposed Action
Targeted Maximum Land Area Enrollment	26,250 acres	100,000 acres
Protected Watercourses	3,000 linear miles	4,000 linear miles
Number of Watersheds	11	38
Number of Counties	65	92
Conservation Practices	*CP-2, Establishment of Permanent Native Grasses* *CP-3A, Hardwood Tree Planting* *CP-4D, Permanent Wildlife Habitat, Noneasement* *CP-21, Grassed Filter Strips* *CP-22, Riparian Buffer* *CP-23, Wetland Restoration – Floodplain*	All existing Conservation Practices with the addition of *CP9, Shallow Water Areas for Wildlife.*

Table 2-1 Comparison of Existing Indiana CREP and Proposed Action

CREP Component	Existing Indiana CREP	Proposed Action
Conservation Practices *(continued)*	*CP-23A, Wetland Restoration – Non-floodplain* *CP-31, Bottomland Timber Establishment on Wetlands*	
Contract Duration	14 to 15 years	No change
Cost Share	50% of reimbursable practice cost	No change

2.1.2 Land and Ownership Eligibility

Land and ownership eligibility requirements for the installation of CPs under the Proposed Action would generally be the same as they currently are under the existing Indiana CREP. All lands proposed for enrollment would be required to meet the cropland eligibility criteria in accordance with policy set forth by the 2018 Farm Bill and detailed in FSA Handbook, *1-EQ*. Eligible lands must be planted or considered planted at least 4 out of 6 years between 2012 and 2017; legally and physically capable of being planted to an agricultural commodity; and compliant with USDA's highly erodible land and wetland provisions. All landowners or operators must have owned or operated the land for at least 12 months prior to program sign-up; be in control of the land for the length of the contract; and meet USDA payment eligibility provisions. Persons who have acreage under an existing CRP contract or an approved offer with a contract pending are ineligible for CREP on that acreage until that contract expires.

The location, size, and number of tracts that would be enrolled in CREP would be determined by individual contracts following implementation of the Proposed Action and is not currently known. As FSA's technical partner for implementation of CREP, NRCS develops site-specific conservation plans based on National Conservation Practice Standards. NRCS coordinates between FSA and the agricultural producer or landowner by providing technical assistance at a local level for resource assessment, CP design, and resource monitoring. Once eligible lands are identified, site-specific EEs would be initiated by NRCS and provided to FSA for review and completion in accordance with FSA Handbook, *1-EQ,* prior to entering contracts.

2.1.3 Conservation Practices

The Proposed Action would add *CP9* to the inventory of CPs available to eligible Indiana landowners. The purpose of *CP9* is to restore shallow water areas with depths of 6 to 18 inches to provide water, food, and cover for wading birds, small mammals, and beneficial insects; reduce downstream flood damage; and improve water quality by intercepting sediment and nutrients. The following requirements are applicable to *CP9* (USDA FSA, 2024):

- A minimum of 6 inches, and a maximum of 18 inches average depth of water, will be maintained for a majority of the year.
- An upland buffer at least 20 feet wide, and up to 120 feet wide, is required to protect water quality and provide wildlife habitat.
- The total acreage of all *CP9* practices, including buffer areas, cannot exceed 10 acres per tract.

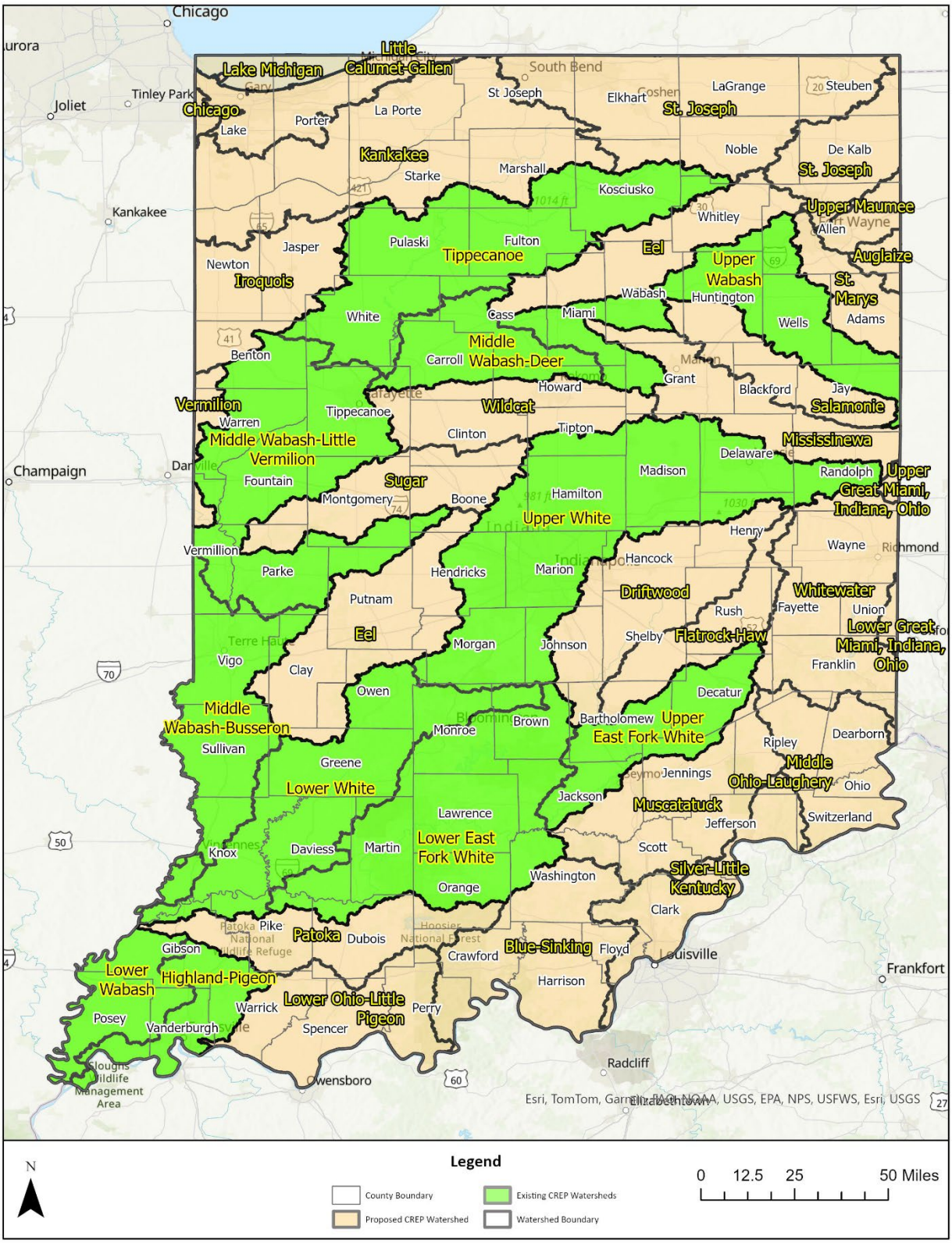

Figure 2-1 Indiana Watersheds Included in the Proposed Action

Additional requirements for *CP9* are summarized in **Appendix B.2**.

The eight CPs currently included in the existing Indiana CREP **(**see **Section 1.2** and **Table 1-1)** would continue to be available to eligible landowners under the Proposed Action. Generally, the installation and maintenance of CPs included in the Proposed Action could include some, all, or combinations of the following activities:

- Removal of existing vegetation and grading, leveling and filling for site preparation.
- Use of equipment to prepare seedbed including disk, harrow, cultipacker, roller or similar equipment.
- Application of nutrients, minerals, and seed, including shrubs and trees.
- Planting of temporary covers if necessary.
- Installation of tree shelters, netting, plastic tubes, fencing or other animal damage control devices.
- Seeding firebreaks, fuelbreaks, or firelanes.
- Construction of structures to regulate flow and restore hydrology.
- Pipelines and water facilities outside the riparian buffer.
- Application of approved herbicides and pesticides.
- Temporary supplemental irrigation systems.

CP installation must be completed within 12 months of the effective federal CREP contract date (ISDA, 2024b).

2.1.4 Financial Support

Producers enrolled in CREP would enter into federal contracts for a minimum of 14 to a maximum of 15 years that stipulate implementation of approved CPs to receive financial and technical assistance. Producers are eligible for annual rental payments for the duration of the contract based upon the soils of acreage enrolled, as well as one-time cost sharing (50%) for establishing CPs and incentive payments for certain situations. In addition, the State of Indiana would also make one-time incentive payments to participants based on the CP and amount of acreage enrolled. Federal and state financial benefits for each CP is summarized in **Table 2-3**. See **Appendix B.2** for details of the cost share and incentive payments available for participants.

The Proposed Action would increase the total funding for the Indiana CREP. The estimated cost of implementing the Proposed Action would be approximately $543,600,000 over 15 years with a federal commitment of $453,000,000. The State of Indiana would match 20% of the federal contribution for a total State contribution of $90,600,000.

2.2 Alternatives

This PEA analyzes potential environmental impacts from the Proposed Action and No Action Alternatives. These alternatives are briefly described below.

Table 2-2 Summary of Federal and State Cost-Share for Conservation Practices Included in the Proposed Action

Conservation Practice	Federal Cost-Share, Rental Payments, and Incentives	State Incentives
CP-2, Establishment of Permanent Native Grasses	• 50% reimbursable cost for installation • 140% Annual Soil Rental	$100/acre
CP-3A, Hardwood Tree Planting	• 50% reimbursable cost for installation • 140% Annual Soil Rental	$400/acre
CP-4D, Permanent Wildlife Habitat, Noneasement	• 50% reimbursable cost for installation • 140% Annual Soil Rental	$100/acre
CP-9, Shallow Water Areas for Wildlife	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	• New enrollments - $950/acre • Re-enrollments - $400/acre
CP-21, Grassed Filter Strips	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	$100/acre
CP-22, Riparian Buffer	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	$400/acre
CP-23, Wetland Restoration, Floodplain	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	• New enrollments - $950/acre • Re-enrollments -$400/acre
CP-23A, Wetland Restoration, Non-Floodplain	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	• New enrollments - $950/acre • Re-enrollments -$400/acre

Table 2-2 Summary of Federal and State Cost-Share for Conservation Practices Included in the Proposed Action

Conservation Practice	Federal Cost-Share, Rental Payments, and Incentives	State Incentives
CP-31, Bottomland Timber Establishment on Wetlands	• 50% reimbursable cost for installation • 140% Annual Soil Rental • SIP according to FSA National CRP Directives for continuous CREP signup • PIP: 50% of the eligible reimbursement cost of practice installation	$400/acre

Notes:
Sources: ISDA, 2024c; Harrold J., 2024
CRP = Conservation Reserve Program; CREP = Conservation Reserve Enhancement Program; FSA = Farm Services Agency; PIP = Practice Incentive Payment; SIP = Signing Incentive Payment

2.2.1 Proposed Action Alternative

The Proposed Action Alternative would implement the proposed expansion of the Indiana CREP described in **Section 2.1**. FSA has determined that the Proposed Action Alternative would meet the purpose of and need for the Proposed Action as described in **Section 1.5**.

2.2.2 No Action Alternative

Under the No Action Alternative, the proposed expansion of the Indiana CREP would not be implemented. Current acreage enrollment goals, CPs, watersheds, eligibility requirements, and financial incentives included in the existing Indiana CREP would be maintained **(**see **Section 1.2** and **Table 1-1)**. The No Action Alternative does not meet the purpose and need described in **Section 1.5** but is retained for analysis in accordance with CEQ NEPA regulations to provide a baseline for the comparison of potential environmental impacts from the Proposed Action Alternative.

2.2.3 Alternative Actions Eliminated from Further Consideration

The FSA and ISDA initially considered expanding the Indiana CREP by six additional watersheds. Although such an expansion would help improve water quality by protecting additional miles of receiving streams and watercourses, reducing pollutants and sediments in agricultural runoff, and enhancing wildlife habitat, it would not expand the Indiana CREP to a statewide program. Therefore, this alternative was dismissed from detailed analysis in this PEA.

2.3 Comparison of Potential Environmental Consequences

Potential impacts from the Proposed Action and No Action Alternatives are summarized in **Table 2-4**. This summary is based on the detailed analysis of the affected environment and potential impacts for each resource presented in **Chapter 3**. For all resources analyzed in this PEA, potential impacts from the Proposed Action and No Action Alternatives would not be significant.

Table 2-3 Comparison of Potential Environmental Consequences of the Alternatives

Resource Area	Proposed Action Alternative	No Action Alternative
Biological Resources	Short-term, non-significant adverse effects and long-term beneficial effects on biological resources. Potential adverse effects on special status species would be avoided, minimized, or mitigated through site-specific Section 7 consultation with U.S. Fish and Wildlife Services prior to enrolling new lands in the expanded CREP.	Beneficial long-term effects, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Cultural Resources	No significant adverse effects. Potential adverse effects would be avoided, minimized, or mitigated through site-specific Section 106 consultation with the IDNR DHPA prior to enrolling new lands in the expanded CREP.	No significant adverse effects. Potential adverse effects would be avoided, minimized, or mitigated through site-specific Section 106 consultation with the IDNR DHPA prior to enrolling or re-enrolling lands in the existing CREP.
Water Resources	Short-term, non-significant adverse effects and long-term beneficial effects on water resources. Any long-term adverse effects from periodic maintenance of vegetation installed under the CPs would not be significant.	Beneficial long-term effects on water resources, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Air Quality	Short-term, non-significant adverse effects and long-term beneficial effects on air quality. Any long-term adverse effects from periodic maintenance of vegetation installed under the CPs would not be significant.	Beneficial long-term effects on air quality, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Soils	Short-term, non-significant adverse effects and long-term beneficial effects on soils. Any long-term adverse effects from periodic maintenance of vegetation installed under the CPs would not be significant	Beneficial long-term effects on soils, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Other Protected Resources	Short-term, non-significant adverse effects and long-term beneficial effects on other protected resources. Any long-term adverse effects from periodic maintenance of vegetation installed under the CPs would not be significant.	Beneficial long-term effects on other protected resources, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.

Table 2-3 Comparison of Potential Environmental Consequences of the Alternatives

Resource Area	Proposed Action Alternative	No Action Alternative
Socioeconomics and Recreation	Beneficial short-term and long-term effects on socioeconomics and recreation. No significant adverse effects.	Beneficial short-term and long-term effects on socioeconomics and recreation, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Environmental Justice	Beneficial short-term and long-term effects on minority and low-income populations. No significant adverse effects.	Beneficial short-term and long-term effects on minority and low-income populations, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No significant adverse effects.
Cumulative Effects	Beneficial cumulative effects and no cumulatively significant adverse effects when considered with other past, present, and reasonably foreseeable actions.	Beneficial cumulative effects, but to a lesser extent because enrollment would continue to be limited to 11 watersheds and a total enrollment of up to 26,250 acres. No cumulatively significant adverse effects.

Notes:
CP = Conservation Practice; CREP = Conservation Reserve Enhancement Program; IDNR DHPA = Indiana Department of Natural Resources Division of Historic Preservation and Archaeology

3 Affected Environment and Environmental Consequences

This chapter describes the affected environment and environmental consequences for resources that would potentially be affected by the Proposed Action. Resources that were dismissed from detailed analysis because the Proposed Action would have no potential to affect them are also briefly summarized. Throughout this PEA, the terms "environmental consequences," "effects," and "impacts" are used interchangeably and have the same meaning.

3.1 Resources Analyzed in the Programmatic Environmental Assessment

The following environmental resources are evaluated in this chapter: biological resources, cultural resources, water resources, air quality, soils and topography, other protected resources, socioeconomics and recreation, and environmental justice. The discussion of each resource includes a definition of the resource, summary of applicable regulatory requirements, a description of the affected environment (that is, existing conditions) of each resource, and potential impacts on that resource that could result from the Proposed Action and No Action Alternatives. Criteria for determining the significance of potential impacts on each resource are also provided.

Generally, the location and size of lands that would be enrolled under the Proposed Action, if selected for implementation, are not currently known. CPs included in the Proposed Action could be implemented on eligible lands throughout the state if the Indiana CREP is expanded as proposed. Therefore, unless otherwise noted, resources addressed in this chapter are evaluated at the statewide level. Once eligible lands are identified, site-specific EEs would be initiated by NRCS and provided to FSA for review and completion in accordance with FSA Handbook, *1-EQ,* prior to entering contracts.

3.2 Resource Areas Dismissed from Analysis

Table 3-1 summarizes the resources that were dismissed from detailed analysis in the PEA because the Proposed Action would have no potential to affect them.

Table 3-1 Rationale for Dismissal of Resource Areas

Resource	Rationale for Dismissal
Geology and Topography	Land disturbance associated with the Proposed Action would be relatively shallow and localized. Such disturbance would have no potential to penetrate underlying geologic strata or modify, damage, destroy, or otherwise alter unique or noteworthy geological and topographic features underlying lands that would be enrolled under the Proposed Action. CPs included in the Proposed Action would generally be installed on land that is already relatively flat and level and would be installed in a manner that promotes positive drainage to receiving water bodies or stormwater management infrastructure, as applicable. Installation of the CPs would not notably change local topography or create new or unusual topographic features that would be inconsistent with local topography. Topographic conditions on and around the CP installation sites would be similar to those that existed prior to installation. Therefore, geology and topography were dismissed from detailed analysis in the PEA.

Table 3-1 Rationale for Dismissal of Resource Areas

Resource	Rationale for Dismissal
Prime and Unique Farmland, and Farmland of Statewide Importance	The Farmland Protection Policy Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Although agricultural land enrolled in the CREP would be temporarily removed from agricultural production, the enrollment of such lands and the installation of CPs included in the Proposed Action is not irreversible. Agricultural land enrolled in the Indiana CREP could be converted back to agricultural use following the expiration or cancellation of a CREP contract. Further, the enrollment of up to 100,000 acres in the CREP under the Proposed Action would represent a small fraction of available agricultural land in the state of Indiana and would have no discernible effect on the state's agricultural production. Therefore, this resource was dismissed from detailed analysis in the PEA.
Noise	Noise associated with the installation of CPs and the periodic maintenance of vegetation, once established, would be similar to noise from activities typically occurring on land in active agricultural production. Noise generated by worker activity and equipment during installation of the CPs would cease upon completion of installation activities. Noise from the periodic maintenance of vegetation installed as part of each CP would be relatively infrequent and would not noticeably change the ambient noise environment in the vicinity of the project areas. Therefore, this resource was dismissed from detailed analysis in the PEA.
Coastal Zone Management	The Coastal Zone Management Act of 1972 requires federal agencies to determine the consistency of activities they fund or authorize with the enforceable policies of a state's federally approved coastal zone program. Indiana's federally approved Lake Michigan Coastal Program area includes portions of Lake, Porter, and LaPorte counties along the southern shoreline of Lake Michigan. This area represents a small proportion of land in Indiana that could be enrolled in the CREP under the Proposed Action. If land within this area would be proposed for enrollment in the Indiana CREP under the Proposed Action, FSA would determine the consistency of such an enrollment and the installation of associated CPs with the Lake Michigan Coastal Program's enforceable policies during the site-specific environmental review and consultation process. Therefore, Coastal Zone Management is not addressed in this PEA.
Sole Source Aquifers	Sole source aquifers are underground water sources that provide at least 50% of the drinking water consumed within the overlying area. The St. Joseph aquifer is Indiana's only sole source aquifer and primarily underlies portions of St. Joseph, Elkhart, and Kosciusko Counties near the Indiana-Michigan border. The enrollment of lands and installation of CPs on overlying lands would not result in new or increased withdrawals from this aquifer, releases of hazardous or toxic materials to this aquifer, or increases in impervious surfaces that would impede or prevent the continued infiltration, percolation, or recharge of this aquifer. Therefore, sole source aquifers were dismissed from detailed analysis in this PEA.
Visual Quality and Aesthetics	The Proposed Action would not introduce new permanent visual elements that would be inconsistent with or disruptive to the predominant visual character of immediate and surrounding areas. The visual quality and character of lands on which CPs would be installed under the Proposed Action, as well as adjacent and nearby lands, would continue to primarily be rural or agrarian. Therefore, this resource was dismissed from detailed analysis in the PEA.

Notes:
CP = Conservation Practice; CREP = Conservation Reserve Enhancement Program; FSA = Farm Service Agency; PEA = Programmatic Environmental Assessment

3.3 Biological Resources

3.3.1 Definition of Resource

Biological resources include native and introduced plant and animal species and the habitats in which they occur. Biological resources evaluated in this PEA consist of vegetation, wildlife, and special status species. Special status species include those listed as threatened and endangered under the ESA, federally designated critical habitat, bird species protected under the Migratory Bird Treaty Act (MBTA), and bald eagles (*Haliaeetus leucocephalus*) protected under the Bald and Golden Eagle Protection Action (BGEPA). Noxious weeds are not addressed because CREP contracts require the preparation of and adherence to conservation plans that specify measures to control the introduction, spread, and growth of such species.

The ESA of 1973 (16 U.S.C. §§ 1531-1544) establishes federal protections for threatened and endangered species of fish, wildlife, and plants. Section 7 of the ESA requires federal agencies to consider the effects of their proposed activities on federally listed species. Federally listed terrestrial and freshwater species are managed by USFWS.

The MBTA of 1918 establishes federal responsibilities for protecting nearly all migratory species of birds, eggs, and nests. The MBTA prohibits “take” (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by USFWS. USFWS is responsible for administering the provisions of the MBTA and maintaining a list of protected bird species.

Although delisted from the ESA in 2007, the bald eagle remains federally protected under the BGEPA (16 U.S.C. §§ 668-668d). The BGEPA prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. Bald eagles are also protected under the MBTA.

The analysis of biological resources in this section is based on Level I and Level III ecoregions defined by the Commission for Environmental Cooperation (CEC). Ecoregions are areas of relatively homogenous soils, vegetation, climate, and geology, with associated species of adapted wildlife. Indiana is entirely located within the Eastern Temperate Forest CEC Level I Ecoregion. Within Indiana, this ecoregion is further subdivided into the Central Corn Belt Plains, Eastern Corn Belt Plains, Southern Michigan/Northern Indiana Drift Plains, Huron/Erie Lake Plains, Interior Plateau, and Interior River Valleys and Hills CEC Level III ecoregions (CEC, 1997). The distribution of Level III ecoregions in Indiana is shown on **Figure 3-1**.

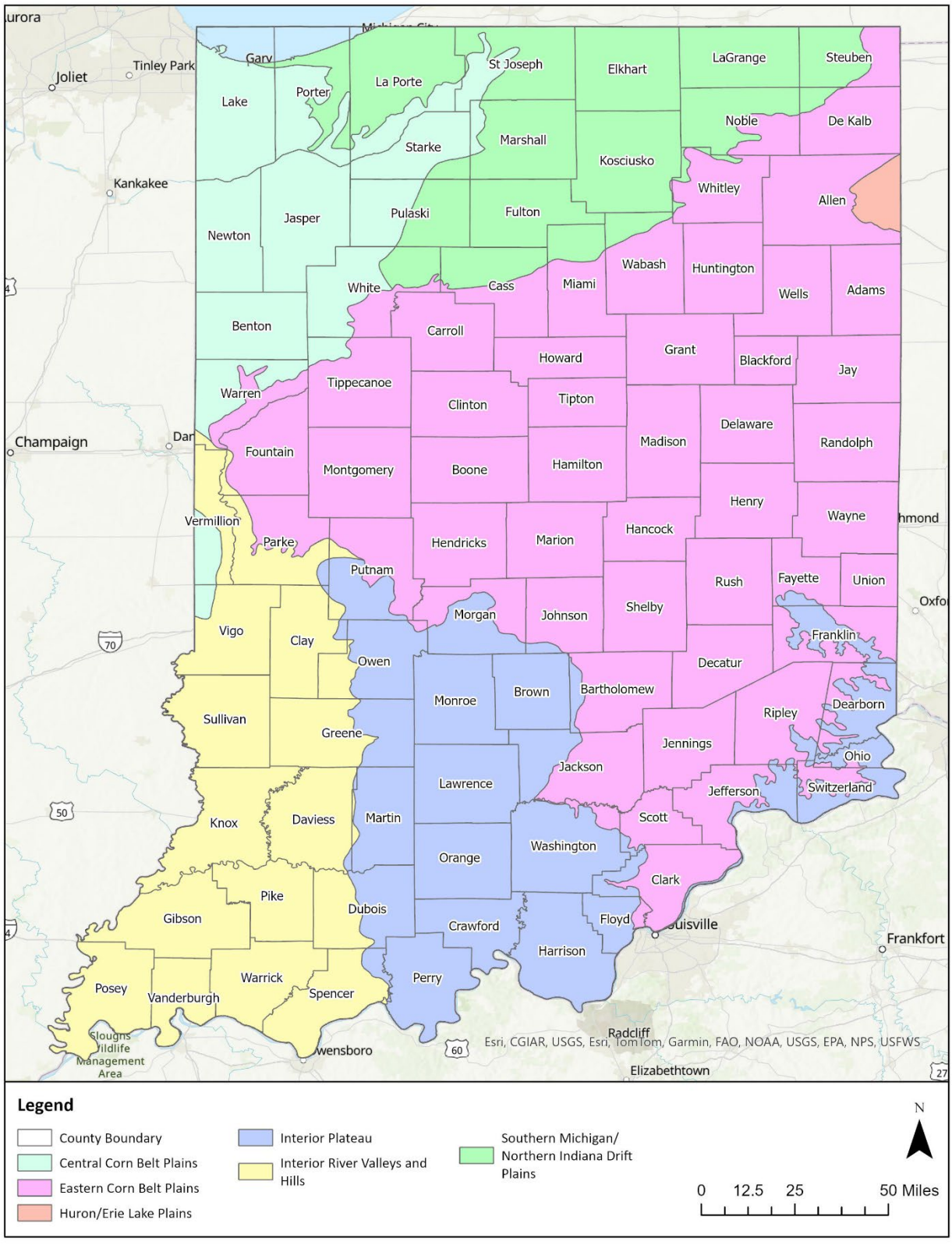

Figure 3-1 Level III Ecoregions of Indiana

3.3.2 Affected Environment

3.3.2.1 Vegetation

Vegetation communities in Indiana include dune-associated vegetation on the beaches of Lake Michigan, hardwood forests, rolling plains, bluestem prairies, and cedar glades. Vegetation communities within each Level III ecoregion in Indiana are described in **Table 3-2**.

Table 3-2 Commission for Environmental Cooperation Level III Ecoregions in Indiana

CEC Level III Ecoregion	Percentage of State	Description
Central Corn Belt Plains	9.9	Extensive prairie communities were native to the glaciated plains of the Central Corn Belt Plains. Beginning in the 19th century, the natural vegetation was gradually replaced by agriculture. Farms are now extensive on the dark, fertile soils of this ecoregion and primarily grow corn and soybeans as well as cattle, sheep, poultry, and hogs.
Eastern Corn Belt Plains	45.8	The Eastern Corn Belt Plains ecoregion is primarily a rolling till plain with local end moraines and has lighter colored, loamy, well-drained rich soils. Glacial deposits of Wisconsinan age are extensive in the region with more dissected and leached as the pre-Wisconsinan till restricted to the southern part of this ecoregion. Historically, beech forests were common on Wisconsinan soils while beech forests and elm-ash swamp forests dominated the wetter pre-Wisconsinan soils. Today, the region is dominated by extensive corn, soybean, and livestock production.
Interior Plateau	16.4	The Interior Plateau is characterized by rolling, deeply dissected, rugged terrain with areas of karst topography. The original forest vegetation included beech habitat and oak-hickory forests on well-drained, upper slopes. Soils within this ecoregion developed from the underlying sandstone, siltstone, shale, and limestone. Land use/land cover includes hay, grain, cattle, hog, and poultry farms and woodland forests.
Southern Michigan / Northern Indiana Drift Plains	12.4	Bordered by Lake Michigan on the west, this ecoregion is characterized by its many lakes and marshes as well as a wide assortment of landforms, soil types, soil textures, and land uses. Broad till plains with thick and complex deposits of drift, paleobeach ridges, relict dunes, morainal hills, kames, drumlins, meltwater channels, and kettles occur. Within this ecoregion, feed grain, soybean, and livestock farming as well as woodlots, quarries, recreational development, and urban-industrial areas are common. Various soils have developed under oak-hickory forests, northern swamp forests, or beech forests and bogs and bog soils are also locally common.
Huron / Erie Lake Plains	0.4	The Huron/Erie Lake Plain is a broad, fertile, nearly flat plain punctuated by relict sand dunes, beach ridges, and end moraines. Historically, wetter soils supported the dominant elm-ash swamp and beech forests, with sandy well-drained dunes and beach ridges supporting oak savanna habitat. Today, most of the area has been cleared and artificially drained and contains highly productive farms producing corn, soybeans, livestock, and vegetables. Urban and industrials areas are also extensive throughout the ecoregion.

Table 3-2 Commission for Environmental Cooperation Level III Ecoregions in Indiana

CEC Level III Ecoregion	Percentage of State	Description
Interior River Valleys and Hills	15.2	The Interior River Valleys and Hills ecoregion contains many wide, flat-bottomed, terraced valleys filled with alluvium and outwash, aeolian, and lacustrine deposits. Bottomland hardwood forests, swamps, and beech forests characterized the wetter lands and oak and mixed oak-hickory forests are found in the uplands. Land uses include grain, soybean, forage crop, and livestock farming, and woodlots.

Notes:
Source: USEPA, 2023a
CEC = Commission for Environmental Cooperation

Tree species commonly found in Indiana include: (Purdue Agricultural Extension, 2021)

- tulip poplar *(Liriodendron tulipifera)*
- American sycamore *(Platanus occidentalis)*
- eastern red cedar *(Juniperus virginiana)*
- black walnut *(Juglans nigra)*
- northern red oak (*Quercus rubra)*
- sugar maple (*Acer saccharum)*
- red pine (*Pinus resinosa)*
- white pine (*Pinus strobus)*

Grasses commonly found in Indiana include:

- big bluestem *(Andropogon gerardii)*
- sideoats gramma *(Bouteloua curtipendula)*
- switchgrass *(Panicum virgatum)* in the prairies
- bottlebrush grass *(Elymus hystrix)*
- northern sea oats *(Chasmanthium latifolium)* in the woodlands

Shrubs commonly found in Indiana include: (Indiana Wildlife Federation [IWF], n.d.)

- eastern redbud *(Cercis canadensis)*
- New Jersey tea *(Ceanothus americanus)*
- winged sumac *(Rhus copallinum)*

Flowering plants commonly found in Indiana include: (IWF, n.d.)

- prairie blazing star *(Liatris pycnostachya)*
- stiff goldenrod *(Solidago rigida)*
- yellow coneflower *(Ratibida pinnata)*
- butterfly milkweed *(Asclepias tuberosa)*

Other plants commonly found in Indiana include ferns such as Christmas fern (*Polystichum acrostichoides*) and ostrich fern (*Matteuccia struthiopteris*), and vines such as Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), and trumpet creeper (*Campsis radicans*) (IWF, n.d.).

In 2022, 63% of lands in Indiana supported agricultural operations (ISDA, 2024d). Primary crops planted in the state include corn and soybeans, accounting for 93% of production; other crops include wheat and vegetables (USDA National Agricultural Statistic Service [NASS], 2023).

3.3.2.2 Wildlife

Diverse vegetation and ecosystems found within the CEC Level I Eastern Temperate Forest ecoregion provide habitat for a wide array of wildlife species. More than 700 fish and wildlife

species are documented in Indiana (IDNR, n.d.a). Habitat types in Indiana generally blend from one to the next, rarely with abrupt transition. Because of this integration of communities, very few wildlife species are strictly associated with any single habitat type. Representative common wildlife species include:

- white-tailed deer *(Odocoileus virginianus)*
- wild turkey *(Meleagris gallopavo)*
- coyote *(Canis latrans)*
- gray squirrel *(Sciurus carolinensis)*
- mallard *(Anas platyrhynchos)*
- mourning dove *(Zenaida macroura)*
- northern cardinal *(Cardinalis cardinalis)*
- gray treefrog *(Hyla versicolor)*
- common watersnake *(Nerodia sipedon)*

3.3.2.3 Special Status Species

Thirty-five federally listed threatened and endangered species are known or have potential to occur in Indiana. Critical habitat has been federally designated in Indiana for five species and is proposed in the state for one other species (USFWS, 2024a). Federally listed, proposed, non-essential experimental populations, and candidate species known or having potential to occur in Indiana, and species for which federal critical habitat has been designated in the state, are listed in **Table 3-3**. A copy of the Official Species List for Indiana obtained from the USFWS Information for Planning and Consultation online query tool is included in **Appendix C**. In accordance with Section 7 of the ESA, FSA is consulting with USFWS regarding the Proposed Action and has requested additional information on federally listed species and critical habitat that could potentially be affected. Copies of relevant Section 7 correspondence are included in **Appendix A**.

Table 3-3 Federally Listed Species Known or Having Potential to Occur in Indiana

Common Name	Scientific Name	Listing Status	Critical Habitat Designated in Indiana
Birds			
golden eagle	*Aquila chrysaetos*	BGEPA	No
bald eagle	*Haliaeetus leucocephalus*	BGEPA	No
eastern black rail	*Laterallus jamaicensis jamaicensis*	T	No
piping plover	*Charadrius melodus*	T	**Yes**
rufa red knot	*Calidris cantus rufa*	T	No
whooping crane	*Grus americana*	EXPN	No
Freshwater Aquatics			
clubshell	*Pleurobema clava*	E	No
fanshell	*Cyprogenia stegaria*	E	No
fat pocketbook	*Potamilus capax*	E	No
longsolid	*Fusconaia subrotunda*	T	No
northern riffleshell	*Epioblasma rangiana*	E	No
orangefoot pimpleback (pearlymussel)	*Plethobasus cooperianus*	E	No
pink mucket (pearlymussel)	*Lampsilis abrupta*	E	No
rabbitsfoot	*Quadrula cylindrica cylindrica*	T	**Yes**
rayed bean	*Villosa fabalis*	E	No
ring pink (mussel)	*Obovaria retusa*	E	No

Table 3-3 Federally Listed Species Known or Having Potential to Occur in Indiana

Common Name	Scientific Name	Listing Status	Critical Habitat Designated in Indiana
rough pigtoe	*Pleurobema plenum*	E	No
round hickorynut	*Obovaria subrotunda*	T	**Yes**
salamander mussel	*Simpsonaias ambigua*	PE	**Proposed**
sheepnose mussel	*Plethobasus cyphyus*	E	No
snuffbox mussel	*Epioblasma triquetra*	E	No
white catspaw (pearlymussel)	*Epioblasma perobliqua*	E	No
Insects			
Hine's emerald dragonfly	*Somatochlora hineana*	E	No
karner blue butterfly	*Lycaeides melissa samuelis*	E	No
Mitchell's satyr butterfly	*Neonympha mitchellii mitchellii*	E	No
monarch butterfly	*Danaus Plexippus*	C	No
rusty patched bumble bee	*Bombus affinis*	E	No
Plants			
eastern prairie fringed orchid	*Platanthera leucophaea*	T	No
lakeside daisy	*Hymenoxys herbacea*	T	No
leafy prairie-clover	*Dalea foliosa*	E	No
Mead's milkweed	*Asclepias meadii*	T	No
Pitcher's thistle	*Cirsium pitcher*	T	No
Short's bladderpod	*Physaria globosa*	E	**Yes**
Short's goldenrod	*Solidago shortii*	E	No
Virginia Sneezeweed	*Helenium virginicum*	T	No
Reptiles			
copperbelly water snake	*Nerodia erythrogaster neglecta*	T	No
eastern massasauga (=rattlesnake)	*Sistrurus catenatus*	T	No
Mammals			
gray bat	*Myotis grisescens*	E	No
Indiana bat	*Myotis sodalist*	E	**Yes**
northern long-eared bat	*Myotis septentrionalis*	E	No
tricolored bat	*Perimyotis subflavus*	PE	No

Notes:
BGEPA = Bald and Golden Eagle Protection Act; C = Candidate; E = Endangered; EXPN = Non-essential Experimental Population; PE = Proposed Endangered; T = Threatened

IDNR has classified over 150 species of fish and wildlife as Species of Greatest Conservation Need, over 430 species of plants and state threatened or state endangered, and nearly 700 species of insects and spiders as state endangered, threatened, or rare (IDNR, n.d.b.; IDNR, 2023a; IDNR, 2023b).

Currently, more than 1,000 bird species are protected under the MBTA; this likely includes most birds occurring in Indiana for all or part of the year. Bald eagles are distributed throughout the state of Indiana and are found mostly along major rivers and other large bodies of water. More than 350 eagle nests were reported in Indiana in 2020 (IDNR, 2024a). The USFWS recommends

maintaining a 330-foot buffer from individual eagles, their nests, and roosts at all times and a 660-foot buffer during the breeding season, occurring from late January to late August in Indiana (USFWS, 2007).

3.3.3 Environmental Consequences Evaluation Criteria

Adverse impacts on biological resources would be considered significant if implementation of the Proposed Action would impede or prevent the continued propagation of common plants and animals at the community, population, or species level; would result in an adverse effect on federally listed threatened and endangered species or critical habitat that could not be avoided or mitigated through consultation with USFWS; or resulted in the unauthorized "take" of birds protected under the MBTA or BGEPA.

3.3.4 Environmental Consequences – Proposed Action Alternative

3.3.4.1 Vegetation

In the short term, the installation of CPs on enrolled lands would likely involve the clearing of non-native vegetation and the thinning or trimming of established native vegetation to prepare areas for the installation of new plants and trees. The size of the areas where these activities would occur within each watershed could vary from less than one acre to several hundred acres, depending on the CP selected for implementation. Although such activities could have an adverse impact on vegetation, adherence to applicable best management practices (BMPs) would minimize adverse effects on native species to the extent possible. Therefore, short-term adverse effects on vegetation would not be significant. The removal of non-native or invasive species would have a beneficial effect.

In the long term, the establishment of plant communities in additional areas of the state under the CPs would result in greater vegetative species density and diversity. Implementation of *CP2, CP3A, CP23, CP23A,* and *CP4D,* would be expected to restore additional lands to native plant communities. The implementation of *CP9, CP21,* and *CP22,* would improve the quality of habitats for terrestrial and aquatic plants and aquatic organisms by decreasing turbidity and enrichment from fertilizers, which would in turn allow more sunlight to reach submerged rooted vegetation. These practices would also improve soil infiltration and reduce downstream flooding, thereby having beneficial effects on downstream species that might otherwise be periodically inundated by floodwaters. The establishment of native vegetation under the Proposed Action Alternative would also reduce the proliferation of non-native and invasive plant species. Therefore, the Proposed Action Alternative would have beneficial long-term effects on vegetation.

3.3.4.2 Wildlife

Human activity, noise, ground disturbance, and vegetation removal during installation of CPs included in the Proposed Action Alternative could cause annoyance, disturbance, or displacement of wildlife that could temporarily disrupt nesting, foraging, and breeding activities. It is anticipated that more mobile species, such as mammals and birds, would relocate to nearby areas offering similar habitat conditions and would resume these activities relatively quickly. In some instances, less-mobile individuals could be inadvertently injured or destroyed. Adherence to site-specific BMPs would further minimize the temporary disturbance of wildlife populations during CP installation. Following the completion of CP installation activities, most individual animals would

likely return to areas where CPs were installed and resume nesting, breeding, and foraging as vegetation matures and suitable habitat is re-established; as such, any short-term adverse effects from CP installation would be temporary. These adverse effects would be limited to individual animals and would not impede or prevent the continued propagation of animals at the community, population, or species level. Therefore, short-term adverse effects on wildlife from the Proposed Action Alternative would not be significant.

In the long term, the establishment of native vegetation under CPs included in the Proposed Action Alternative would provide suitable habitat in additional areas of the state and encourage nesting, breeding, and foraging by wildlife. The implementation of CP9 would expand and improve habitat for terrestrial and semiaquatic wildlife, and predators who rely on forage species within those habitats. The reduction of sediments and nutrients in agricultural runoff through the planting and establishment of vegetation near or adjacent to receiving streams and waterbodies would improve water quality and habitat for fish and other aquatic organisms. Therefore, the Proposed Action Alternative would have beneficial long-term effects on common wildlife species.

3.3.4.3 Special Status Species

Generally, the establishment of native vegetation and removal of non-native or invasive vegetation under CPs included in the Proposed Action Alternative, and corresponding improvements to water quality through the reduction of sediments and nutrients in agricultural runoff, would be anticipated to have long-term beneficial effects on special status species by providing or improving nesting, breeding, and foraging habitats. Special status species that could experience long-term beneficial effects from the creation or restoration of habitat and improvement of water quality include the eastern black rail (*Laterallus j. ssp. jamaicensis*), copperbelly watersnake (*Nerodia erythrogaster neglecta*), eastern massasauga rattlesnake (*Sistrurus catenatus*); all listed or proposed for listing freshwater clam species and bats; all listed insects and flowering plants; and critical habitat for the Indiana bat (*Myotis sodalis*), Short's bladderpod (*Physaria globose*), round hickorynut (*Obovaria subrotunda*), and rabbitsfoot (*Quadrula c. cylindrica*).

In accordance with Section 7 of the ESA, FSA would conduct additional consultation with USFWS during site-specific environmental reviews to determine potential effects on special status species and critical habitat that could be present on lands proposed for enrollment under the Proposed Action Alternative. This consultation would identify conservation measures to avoid or minimize adverse effects on special status species and critical habitat to the extent possible. Adherence to these conservation measures during installation and periodic maintenance of the CPs would ensure that potential adverse effects on special status species would not be significant.

3.3.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on biological resources in the state, but to a lesser extent because they would be limited to the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Potential adverse effects on biological resources from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.3.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

The Proposed Action would contribute to beneficial effects on biological resources when considered with reasonably foreseeable future actions listed in **Table D-1**, particularly federal, state, and local conservation programs that are intended to improve wildlife habitat, distribution, abundance, and diversity. These beneficial effects would outweigh any potential adverse impacts associated with the installation and maintenance of CPs included in the Proposed Action Alternative, which would be temporary, infrequent, and distributed across relatively small areas throughout the state. Any potential adverse impacts on biological resources from the Proposed Action, when considered with adverse impacts from reasonably foreseeable future actions, would not contribute to cumulatively significant adverse impacts on biological resources.

3.4 Cultural Resources

3.4.1 Definition of Resource

Historic properties are any prehistoric or historic district, site, building, structure, or object that is listed or has been determined eligible for listing in the National Register of Historic Places (NRHP). National Historic Landmarks (NHLs), NRHP-listed properties, archaeological sites, and traditional cultural properties having historic, cultural, or religious significance to Native American tribes are also considered historic properties. To be listed or determined eligible for listing in the NRHP, historic properties typically must be 50 years or older, have national, state, or local significance in American history, architecture, archaeology, engineering, or culture, and meet one or more evaluation criteria established by the National Park Service (NPS) (NPS, 1997). Properties less than 50 years old may be listed or eligible for listing in the NRHP if they possess exceptional historical importance, retain historic integrity, and meet at least one of the four NRHP evaluation criteria.

Under Section 106 of the NHPA, federal agencies are responsible for defining the Area of Potential Effects (APE) where impacts from a proposed action may occur; identifying historic properties present within the APE; assessing the potential effects of the undertaking on those historic properties; and considering ways to avoid, minimize, and mitigate any adverse effects. Federal agencies are further required to initiate consultation with the designated State Historic Preservation Officer (SHPO) for actions that may impact historic properties within the APE. In Indiana, the Director of IDNR serves as the SHPO. Other federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 as amended, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1990.

The Proposed Action evaluated in this PEA is considered an undertaking for the purposes of Section 106. Although separate from the NEPA process, Section 106 consultation for the Proposed Action is being conducted in parallel with NEPA to maximize efficiency and streamline compliance with both requirements. The location and size of lands that would be enrolled in the Indiana CREP under the Proposed Action, if selected for implementation, is not currently known; therefore, the APE for the Proposed Action consists of the entire state of Indiana.

3.4.2 Affected Environment

The physiography of Indiana was greatly influenced by the maximum extent of the Wisconsin Glaciation 15,000 to 20,000 years ago (Gray, 2000). Indiana is roughly divided in half by the southern extent of the glaciation. The northern portion of the state is characterized by moraine deposits and till and lake plains while the southern portion of the state consists of pre-glacial uplands and lowlands. The majority of the state lies within the Ohio River Valley and is largely drained by tributaries of the Wabash River.

The IDNR DHPA cultural resources inventory lists approximately 292,000 historic buildings, structures, sites, and objects, including over 71,500 archaeological sites (IDNR, 2020). Indiana's precontact archaeological sites span the Paleoindian (ca. 10,000-7500 B.C.) through Mississippian (ca. A.D. 1000-1650) time periods and include artifact scatters, camp sites, villages, burial mounds, earthworks, and rockshelters (Jones and Johnson, 2016). Historical archaeological sites span the mid-seventeenth through mid-twentieth centuries and include early pioneer settlements, frontier outposts, homesteads, residential and commercial developments as well as industrial, agricultural, and transportation infrastructure. Of Indiana's documented cultural resources, 2,109 are listed on the NRHP, including 83 archaeological sites (NPS, 2024a). While most of the historic properties listed on the NRHP are architectural resources, it is likely that many more of Indiana's thousands of archaeological sites retain integrity sufficient to convey their significance for NRHP eligibility.

Archaeological sites, particularly larger precontact and early historical occupations, are typically distributed in proximity to perennial streams and rivers that provide a source of subsistence and transportation. Smaller, short-term activity sites, such as hunting, foraging, or resource extraction camps can often be found on lower order drainages and upland areas. Thus, floodplains and stream terraces in general have a high potential for containing archaeological deposits that could be impacted by current and proposed CPs.

No federally recognized Native American tribes are currently located in Indiana (Bureau of Indian Affairs [BIA], 2024). However, at least 18 Native American tribes have ancestral ties to lands in the state (U.S. Department of Housing and Urban Development [HUD], 2024); these tribes are listed in **Table 3-4**. In accordance with Section 106, FSA has initiated consultation with the IDNR DHPA and the Native American tribes listed in **Table 3-4**. Copies of relevant Section 106 consultation correspondence are included in **Appendix A**.

Table 3-4 Tribes Having Ancestral Ties to Lands in Indiana

Tribe	State Where Tribe is Currently Located	Tribe	State Where Tribe is Currently Located
Citizen Potawatomi Nation	Oklahoma	Osage Nation	Oklahoma
Delaware Nation	Oklahoma	Ottawa Tribe of Oklahoma	Oklahoma
Delaware Tribe of Indians	Oklahoma	Peoria Tribe of Indians of Oklahoma	Oklahoma
Eastern Shawnee Tribe of Oklahoma	Oklahoma	Pokagon Band of Potawatomi Indians	Michigan
Forest County Potawatomi Community	Wisconsin	Prairie Band Potawatomi Nation	Kansas

Table 3-4 Tribes Having Ancestral Ties to Lands in Indiana

Tribe	State Where Tribe is Currently Located	Tribe	State Where Tribe is Currently Located
Hannahville Indian Community	Michigan	Quapaw Nation	Oklahoma
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas	Kansas	Seneca Cayuga Nation	Oklahoma
Little Traverse Bay Banks of Odawa Indians	Michigan	Shawnee Tribe	Oklahoma
Miami Tribe of Oklahoma	Oklahoma	Wyandotte Nation	Oklahoma

Source: HUD, 2024

3.4.3 Environmental Consequences Evaluation Criteria

Adverse effects on cultural resources might include physically altering, damaging, or destroying all or part of a resource or altering characteristics of the resource that make it eligible for listing in the NRHP. Those effects can include introducing visual or audible elements that are out of character with the property or its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance. For this PEA, an effect is considered adverse if it alters the integrity of a NRHP-listed or eligible resource or if it has the potential to adversely affect traditional cultural properties and the practices associated with the property.

3.4.4 Environmental Consequences – Proposed Action Alternative

The installation of CPs within historic properties previously listed or determined eligible for listing in the National Register of Historic Places (NRHP) is not anticipated. Prior to enrolling lands in the CREP under the Proposed Action Alternative, FSA would conduct site-specific environmental reviews in accordance with FSA Handbook *1-EQ*. These reviews would include consideration of undocumented cultural resources having potential to be present on lands where proposed CPs would be installed. FSA would conduct additional Section 106 consultation with the IDNR DHPA and, as applicable, Native American tribes having ancestral ties to lands proposed for enrollment, to identify potential effects on cultural resources. Once identified, FSA would develop and implement measures to avoid, minimize, or mitigate adverse effects on cultural resources in accordance with Section 106. Therefore, adverse effects on cultural resources from the Proposed Action Alternative would not be significant.

3.4.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. Lands proposed for enrollment or re-enrollment under the existing CREP would undergo site-specific reviews, which would include consultation with the IDNR DHPA and Native American tribes, as applicable, to identify and avoid, minimize, or mitigate potential adverse effects on cultural resources in

accordance with Section 106. Therefore, impacts on cultural resources from the No Action Alternative would not be significant.

3.4.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Assuming compliance with Section 106 of the NHPA as described above, when considered in combination with reasonably foreseeable future actions listed in **Table D-1**, the Proposed Action would not contribute to cumulatively significant adverse effects on historic properties.

3.5 Water Resources

3.5.1 Definition of Resource

Water resources include surface water, groundwater, wetlands, and floodplains. Surface waters include oceans, lakes, ponds, rivers, streams, as well as human-built canals and water impoundments. Groundwater is water that fills the pores and fractures in underground materials such as sand, gravel, and other rock (U.S. Geological Survey, 2024). Wetlands are generally defined as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include "swamps, marshes, bogs, and similar areas" (U.S. Environmental Protection Agency [USEPA], 2023b). Floodplains are land areas that are susceptible to being inundated by floodwaters from any source (Federal Emergency Management Agency [FEMA], 2022).

The CWA of 1972 (33 U.S.C. § 1251 et seq.) is the primary federal law regulating water quality and the use of water resources. E.O. 11988 and E.O. 11990 also require federal agencies to consider the effects of their proposed activities on floodplains and wetlands, respectively, and consider alternatives to implementing actions in floodplains and wetlands. Wetland conservation provisions included in the 1985 Food Security Act assist in protecting the values, acreage, and functions of the wetlands in the United States.

3.5.2 Affected Environment

3.5.2.1 Surface Water and Water Quality

Indiana has approximately 63,511 miles of rivers, streams, ditches, and drainage ways, and approximately 129,662 acres of lakes, reservoirs, and ponds (Indiana Department of Environmental Management [IDEM], 2022). The north-south continental divide in Northern Indiana separates the state into two drainage systems: the northern quarter of the state drains into the Great Lakes basin and the southern three-quarters of the state drains into the Mississippi and Ohio River basins. Indiana contains all or portions of 38 Hydrologic Unit Code watersheds associated with rivers and streams **(Figure 2-1)**; these watersheds, and counties contained within each, are listed in **Appendix B.1**.

Discharges of pollutants to surface waters are regulated under the National Pollutant Discharge Elimination System (NPDES) program in accordance with the CWA. The NPDES program regulates pollutant discharges from both point sources (e.g., factories, power plants, wastewater treatment facilities) and non-point sources (e.g., stormwater runoff). USEPA is granted authority under the CWA to administer the NPDES program; in Indiana, USEPA has delegated authority for

issuing NPDES discharge permits to the IDEM Permits Branch. Indiana issues NPDES permits to multiple types of pollutant dischargers, including municipal, industrial, industrial wastewater pretreatment, stormwater-related, and combined sewer overflows (IDEM, 2024a). Nearly 11,000 NPDES permits are currently in effect in Indiana (IDEM, 2024b).

IDEM periodically assesses the water quality of Indiana streams in accordance with Section 303 of the CWA to determine the streams' ability to safely support recreational, fishable, public water supply, and aquatic life uses without posing a risk to human health. The most recent water quality assessments in Indiana were conducted in 2022.

Of Indiana's 63,511 miles of streams and rivers, 53.4% were assessed for recreational use and 57.7% were assessed for aquatic life use. Nearly 40% of streams and rivers assessed for recreational use and 18.6% of streams and rivers assessed for aquatic life use were classified as impaired **(Table 3-5)**. *Escherichia coli* (E. coli) bacteria was the primary cause of impairment, followed by biological integrity, polychlorinated biphenyls (PCBs) in fish tissue, and dissolved oxygen. Other sources of stream and rivers impairment included excess nutrients, mercury in fish tissue, and PCBs. Most pollutants were potentially attributed to non-point and unknown sources, municipal discharges and sewage, agricultural practices, and land application/waste sites (IDEM, 2022).

Table 3-5 Summary of Indiana Streams and Rivers Water Quality Assessment (2022)

Designated Use	Total Size (miles)	Size Assessed (miles)	Percent Assessed	Percent Unassessed	Percent Compliant	Percent Impaired
Recreational Use (full body contact)	63,511	33,904	53.4	46.6	14.6	38.8
Fishable Use	63,508	8,965	14.1	85.9	5.3	8.8
Public Water Supply	377	23	6.1	93.9	6.1	0.0
Aquatic Life Use	63,511	36,653	57.7	42.3	39.1	18.6

Source: IDEM, 2022

The water quality of lakes and reservoirs was also assessed for recreational use, fishable use, public water supply, and aquatic life use. Approximately 30.7% of the total lake and reservoir acreage of Indiana was assessed for impairment, of which 7.2% was impaired **(Table 3-6)**. Of the 57.7% of the assessed public water supply provided by lakes and reservoirs, 56.9% was impaired. Primary impairments to Indiana lakes and reservoirs are attributed to PCBs and mercury in fish tissue; potential sources of these impairments are from non-point and unknown sources (IDEM, 2022).

Table 3-6 Summary of Indiana Lakes and Reservoirs Water Quality Assessment (2022)

Designated Use	Total Size (acres)	Size Assessed (acres)	Percent Assessed	Percent Unassessed	Percent Compliant	Percent Impaired
Recreational Use (full body contact)	129,547	39,790	30.7	69.3	23.5	7.2
Fishable Use	129,662	81,335	62.0	38	32.6	30.2
Public Water Supply	29,262	16,871	57.7	42.3	0.8	56.9
Aquatic Life Use	129,547	16,125	12.5	87.5	4.6	7.9

Source: IDEM, 2022

IDEM administers a Total Maximum Daily Load (TMDL) program that conducts TMDL evaluations in watersheds with impaired waters and develops TMDL plans (IDEM, 2022). TMDLs quantify the maximum amount of a particular pollutant that a surface water body can absorb without exceeding water quality standards. As of June 2020, the TMDL Program has developed TMDLs for impairments to more than 2,600 streams and stream reaches, all of which have been approved by the USEPA (IDEM, 2022). A list of watersheds with USEPA-approved TMDLs in Indiana is shown in **Table 3-7**.

Table 3-7 Indiana Watersheds with Approved Total Maximum Daily Loads

Watersheds	Parameter	Approval Date
Beanblossom Creek	E. coli	04/02/2006
Big Blue River	E. coli	07/31/2006
Big Blue River (Lower)	E. coli	07/14/2014
Big Raccoon Creek	E. coli Impaired Biotic Communities	09/20/2013
Blue River, South Fork	E. coli	09/15/2017
Cicero Creek	E. coli	09/30/2011
Deep River-Portage Burns	E. coli Impaired Biotic Communities	09/26/2014
Duck, Pipe, Killbuck, Stony Creek	E. coli	04/23/2008
Eel River, Lower	E. coli	03/28/2005
Fall Creek	E. coli	03/31/2004
First Creek	E. coli	04/29/2005
Flatrock-Haw Creek	E. coli	09/22/2005
Galena River Watershed	E. coli	09/20/2010
Duck, Pipe, Killbuck, Stony Creek	E. coli	04/23/2008
Highland-Pigeon Creek	E. coli Phosphorus	09/07/2011
Indian Creek	E. coli	07/19/2005
Kankakee/Iroquois Watershed	E. coli	09/29/2009
Kessinger Ditch	E. coli	04/05/2005
Kokomo Creek	Dissolved Oxygen Ammonia	03/05/2001
Lake Michigan	E. coli	09/01/2004
Lambs Creek	E. coli	03/01/2006
Laughery Creek	E. coli Impaired Biotic Communities Nutrients Dissolved Oxygen	09/02/2020
Limberlost Creek	Nitrogen Phosphorus Total Suspended Solids	07/16/2007
Little Calument River and Burns Ditch	E. coli	01/28/2005
Maria Creek	E. coli Impaired Biotic Communities	09/14/2021
Mississinewa River, Upper	E. coli Impaired Biotic Communities	02/24/2017

Table 3-7 Indiana Watersheds with Approved Total Maximum Daily Loads

Watersheds	Parameter	Approval Date
Otter Creek	E. coli	09/20/2013
Pigeon River	E. coli Phosphorus	09/20/2012
Pleasant Run	E. coli	03/31/2004
Plummer Creek	E. coli	06/08/2006
Prairie Creek	E. coli	12/13/2004
Richland Creek	E. coli	08/03/2006
Salt Creek	E. coli	09/27/2004
Salt Creek (2012)	E. coli Impaired Biotic Communities	09/07/2012
Salt Creek, Lower	E. coli	09/10/2018
St. Joseph River (Lake Erie)	E. coli Phosphorus Total Suspended Solids	10/26/2017
St. Joseph River (Lake Michigan)	E. coli	07/21/2004
St. Marys and Maumee	E. coli Impaired Biotic Communities Nutrients	08/21/2006 09/22/2006
Sugar Creek	E. coli	05/14/2007
Trail Creek	E. coli	03/01/2004
Upper Mill Creek	E. coli	03/31/2005
Vernon Fork – Muscatatuck River	E. coli Impaired Biotic Communities Dissolved Oxygen	09/09/2022
Wabash River	E. coli Nutrients Impaired Biotic Communities Dissolved Oxygen pH	09/22/2006
White River, East Fork (Lower Watershed)	E. coli Impaired Biotic Communities Nutrients Dissolved Oxygen	12/19/2019
White River Headwaters, Upper	E. coli	09/20/2011
White River, Middle West Fork	E. coli	07/21/2005
White River, West Fork (Marion County to Waverly)	E. coli	03/31/2004
White River, West Fork (Muncie to Hamilton-Marion County Line)	E. coli	04/09/2004
Whitewater River, East Fork	E. coli	07/26/2007
Whitewater River, Southern	E. coli Nutrients Impaired Biotic Communities Dissolved Oxygen Siltation	09/30/2015
Whitewater River, West Fork	E. coli	04/02/2009

Table 3-7 Indiana Watersheds with Approved Total Maximum Daily Loads

Watersheds	Parameter	Approval Date
Wildcat Creek, Lower	E. coli	09/24/2010
Wildcat Creek, Middle	E. coli	09/24/2010
Wildcat Creek, South Fork	E. coli Nitrogen Phosphorus Total Suspended Solids	07/31/2008
Wildcat Creek, Upper	E. coli	09/24/2010

Source: IDEM, 2024c

3.5.2.2 Wetlands and Other Surface Waters

Indiana contains more than 1.7 million acres of wetlands. Of these, the majority (39.2%) consist of freshwater wetlands dominated by trees, shrubs, and emergent vegetation **(Table 3-8)** (USFWS, 2023). Other types of wetland ecosystems in Indiana include bogs, fens, swamps, and marshes. Ecological functions provided by wetlands include habitat for wildlife, including migrating birds and waterfowl. Wetlands also capture, store, and release floodwaters, filter pollutants, and are a source of groundwater recharge (IDEM, 2024d).

Table 3-8 Indiana Wetland Acreage

Classification	Acres	Percent of Total
Freshwater Forested/Shrub	672,623	39.2
Lake	364,099	21.2
Riverine	322,355	18.8
Freshwater Emergent	192,188	11.2
Freshwater Pond	162,847	9.5
Other	189	<0.1
Total	**1,714,301**	**100**

Source: USFWS, 2023

Activities involving draining, filling, clearing, or other types of disturbance in wetlands are subject to permits issued by the U.S. Army Corps of Engineers (USACE) and IDEM. USACE is responsible for determining the jurisdictional status of wetlands. Activities in wetlands having federal jurisdiction require a permit issued by USACE. IDEM issues permits for activities in state-regulated wetlands. IDEM also issues Water Quality Certifications in accordance with Section 401 of the CWA for activities affecting wetlands, which are a required prerequisite of a federal permit (IDEM, 2021a).

Under wetland conservation provisions of the 1985 Food Security Act, a drainage constructed in or near a wetland before December 23, 1985 may be maintained to the scope and effect of the drainage as originally constructed. Any additional drainage which would increase production, or allow the wetland to be farmed in additional years would be a potential violation of the provisions. If a wetland was converted after December 23, 1985, it cannot be used for commodity crop production to retain USDA program eligibility. A converted wetland is not subject to the wetland conservation provision if it is planted to a non-agricultural commodity, or a crop which does not

involve annual tilling of the soil (such as an apple orchard or grape vineyard) (USDA NRCS, 2024a).

3.5.2.3 Groundwater

Indiana is underlain by multiple bedrock and sand and gravel aquifers. Sand and gravel aquifers are relatively shallow and formed within glacial and alluvial deposits. Bedrock aquifers are generally deeper, underlying sand and gravel aquifers. In Indiana, 97% of all public water systems are supplied by groundwater. Approximately 54% of the state's population is served by systems utilizing groundwater (IDEM, 2021b). Sources of groundwater pollution in Indiana include commercial fertilizer applications, confined animal feeding operations, underground storage tanks, septic systems, and landfills, among others (IDEM, 2022). IDEM monitors groundwater quality in the state in accordance with Section 305(b) of the CWA.

Groundwater availability varies throughout the state. In northern Indiana, groundwater availability is considered good to excellent. Groundwater sources associated with the St. Joseph, Elkhart, Pigeon, Fawn, Eel, and Tippecanoe River valleys are capable of large groundwater production, with common well capacities exceeding 400 gallons per minute (gpm) or 0.6 million gallons per day (mgd). Groundwater availability in central Indiana is considered fair to good. Major groundwater sources are present in the valleys of the West Fork of the White, Whitewater, Eel, and Wabash Rivers, and in portions of the valleys of Eagle, Fall, and Brandywine Creeks and the Blue River. Well yields from 100 to 600 gpm or 0.15 to 0.9 mgd are typical for many large-diameter wells. Many areas of the southern part of the state are particularly lacking in groundwater, with well yields generally limited to less than 10 gpm. However, aquifers underlying the valleys of the Eel, Ohio, Wabash, and Whitewater Rivers as well as the East Fork, West Fork, and main stem of the White River can supply over 1,000 gpm or 1.4 mgd (IDNR, 2024b).

3.5.2.4 Floodplains

FEMA defines the 100-year floodplain as an area within which there is a 1% chance of inundation by a flood event in a given year. The 500-year floodplain is the area with a 0.2% chance of annual flooding (FEMA, 2023). Flooding risk is influenced by local topography, frequency of precipitation events, size of the watershed above the floodplain, and upstream development. In addition to the natural moderation, storage, and conveyance of floodwaters, ecosystem functions provided by floodplains include groundwater recharge, nutrient cycling, water quality maintenance, and habitat for plants and wildlife.

The National Flood Insurance Program administered by FEMA establishes minimum floodplain management standards. Indiana has established floodplain mapping and development criteria that exceed these minimum standards (IDNR, 2018). Development and other uses in floodplains in Indiana are regulated in accordance with the Indiana Flood Control Act (Indiana Code [IC] 14-28-1), Indiana Floodplain Management Act (IC 14-28-3), and Floodplain Management (312 Indiana Administrative Code 10) (IDNR, 2018).

Approximately 2.3 million acres of land in Indiana are within the 100-year floodplain, representing approximately 10% of the state's land area. Approximately 78,565 acres, or 0.3%, of the state, are within the 500-year floodplain (IndianaMap, 2023). Flood-prone areas are distributed throughout the state and are typically associated with major rivers and streams, and their tributaries.

3.5.3 Environmental Consequences Evaluation Criteria

Impacts on water resources would be considered significant if implementation of the Proposed Action resulted in exceedances or violations of applicable state or federal water quality criteria, increased the risk of flooding, threatened or damaged unique hydrologic characteristics, or violated established laws or regulations.

3.5.4 Environmental Consequences – Proposed Action Alternative

3.5.4.1 Surface Water and Water Quality

In the short term, vegetation clearing and soil disturbance associated with installation of the CPs could temporarily increase soil erosion and the corresponding sedimentation and turbidity of receiving water bodies, resulting in an adverse effect. Adherence to applicable BMPs during CP installation activities would prevent or minimize these effects to the extent practicable. Installation of the CPs would occur over a period of several years, rather than occurring simultaneously, and would be distributed throughout the state, further minimizing impacts. CP installation would not require new or additional withdrawals of surface water, the modification of existing stream channels, or the discharge of pollutants to surface water bodies. Potential impacts on surface waters would be evaluated and addressed during site-specific environmental reviews that would be conducted prior to enrolling new lands under the Proposed Action Alternative. Therefore, short-term adverse effects on surface water and water quality would not be significant.

In the long term, the expansion of the Indiana CREP and installation of associated CPs in additional areas of the state would have beneficial effects on water quality from the establishment of native vegetation, wetlands, and shallow water areas that would reduce sediments, pollutants, and nutrients in agricultural runoff. The installation of CPs adjacent to or upstream of impaired waters would help in the attainment of water quality objectives set forth in applicable TMDLs. The long-term maintenance of the CPs would not require new or additional withdrawals of surface water, the modification or other alteration of existing stream channels, or discharges of pollutants, and would not impede or prevent the achievement of TMDL objectives. Adherence to applicable BMPs during maintenance activities would minimize soil disturbance and the amount of sediments in runoff to the extent possible; any such disturbance and runoff would be relatively infrequent and small in the context of soil disturbing activities occurring throughout the state. Therefore, any potential adverse effects on water quality would not be significant.

3.5.4.2 Wetlands and Other Surface Waters

The installation of vegetation and establishment of new wetlands and shallow-water areas under CPs included in the Proposed Action Alternative could involve excavation, fill, vegetation removal, or other disturbances that would have short-term adverse effects on wetlands. Prior to conducting activities with the potential to disturb wetlands, project proponents would acquire and adhere to the requirements of applicable permits issued by USACE and/or IDEM. Site-specific environmental reviews conducted prior to enrolling new lands in the expanded CREP would identify potential wetland impacts and applicable avoidance, minimization, and/or mitigation measures. Adherence to wetland conservation provisions of the 1985 Food Security Act and applicable permitting requirements and BMPs, such as the use of silt fencing to prevent or minimize the discharge of sediments in runoff, would prevent or minimize short-term impacts on wetlands to the extent possible. The installation of CPs over a period of several years rather than

simultaneously, and the distribution of CPs throughout the state, would further minimize potential impacts. Therefore, any adverse effects on wetlands from the Proposed Action Alternative would not be significant.

In the long term, the restoration of wetlands under CP23 and CP23A would have beneficial effects by increasing the distribution, functions, abundance, and diversity of wetlands throughout the state. Newly established or restored wetlands would provide wildlife habitat and remove additional quantities of sediments, pollutants, and nutrients from agricultural runoff, thereby helping to improve water quality in receiving water bodies. The periodic maintenance of wetland vegetation installed under the CPs would be infrequent, would contribute to the health and optimal function of wetland ecosystems, and would be conducted in a manner that would minimize disturbance of wildlife, their habitat, and healthy vegetation. Therefore, any adverse long-term effects on wetlands under the Proposed Action Alternative would not be significant.

3.5.4.3 Floodplains

Activities associated with the installation of CPs in floodplains would be conducted in a manner that would prevent or minimize the potential to increase the volume or downstream displacement of floodwaters. Site-specific environmental reviews conducted prior to enrolling lands under the Proposed Action Alternative would evaluate the potential for localized floodplain impacts from CPs proposed for installation in the floodplain and would identify measures to prevent or minimize any such impacts. The installation of CPs in the floodplain under the Proposed Action Alternative would occur over a period of several years, rather than simultaneously; be distributed throughout the state; and would occur in relatively small areas in the context of all floodplains within the state, further minimizing potential impacts. The installation of CPs in the floodplain would adhere to all applicable regulatory requirements established by FEMA and the state of Indiana. Therefore, short-term adverse impacts on floodplains from the Proposed Action Alternative would not be significant.

In the long term, the establishment of additional CPs in floodplains throughout the state under the Proposed Action Alternative would improve floodplain functions, including the moderation, storage, and conveyance of floodwaters, groundwater recharge, nutrient cycling, water quality maintenance, and the provision of habitat for plants and wildlife. The improvement of these functions would generally represent a beneficial effect on floodplains. The periodic maintenance of vegetation installed in the floodplain under CPs included in the Proposed Action Alternative would be conducted in a manner that would not compromise these functions. Therefore, the Proposed Action Alternative would have beneficial long-term effects on floodplains, and any adverse effects would not be significant.

3.5.4.4 Groundwater

The installation and periodic maintenance of CPs under the Proposed Action Alternative would not involve new or additional groundwater withdrawals, the discharge of pollutants to groundwater, or the creation of new impervious surface that could inhibit groundwater recharge. The establishment of new vegetation and shallow-water areas under CPs included in the Proposed Action Alternative would increase the distribution of permeable surface throughout the state and contribute to improved groundwater recharge by promoting the infiltration and percolation of precipitation. Therefore, the Proposed Action Alternative would have beneficial long-term effects on groundwater. Any potential adverse effects would be temporary and not significant.

3.5.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on water resources in the state, but to a lesser extent because they would be limited to eligible lands in the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse effects on water resources from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.5.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

The Proposed Action would contribute to beneficial effects on water resources when considered with other reasonably foreseeable future actions listed in **Table D-1**, particularly those intended to improve water quality, floodplain functions, and groundwater recharge, or establish or restore wetlands. These beneficial effects would outweigh any potential adverse impacts associated with the installation and maintenance of CPs included in the Proposed Action, which would be temporary, infrequent, and distributed across relatively small areas throughout the state. Other reasonably foreseeable future actions, whether implemented by federal, state, or local agencies, or private landowners, would be required to comply with applicable permitting requirements to avoid, minimize, or mitigate potential adverse impacts on water resources. Therefore, any potential adverse impacts on water resources from the Proposed Action, when considered with adverse impacts from reasonably foreseeable future actions, would not contribute to cumulatively significant adverse impacts on water resources.

3.6 Air Quality

3.6.1 Definition of Resource

Air quality refers to the amounts and types of pollutants present in the ambient air. Air pollutants are emitted by numerous natural and human-built sources. Weather conditions and topography further influence the amounts and types of air pollutants that are present in a particular location.

USEPA has established standards in accordance with the federal Clean Air Act to manage emissions of select pollutants known to affect human health and the environment. These standards, known as National Ambient Air Quality Standards (NAAQS), are currently established for six criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (PM) including particulates equal to or less than 10 microns in diameter (PM_{10}) and particulates equal to or less than 2.5 microns in diameter ($PM_{2.5}$), and lead. Areas of a state that meet the NAAQS for all criteria pollutants are designated by USEPA as attainment areas. Areas in which the NAAQS are exceeded for one or more criteria pollutants are designated as non-attainment areas. Areas that were reclassified from a previous nonattainment status to attainment are designated as maintenance areas. For areas designated as nonattainment or maintenance for one or more criteria pollutants, the state must prepare a State Implementation Plan (SIP) or a Maintenance Plan to show how the area will meet or maintain the NAAQS within a specified timeframe.

Federal actions in NAAQS nonattainment and maintenance areas are also required to comply with the USEPA's General Conformity Rule (40 CFR Part 93). Federal actions are evaluated to

determine if project emissions would be below *de minimis* levels for each criteria pollutant as specified in 40 CFR § 93.153. If project emissions would be below *de minimis* levels (or are minimal), no further evaluation is required. If project emissions would exceed *de minimis* levels for any criteria pollutant, a detailed analysis of potential emissions is required.

Some areas of the United States have been designated by USEPA as Class I federal wilderness areas to address conditions where visibility is reduced due to the presence of pollutants in the ambient air (40 CFR §§ 81.410, 81.425, and 81.434). Class I areas include national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. To maintain good air quality in these pristine areas in the country, SIPs must also address visibility as an air quality issue.

Greenhouse gases (GHGs) are gases occurring from natural processes and human activities that trap heat in the atmosphere. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and are believed to contribute to global climate change. The USEPA regulates GHG emissions via permitting and reporting requirements that are applicable mainly to large stationary sources of emissions. Agricultural activities contribute directly to emissions of GHGs including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These emissions result through a variety of non-agricultural sources (e.g., fuel combustion, industrial processes) and agricultural sources, such as the use of diesel-fueled farm equipment, enteric fermentation, agricultural soil and manure management, and crop and field burning.

The area of analysis for air quality in this PEA consists of the airsheds that contains the Indiana counties included in the proposed CREP expansion. An airshed is a geographic area or region defined by settlement patterns or topography that shares the same air mass and results in discrete atmospheric conditions.

3.6.2 Affected Environment

3.6.2.1 Climate and Topography

Indiana is in the North American interior west of the Appalachian Mountains. The lack of mountains to the north and south expose the state to movements of bitterly cold air masses from the Arctic in the winter and warm, humid air masses from the Gulf of Mexico in the summer. Annual average temperature varies widely across the state, with a range of about 10 degrees Fahrenheit (°F) from north to south. In northwestern Indiana, Lake Michigan moderates the temperature, causing cooler summers and warmer winters. Lake Michigan is also the source of lake-effect snows, which can extend as far inland as Elkhart (north-central Indiana) (National Oceanic and Atmospheric Administration [NOAA], 2022). Indiana's topography is characterized by vast flat plains in the northern two-thirds of the state. The south has an abundance of hills, ridges, caves, and waterfalls. Land elevations range from 324 feet above sea level at the mouth of the Wabash River in the southwest corner of the state to 1,257 feet in far east-central Indiana. South-central Indiana has the most rugged terrain and is home to the Hoosier National Forest. Many small lakes are present in northeastern Indiana among numerous glacial moraines and hills (NOAA, 1960).

January is typically the coldest month of the year with the highest average maximum daily temperatures ranging from 33° to 42°F north to south across Indiana. July is the warmest month with highest daily maxima averaging 84° to 89°F and minima averaging 64° to 71°F north to south.

Annual precipitation varies widely across the state, ranging from about 47 inches in the south to 37 inches in the north. For snowfall, the southwest averages about 14 inches and some northern locations near Lake Michigan average more than 70 inches. Prevailing winds average near 10 miles per hour and travel generally from the southwest during most of the year. During winter months winds prevail from a northerly direction and are more persistent (NOAA, 2022).

Temperatures in Indiana have risen almost 1.5°F since the beginning of the 20th century. Warming has been concentrated in winter and spring, while summers have not warmed substantially, a feature characteristic of much of the Midwest. Annual precipitation has varied from a low of 29.1 inches in 1963 to a high of 55.2 inches in 2011. Indiana has also experienced an increase in the number of extreme precipitation events, which can cause severe flooding. Increases in precipitation are projected for Indiana, most likely during the winter and spring. The frequency and intensity of extreme precipitation events are also projected to increase, potentially increasing the frequency and intensity of floods. The intensity of future droughts is projected to increase even if precipitation increases. Rising temperatures will increase evaporation rates and the rate of soil moisture loss (NOAA, 2022). Drought can influence agriculture and agricultural air pollutant emissions significantly. Ground that is drier is more likely to generate dust, leading to worsened air quality.

3.6.2.2 Existing Status of Air Quality and Air Emissions

IDEM is responsible for meeting and maintaining the federal NAAQS in Indiana. IDEM has implemented a network of 72 air monitoring sites across the state to monitor ambient (outdoor) levels of criteria pollutants (IDEM, 2024e). Air monitoring data indicates all counties in Indiana to be in attainment of the NAAQS, except portions of Lake, Porter, and Huntington Counties where measured concentrations of one or more criteria pollutant exceeds the NAAQS **(Figure 3-2)** (IDEM, 2024f; IDEM, 2024g; USEPA 2024a).

As shown on **Figure 3-2**, parts of Lake and Porter Counties are designated as nonattainment for the 2015 8-hour ozone NAAQS. Also, Huntington Township in Huntington County is in nonattainment for the 2010 primary 1-hour SO_2 NAAQS. Pollutant concentrations are greater than the NAAQS in these areas due to significant emissions from large industrial facilities, such as electric power generating units, iron and steel companies, and large chemical manufacturers. The attainment status of other Indiana counties generally indicates that ambient air quality in those counties is considered good. No mandatory Class I areas are within or close to Indiana; therefore, issues related to visibility and regional haze are not considered further in this PEA.

Air pollution from agricultural and non-agricultural sources is harmful to human health. USEPA's 2020 National Emissions Inventory data estimates criteria air pollutant (CAP) emissions from crops and livestock dust, fertilizer application, livestock waste and agricultural field burning. In Indiana, combined emissions from these agricultural sources are estimated to be approximately 10% of the total CAP emissions from all sources in the state (USEPA, 2020). USEPA's CAP-related emissions include ammonia, CO, lead, N_2O, particulate matter (PM_{10}, $PM_{2.5}$, organic carbon and black carbon), SO_2, and volatile organic compounds. Particulate emissions of PM_{10} and $PM_{2.5}$ are approximately 38% and 7% of the total CAP emissions from agricultural sources.

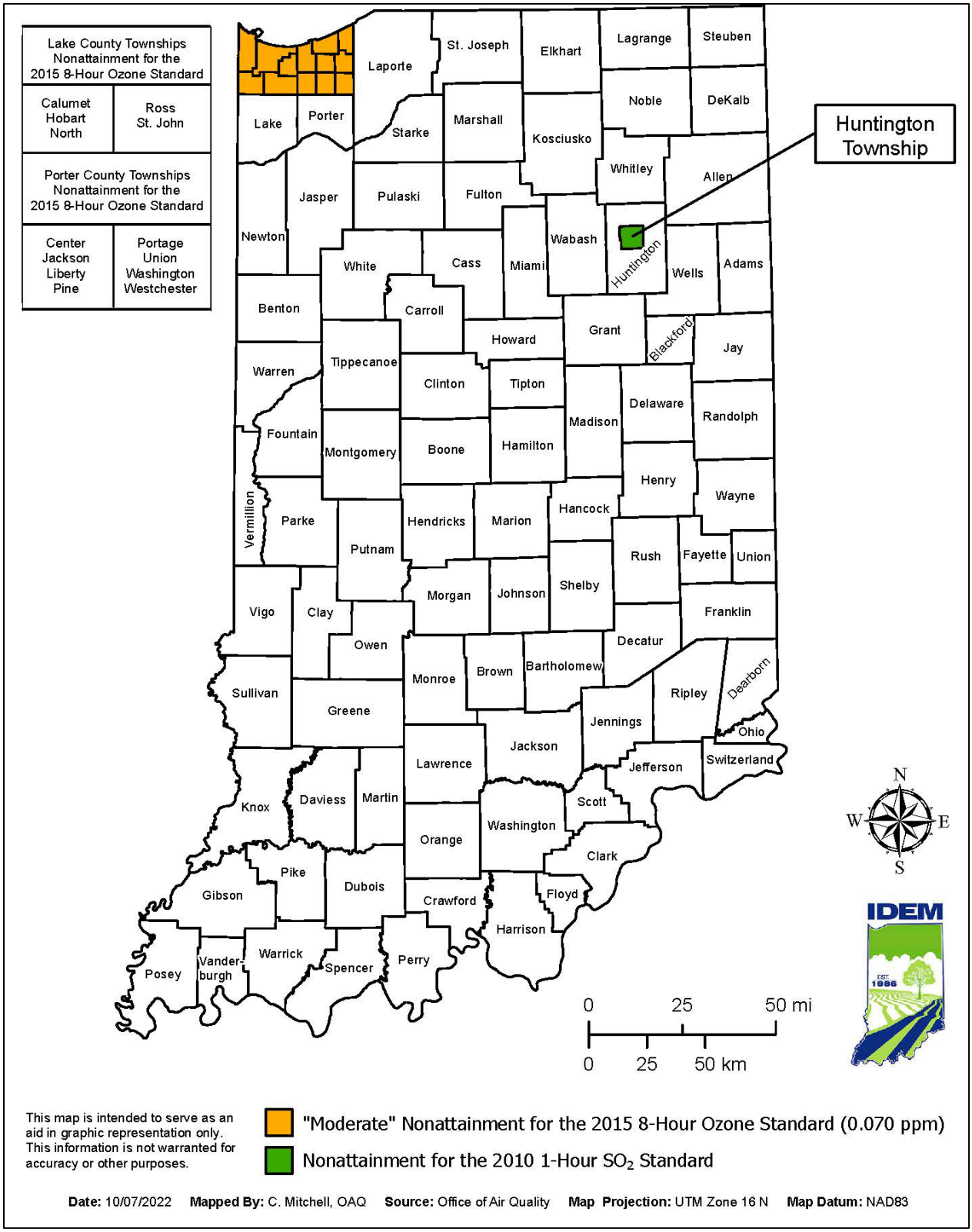

Figure 3-2 Current Nonattainment Areas in Indiana

Source: IDEM, 2024h.

In 2022, the agriculture sector was responsible for 593.4 million metric tons CO_2 equivalent emissions, or 9.4% of total GHG emissions for the United States. Emissions of N_2O by agricultural soil management through activities such as fertilizer application and other agricultural practices that increased nitrogen availability in the soil was the largest source of N_2O emissions in the United States, accounting for 75.2% (USEPA, 2024b). In Indiana, the agriculture sector was responsible for 13.1 million metric tons of CO_2- equivalent emissions, or 7% of the state's total GHG emissions (USEPA, 2023c).

3.6.3 Environmental Consequences Evaluation Criteria

Impacts on air quality in areas of Indiana designated as in attainment would be considered significant if air emissions associated with the Proposed Action would result in an exceedance of one or more of the NAAQS. Impacts would also be considered significant if:

- Any national, state, or local ambient air quality standard would be violated by pollutant emissions associated with the Proposed Action;
- Sensitive receptors (e.g., residential areas, hospitals) would be exposed to substantially increased pollutant concentrations during implementation of the Proposed Action; or
- Pollutant emissions associated with the Proposed Action would exceed any significance criteria established by the SIP.

For this analysis, impacts on GHG emissions from the Proposed Action are evaluated qualitatively because the location and size of lands where CPs would be installed under the Proposed Action is not currently known.

3.6.4 Environmental Consequences – Proposed Action Alternative

The Proposed Action Alternative would potentially result in beneficial long-term effects on air quality. However, it is likely that such beneficial effects would not be substantial enough to result in changes to the existing air quality status of the airsheds in which the Proposed Action Alternative would be implemented.

Studies that show a direct link between CPs and air quality are rare and thus, potential impacts on air quality are addressed qualitatively in this PEA. Implementation of CPs would help improve air quality by decreasing the use of heavy machinery and the application of synthetic fertilizers on tracts of farmland that would be enrolled under the expanded CREP, if implemented.

Activities involving vegetation clearing, soil disturbance, and operation of heavy equipment and vehicles would occur during the installation of CPs. These activities would have the potential to adversely affect local air quality through the release of fine dust, toxic gases, and other emissions of criteria pollutants. Air pollution from heavy equipment is common on agricultural lands and farmlands that could be enrolled under the Proposed Action Alternative. The potential for increased air pollution levels associated with installation of the CPs would be localized, small relative to air pollutant emissions from agriculture, farming, and other sources in the state, and would cease upon completion of CP installation activities. Further, emissions would be minimized using BMPs such as erosion control fencing, temporary vegetative buffers, erosion control blankets, or similar measures. Generally, pollutant emissions from the installation and maintenance of CPs would represent a substantial decrease from emissions associated with typical farming and agricultural

practices. For these reasons, adverse short-term and long-term impacts on air quality would not be significant.

The Proposed Action Alternative would have beneficial effects on air quality from the reduction in GHG and criteria pollutant emissions that would result from the establishment of vegetation and shallow water areas under the CPs on selected tracts of farmland and the corresponding reduction of agricultural activities occurring on those lands, such as land preparation, burning fossil fuels, and the application of fertilizers and herbicides. Air quality would also benefit in the long term from increased capture and storage of carbon dioxide by vegetation that would be planted under the CPs. The potential for carbon sequestration and the potential reduction in criteria pollutant emissions would have an overall beneficial impact on air quality but would be small in the context of statewide GHG emissions.

Many of the CPs included in the Proposed Action Alternative include restoration of grassland and wetland habitats or establishing and maintaining forest cover. Establishing and maintaining forest cover, and specifically, planting of native and other desirable plant and tree species, would allow for an increased level of capture and storage of atmospheric carbon as compared to that for agricultural land. Trees reduce the amount of carbon in the atmosphere by sequestering carbon in new tissue growth and can help mitigate climate change. Implementation of the Proposed Action Alternative would also reduce other GHG emissions, such as N_2O and CH_4 due to a reduction in certain agricultural activities, including manure management and livestock enteric fermentation. Increasing vegetative cover would also reduce particulate matter emissions because of decreased wind erosion, thereby further benefitting air quality.

Activities such as grading, compacting, site preparation and debris removal associated with CP installation and maintenance could produce dust or release particulate matter into the air. These emissions would primarily be fugitive in nature and temporary. Watering exposed soil during and after such ground-disturbing activities would reduce dust emissions. The use of diesel vehicles and heavy-duty equipment, such as tractors, backhoes, rolling harrows, and cultipackers, for site preparation, tilling, and seed-bed preparation, would emit air pollutants as exhaust emissions from the combustion of fuel. These emissions would be small in the context of agricultural and farming emissions throughout the state, would be distributed across a period of several years rather than occurring simultaneously, and would cease upon the completion of CP installation activities. In general, pollutant emissions from the installation and maintenance of CPs would likely represent a net decrease relative to emissions from intensive agricultural production.

None of the CREP installation and maintenance activities would be anticipated to cause or contribute to a violation of any NAAQS or expose sensitive receptors to substantially increased pollutant concentrations. Overall, the Proposed Action Alternative would be expected to have beneficial long-term effects on air quality from increased carbon sequestration associated with additional vegetative cover and reductions in emissions from agricultural activities.

3.6.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on air quality in the state, but to a lesser extent because they would be limited to eligible lands within the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse

effects on air quality from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.6.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

The Proposed Action would contribute to beneficial effects on air quality when considered with other reasonably foreseeable future actions listed in **Table D-1**, particularly federal, state, and local conservation programs that would indirectly benefit air quality through the establishment of native vegetation and wetlands. These beneficial effects would outweigh any potential adverse impacts associated with the installation and maintenance of CPs included in the Proposed Action, which would be temporary, infrequent, and distributed across relatively small areas throughout the state. Other reasonably foreseeable future actions would be required to comply with applicable permitting requirements to prevent or minimize criteria pollutant emissions and the corresponding degradation of ambient air quality. Therefore, any potential adverse impacts on air quality from the Proposed Action, when considered with adverse impacts from reasonably foreseeable future actions, would not contribute to cumulatively significant adverse impacts on air quality.

3.7 Soils

3.7.1 Definition of Resource

Soil consists of unconsolidated mineral and organic materials on the Earth's surface that serves as a natural medium for the growth of plants (USDA NRCS, 2024b). The 1985 Food Security Act included provisions addressing highly erodible lands that are intended to (USDA NRCS, 2024c):

- reduce soil loss due to wind and water erosion;
- protect the long-term capability of the United States to produce food and fiber;
- reduce sedimentation and improve water quality; and
- assist in preserving the values, acreage, and functions of wetlands in the United States.

To maintain eligibility for most USDA programs, producers must comply with the conservation provisions, agreeing they will not:

- produce an agricultural commodity on highly erodible land without an adequate conservation system;
- plant an agricultural commodity on a converted wetland; or
- convert a wetland to make possible the production of an agricultural commodity.

3.7.2 Affected Environment

Indiana is within three major Land Resource Regions defined by USDA **(Figure 3-3)** (USDA NRCS, 2022):

- Central Feed Grain and Livestock Region
- Lake States Fruit, Truck Crop, and Dairy Region
- East and Central Farming and Forest Region

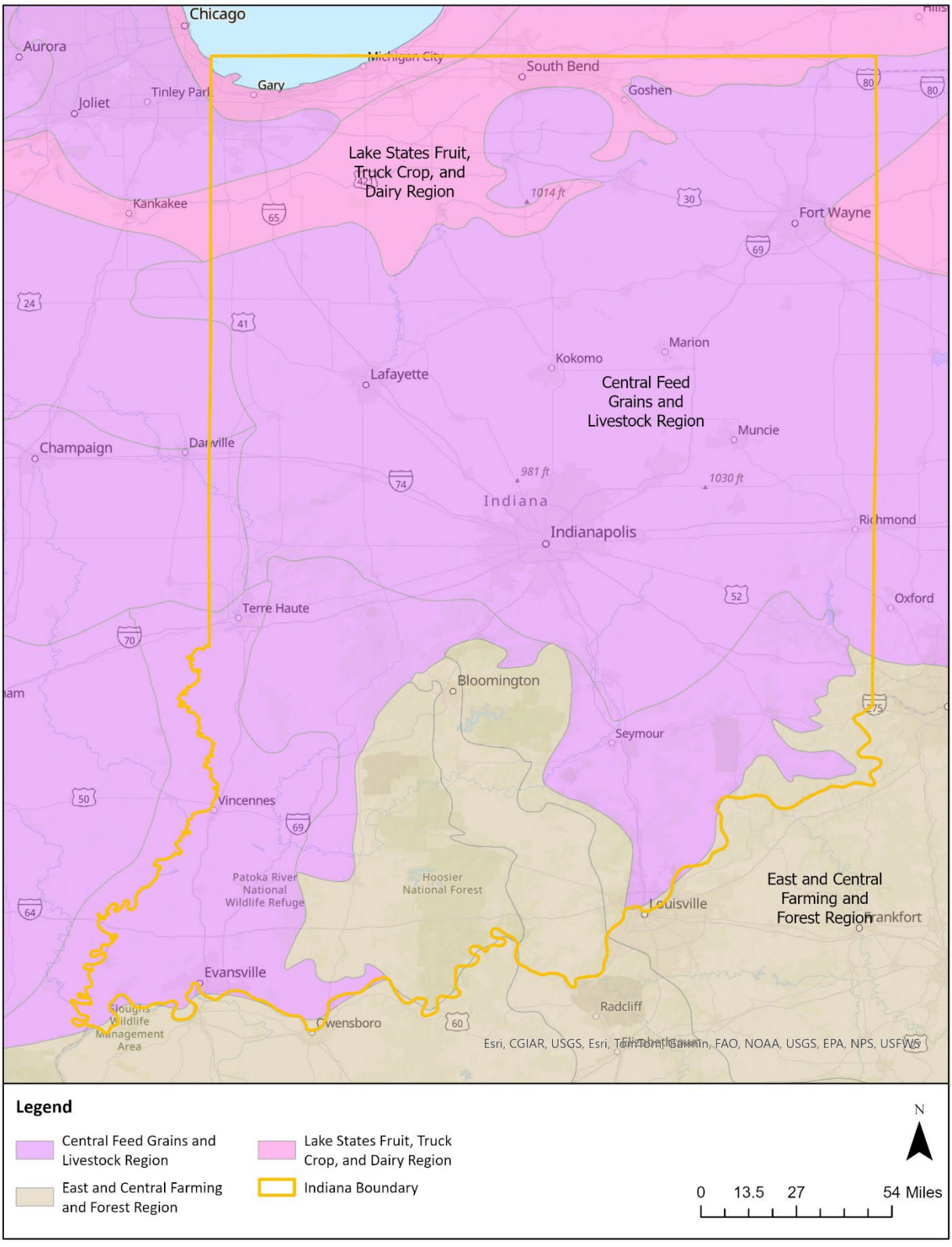

Figure 3-3 U.S. Department of Agriculture Land Resource Regions in Indiana

The majority of Indiana is within the Central Feed Grains and Livestock Region. This region primarily contains Entisol, Inceptisol, and Mollisol soil orders. Soil order characteristics are summarized in **Table 3-9**. Soil resource concerns in this region include water erosion, saturation, and maintenance of soil organic matter and soil productivity, as well as protecting surface and groundwater quality, and preservation of wildlife habitat. Wind erosion is a concern in the northern portion of this region.

Table 3-9 Soil Order Descriptions

Soil Order	Associated Land Resource Region(s)	Soil Order Description
Alfisols	• Lake States Fruit, Truck Crop, and Dairy Region • East and Central Farming and Forest Region	These soils are present in semiarid to moist areas. They form primarily under forest or mixed vegetative cover and are productive for most crops.
Entisols	• Central Feed Grains and Livestock Region • Lake States Fruit, Truck Crop, and Dairy Region • East and Central Farming and Forest Region	Entisols occur in areas of recently deposited parent materials or in areas where erosion or deposition rates are faster than the rate of soil development, such as dunes, steep slopes, and floodplains. They are present in many environments.
Inceptisols	• Central Feed Grain and Livestock Region • East and Central Farming and Forest Region	Inceptisols occur in a wide variety of environments. They generally exhibit only moderate degrees of soil weathering and development.
Mollisols	• Central Feed Grain and Livestock Region	Mollisols have a dark-colored surface horizon relatively high in organic matter content and are very fertile.
Spodosols	• Lake States Fruit, Truck Crop, and Dairy Region	Spodosols commonly occur in areas of coarse-textured deposits under coniferous forests of humid regions. They tend to be acidic and infertile.
Ultisols	• East and Central Farming and Forest Region	Utilisols are typically acid soils in which most nutrients are concentrated in the upper few inches. They have a moderately low capacity to retain additions of lime and fertilizer.

Source: USDA NRCS, n.d.

Portions of northern Indiana are within the Lake States Fruit, Truck Crop, and Dairy Region. Soil orders in this region consist of Alfisols, Entisols, and Spodosols. Soil management concerns in this region include controlling the movement of sediments and pesticides by water and wind, reducing excess moisture on croplands, conserving soil moisture in drought-prone areas, improving fertility and tilth, and preserving water quality, wetlands, fish and wildlife habitat, and prime farmland.

The south-central portion of Indiana is within the East and Central Farming and Forest Region. Soil orders within this region are primarily Alfisols, Entisols, Inceptisols and Ultisols. Soil resource concerns in this region are soil productivity, erosion control, and prevention of groundwater contamination. Forestland concerns include erosion control as a result of agricultural practices and forest productivity.

3.7.3 Environmental Consequences Evaluation Criteria

Adverse impacts on soils would be significant if the Proposed Action permanently changed soil composition, structure, or function, increased soil erosion and downstream sedimentation, or affected unique soil conditions. Short-term and long-term impacts on soils would generally be prevented or minimized through adherence to applicable BMPs such as the use of silt fences, covering temporary soil stockpiles, seeding soils that would be exposed for extended periods, and planting any soils that would remain exposed following the installation of CPs.

3.7.4 Environmental Consequences – Proposed Action Alternative

Under the Proposed Action Alternative, beneficial long-term effects on soils would be expected from the localized stabilization of soils. Establishing permanent native grasses (*CP-2*), hardwood trees (*CP-3A*), and wildlife habitats (*CP-4D*) on former croplands would reduce soil erosion and the amounts of sediments, pollutants, and nutrients in agricultural runoff. Implementing shallow water areas for wildlife (*CP-9*) would provide water, food, and cover for wading birds, small mammals, and beneficial insects while also reducing downstream flood damage and improving water quality by intercepting sediment and nutrients. Planting grassed filter strips (*CP-21*) and riparian buffers (*CP-22*) would reduce erosion and sedimentation by stabilizing stream banks. Restoring wetlands (*CP-23, CP-23A*) and bottomland timber establishment on wetlands (*CP-31*) would promote aquatic, emergent, and woody vegetation that would slow the velocity of water runoff and reduce the scouring effects of flooding.

Short-term soil disturbance during implementation of the CPs could include grading, leveling, tilling, or installation of various structures such as fences and temporary irrigation features. These activities could result in temporary increases in soil erosion; however, these increases would be minimized through adherence to applicable erosion and sediment control measures such as establishing stable grades, installing silt and erosion fencing, applying water to limit airborne dust in windy environments, using mulch, and establishing temporary vegetated buffer strips; as well as following the requirements of NRCS Practice Code 638-Wetland Creation, Code 460-Land Clearing, and Code 484-Mulching. Adherence to highly erodible lands provisions of the 1985 Food Security Act and applicable BMPs and requirements established by FSA would minimize erosion and soil compaction during CP installation to the extent possible. Any short-term adverse effects on soils from installation of the CPs would occur over a period of several years rather than simultaneously; occur in relatively small areas in the context of eligible lands within the state and distributed throughout the state rather than being concentrated in one area; and would cease upon the completion of installation activities. For these reasons, any short-term adverse effects on soils would not be significant.

In the long term, the Proposed Action Alternative would not involve ongoing soil disturbance, other than minor, infrequent, and highly localized disturbance from periodic maintenance activities. Any adverse effects on soils from these activities would not be significant. Overall, the establishment of native vegetation under the Proposed Action Alternative would prevent or minimize the potential for ongoing soil erosion and promote soil retention, thereby resulting in beneficial long-term effects on soils.

3.7.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on soils in the state, but to a lesser extent because they would be limited to eligible lands in the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse effects on soils from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.7.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

The Proposed Action would generally have beneficial effects on soils. These beneficial effects would outweigh temporary and localized adverse effects on soils from the installation and periodic maintenance of CPs included in the Proposed Action. Other reasonably foreseeable actions listed in **Table D-1** involving land disturbance would be required to comply with applicable permitting requirements and BMPs to prevent or minimize soil erosion, increased sedimentation of receiving water bodies, and other adverse effects on soils. Therefore, any potential adverse impacts on soils from the Proposed Action, when considered with adverse impacts from reasonably foreseeable future actions, would not contribute to cumulatively significant adverse impacts on soils.

3.8 Other Protected Resources

3.8.1 Definition of Resource

Other protected resources are lands preserved and managed by the state or federal government for the purpose of conservation, recreation, or research. This includes NHLs, National Wildlife Refuges, Wetland Management Districts, Wild and Scenic Rivers, and American Indian Reservations. NHLs preserve historic properties that represent an outstanding aspect of American history and culture and are managed by NPS. The USFWS manages National Wildlife Refuges and Wetland Management Districts which are protected public lands and waters that conserve America's fish, wildlife, plants, and people. Wild and Scenic Rivers are designated under Public Law 90-542 and are defined as rivers with outstanding natural, cultural, and recreational values preserved in a free-flowing condition for the enjoyment of present and future generations (National Wild and Scenic Rivers, 2024a). These rivers are managed by the National Wild and Scenic Rivers System Interdisciplinary Council composed of four federal land agencies including the Bureau of Land Management, NPS, USFWS, and the U.S. Forest Service. American Indian reservations are tracts of land governed by a federally recognized tribal nation and are accountable to the BIA (consultation with Native American tribes having ancestral ties to lands in Indiana is discussed in **Section 3.4**).

3.8.2 Affected Environment

NHLs within the boundaries of watersheds included in the existing Indiana CREP are listed in **Table 3-10**. NHLs within watersheds included in the Proposed Action are listed in **Table 3-11**. **Table 3-12** and **Table 3-13** lists the National Wildlife Refuges and the National Wild and Scenic Rivers located in Indiana. No Wetland Management Districts or federally recognized Native American tribes are physically located in Indiana (BIA, 2024); however, at least 18 Native

American tribes have ancestral ties to lands in Indiana (HUD, 2024). Consultation with these tribes is discussed in **Section 3.4**.

Table 3-10 National Historic Landmarks within the Boundaries of the Existing Conservation Reserve Enhancement Program Area

National Historic Landmark[1]	Watershed Subbasin	County	List Date	Period of Significance	Area of Significance
West Baden Springs Hotel	Lower East Fork White	Orange	02/27/1987	1900-	Eng; Rec
Angel Mounds State Memorial	Lower Ohio-Little Pigeon	Vanderburgh	01/29/1964	Prehistoric; 1400 to1499; 1500 to 1599	Archeology: Prehistoric
New Harmony Historic District	Lower Wabash	Posey	06/23/1965	1900-	Social / Human
Grouseland	Middle Wabash-Busseron	Knox	12/19/1960	1800 to 1899	Military; Politics / Govt
Debs, Eugene V., Home	Middle Wabash-Busseron	Vigo	11/13/1966	1900-	Commerce; Industry
Samara (John and Catherine Christian House)	Middle Wabash-Little Vermillion	Tippecanoe	02/27/2015	1956	Architectural; Arch
Fort Ouiatenon Archeological District	Middle Wabash-Little Vermillion	Tippecanoe	01/13/2021	1717 to 1791	Commerce; Military; Political
Tippecanoe Battlefield	Middle Wabash-Little Vermillion	Tippecanoe	100/9/1960	1900-	Military; Politics / Govt
Wallace Circus Winter Headquarters	Mississinewa	Miami	02/27/1987	1800 to 1899; 1900-	Rec
First Baptist Church	Upper East Fork White	Bartholomew	05/16/2000	1965	Arch
McDowell, Mabel, Elementary School	Upper East Fork White	Bartholomew	01/03/2001	1960	Arch
Indiana War Memorials Historic District [2]	Upper White	Marion	10/11/1994	1921 to 1950	Community P&D; Arch; Art
Athenaeum (Das Deutsche Haus)	Upper White	Marion	10/31/2016	1893 to 1898	Arch; Physical Fitness; Social / Human
Madame C.J. Walker Manufacturing Company	Upper White	Marion	07/17/1991	1927 to 1940	Ethnic Heritage: Black; Commerce Invention; Social History; Ent / Rec
Oldfields (J.K. Lillie Home)	Upper White	Marion	07/31/2003	1909 to 1966	Landscape Arch; Health / Medicine
Riley, James Whitcomb, House	Upper White	Marion	12/29/1962	1800 to 1899; 1900-	Literature
Harrison, Benjamin, Home	Upper White	Marion	01/29/1964	1800 to 1899	Military; Politics / Govt

Table 3-10 National Historic Landmarks within the Boundaries of the Existing Conservation Reserve Enhancement Program Area

National Historic Landmark[1]	Watershed Subbasin	County	List Date	Period of Significance	Area of Significance
Broad Ripple Park Carousel	Upper White	Marion	02/27/1987	1800 to 1899; 1900-	Rec
Indianapolis Motor Speedway	Upper White	Marion	02/27/1987	1900-	Rec
Butler Fieldhouse	Upper White	Marion	02/27/1987	1900-	Sports (Basketball)

Notes:
Sources: NPS, 1973a; NPS, 1989; NPS, 1992a; NPS, 2018; NPS, 2021a; NPS, 2024b; IDEM, 2024i
[1] Managed by the National Park Service
[2] Formerly known as Indiana World War Memorial Plaza Historic District

Arch = Architecture
Eng = Engineering
Ent = Entertainment
Govt = Government
Human = Humanitarian
P&D = Planning and Development
Rec = Recreation

Table 3-11 National Historic Landmarks within the Boundaries of the Proposed Conservation Reserve Enhancement Program Area

National Historic Landmark[1]	Watershed Subbasin	County	List Date	Period of Significance	Area of Significance
Spencer Park Dentzel Carousel	Eel (WR)	Cass	02/27/1987	1900-	Rec
First Christian Church	Flat Rock-Haw	Bartholomew	01/03/2001	1942	Archeology: Prehistoric
Irwin Union Bank and Trust	Flat Rock-Haw	Bartholomew	05/16/2000	1954	Social / Human
Miller House	Flat Rock-Haw	Bartholomew	05/16/2000	1957	Military; Politics / Govt
North Christian Church	Flat Rock-Haw	Bartholomew	05/16/2000	1964	Comm; Industry
The Republic (Myron Goldsmith)	Flat Rock-Haw	Bartholomew	10/16/2012	1969 to 1971	Arch; Architectural
Bailly, Joseph, Homestead	Little Calumet-Galien	Porter	12/29/1962	1800 to 1899; 1900-	Comm; Exp / Stlmnt; Arch; Social / Human
Cannelton Cotton Mills	Lower Ohio-Little Pigeon	Perry	07/17/1991	1849	Arch; Industry
Lincoln Boyhood Home (Abraham Lincoln)	Lower Ohio-Little Pigeon	Spencer	12/19/1960	1800 to 1899; 1900-	Landscape Arch; Art; Politics / Govt; Arch; Agriculture
Gaff, Thomas, House (Hillforest)	Middle Ohio-Laughery	Dearborn	10/05/1992	1853 to 1855	Arch
Webster, Marie, House	Mississinewa	Grant	11/04/1993	1909 to 1942	Art; Social History
Eleutherian College Classroom and Chapel Building	Muscatatuck	Jefferson	02/18/1997	1854 to 1861	Social History; Ethnic Heritage: Black; Education

Table 3-11 National Historic Landmarks within the Boundaries of the Proposed Conservation Reserve Enhancement Program Area

National Historic Landmark[1]	Watershed Subbasin	County	List Date	Period of Significance	Area of Significance
Studebaker, Clement, House	St. Joseph (MI)	St. Joseph	12/22/1977	1800 to 1899; 1900-	Industry; Trans
Auburn Cord Duesenberg Automobile Facility	St. Joseph (OH)	Dekalb	04/05/2005	1923 to 1936	Comm; Industry; Trans
Allen County Courthouse	Saint Marys	Allen	07/31/2003	1896 to 1902	Arch
Akima Pinšiwa Awiiki (Chief Jean-Baptiste de Richardville House)	Saint Marys	Allen	03/02/2012	1827 to 1841	Ethnic Heritage: Native American
Lanier Mansion (James F.D. Lanier)	Silver-Little Kentucky	Jefferson	04/19/1994	1840 to 1844	Arch; Comm
Madison Historic District	Silver-Little Kentucky	Jefferson	03/20/2006	1806 to 1860	Agriculture; Trans; Comm; Historic
Shrewsbury, Charles, House	Silver-Little Kentucky	Jefferson	04/19/1994	1846 to 1849	Arch
Duck Creek Aqueduct (Whitewater Canal)	Whitewater	Franklin	08/25/2014	1838 to 1923	Arch; Eng; Trans
Montgomery County Jail and Sheriff's Residence	Sugar	Montgomery	12/11/2023	1882	Arch; Eng; Social / Human
Wallace, General Lew, Study	Sugar	Montgomery	05/11/1976	1800 to 1899	Literature; Military; Politics / Govt
West Union Bridge	Sugar	Parke	12/23/2016	1876	Eng; Trans
Coffin, Levi, House	Whitewater	Wayne	06/23/1965	1800 to 1899	Social / Human

Notes:
Sources: NPS, 1973b; NPS, 1975; NPS, 1992b; NPS, 2018; NPS, 2021b; NPS, 2024b; IDEM, 2024i
[1]Managed by the National Park Service

Arch = Architecture
Comm = Commerce
Eng = Engineering
Exp = Exploration
Govt = Government
Human = Humanitarian
Stlmnt = Settlement
Trans = Transportation

Table 3-12 National Wildlife Refuges within the Boundaries of the Proposed Conservation Reserve Enhancement Program Area

National Wildlife Refuge[1]	Watershed Subbasin	County	Description
Big Oaks National Wildlife Refuge	Muscatatuck	Ripley, Jefferson, Jennings	This 50,000-acre refuge designated as a Globally Important Bird Area provides habitat for many rare species of plants and animals within wetlands, grasslands, shrublands, and forests. The refuge covers a portion of the former Jefferson Proving Ground, a munitions testing facility operated by the U.S. Army between 1940-1995. Historic buildings and stone bridges are also present on the refuge along with a 165-acre lake known as Old Timbers Lake.

Table 3-12 National Wildlife Refuges within the Boundaries of the Proposed Conservation Reserve Enhancement Program Area

National Wildlife Refuge[1]	Watershed Subbasin	County	Description
Muscatatuck National Wildlife Refuge	Muscatatuck	Jackson, Jennings, Monroe	This refuge was established in 1966 for migratory birds and been designated as a Continentally Important Bird Area. The refuge includes 7,724-acres near Seymour and the 78-acre Restle Unit near Bloomington that includes a flat to gently rolling mix of bottomland and upland forest, wetland, brushland and grassland habitat.
Patoka River National Wildlife Refuge and Management Area	Patoka	Pike, Gibson	This refuge was established in 1994 under the authority of the Emergency Wetlands Resource Act to protect one of the few remaining expanses of bottomland forested wetlands in the Midwest and one of two intact floodplain forest systems.

Notes:
Sources: USFWS, n.d.a; USFWS, n.d.b; USFWS, n.d.c; USFWS, 2024b; IDEM, 2024i
[1] Managed by the U.S. Fish and Wildlife Service

Table 3-13 National Wild and Scenic Rivers within the Boundaries of the Proposed Conservation Reserve Enhancement Program Area

National Wild & Scenic Rivers[1]	Watershed Subbasin	Counties	Description
Blue River	Blue-Sinking	Harrison, Crawford, Washington	Designated as a scenic river from river miles 57 downstream to 42; as a natural river from river miles 32 downstream to 22; as a recreational river from river miles 42 downstream to 32 and from river miles 22 downstream to 11.5. Some uses and activities are governed by the Blue River Commission to maintain the river's natural and scenic qualities.
Cedar Creek	St. Joseph (OH)	Allen, DeKalb	Designated as a recreational river from river mile 13.7 to the confluence with the St. Joseph River.
Wildcat Creek	Wildcat	Tippecanoe, Carroll	Designated as a scenic river from the North Fork in Tippecanoe and Carroll Counties from river mile 43.11 to river mile 4.82 and the South Fork in Tippecanoe County from river mile 10.21 to river mile 0.00.

Notes:
Sources: IDEM, 2024i; IDNR, 2024c; National Wild and Scenic Rivers System, 2024b
[1] Managed by the Natural, Scenic, and Recreational River System Interdisciplinary Council (Bureau of Land Management, National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Service)

3.8.3 Environmental Consequences Evaluation Criteria

Impacts on other protected resources would be significant if the Proposed Action impeded or prevented the conservation or research mission, or other key functions, of a particular resource and could not be avoided, minimized, or mitigated through coordination with the managing or responsible agency. For example, an impediment to or prevention of public access or experience

at a national park, wildlife refuge, or historic landmark that could not be prevented, minimized, or mitigated through coordination with the NPS or USFWS would be considered an adverse impact.

3.8.4 Environmental Consequences – Proposed Action Alternative

The Proposed Action Alternative would be implemented on privately owned lands and would have no direct physical impacts on other protected resources. It is unlikely that activities associated with the installation and long-term maintenance of CPs included in the Proposed Action Alternative on private lands would be noticeable to users or visitors to other protected resources. If site-specific environmental reviews of lands proposed for enrollment determine that noise, increased human activity, fugitive dust, or other temporary effects from CP installation and maintenance activities could be noticeable at adjacent or nearby other protected resources, FSA would coordinate with the responsible managing agency to develop and implement measures that would prevent or minimize these effects on users or visitors at the resource. Any such effects would cease upon completion of the installation and maintenance activities and, in the case of periodic maintenance activities, would occur infrequently. Therefore, potential adverse short-term or long-term effects on other protected resources from the Proposed Action Alternative would not be significant.

Generally, the establishment of native vegetation, wetlands, and shallow water habitat in additional areas of the state under the Proposed Action Alternative, and corresponding improvements to water quality, wildlife, wildlife habitat, and aesthetics, would be expected to have beneficial long-term effects on other protected resources near or adjacent to lands where CPs would be installed.

3.8.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and *CP9* would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on other protected resources in the state, but to a lesser extent because they would be limited to eligible lands in the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse effects on other protected resources from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.8.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Beneficial effects from the Proposed Action, when considered with beneficial effects from reasonably foreseeable future actions listed in **Table D-1**, particularly other federal, state, and local conservation programs, would contribute to cumulatively beneficial effects on other protected resources in the vicinity of lands enrolled in the Indiana CREP under the Proposed Action. Any potential adverse effects on other protected resources from the Proposed Action, which would be temporary and occur in relatively small areas throughout the state, would not contribute to cumulatively significant adverse effects when considered with reasonably foreseeable future actions.

3.9 Socioeconomics and Recreation

3.9.1 Definition of Resource

Socioeconomic analysis addresses the potential effects of a proposed action on the social and economic characteristic of a particular geographic area. These characteristics include population, income, employment, and housing conditions. Socioeconomic conditions in a particular area could be affected by changes in the rate of population growth, changes in demographic characteristics, increases or decreases in employment, or changes in economic expenditures. (Environmental justice considerations are addressed in **Section 3.10**.)

3.9.2 Affected Environment

3.9.2.1 Population and Economy

Approximately 6.7 million people lived in Indiana as of 2020 (U.S. Census Bureau, 2020). Indiana's population has risen by 4.7% since 2010, with the largest populations found in Marion, Lake, and Allen Counties. Approximately 76.5% of the population is 18 years and older.

Indiana produces and exports many agricultural products, but is primarily known for its soybean and corn crops which accounted for almost $4 million in commodity exports in 2022 (USDA Economic Research Service, 2023). The number of farms in Indiana has steadily decreased from 66,707 farms in 1997 to approximately 53,599 farms in 2022, a decrease of nearly 10 million acres (USDA NASS, 2024) **(Table 3-14)**. Land values have increased by almost 300% during that timeframe, from an average price per acre of $2,097 in 1997 to $8,259 per acre in 2022.

Indiana's Gross State Product, the value of all goods and services produced in the state during a given year, totals $352.96 billion. Agriculture in Indiana accounts for less than 1% of the overall state economy. The overall production expense of these farms increased by more than 200% between 1997 and 2022, from just over $4 million in 1997 to over $12.5 million in 2022 **(Table 3-15)**.

In 2017, 80 million people visited the state of Indiana, spending nearly $12.7 billion on lodging, food, entertainment, shopping and transportation (IDNR, 2019). Employment within the Indiana tourism industry reached nearly 200,000 workers in 2017 and generated $5.6 billion in total wages and proprietor income. Combined, tourism-related businesses in the state were the 10th largest private sector employer and accounted for approximately 5.2% of nonfarm jobs in the state.

The outdoor recreation economy accounted for 1.9% of current-dollar gross domestic product for the nation in 2021. Comparatively, this sector of the economy accounted for 3.1% of Indiana's gross domestic product in the same year (U.S. Bureau of Economic Analysis, 2023).

Table 3-14 Indiana Agricultural Census, 1997 – 2022

	1997	2002	2007	2012	2017	2022
Number of Farms	66,707	60,296	60,938	58,695	56,649	53,599
Land in farms (acres)	15,525,154	15,058,670	14,773,184	14,720,396	14,969,996	14,602,240
Average size of farm (acres)	233	250	242	251	264	272
Estimated market value of land and buildings						
Average per farm	$486,171	$637,645	$868,699	$1,342,826	$1,737,741	$2,250,114
Average per acre	$2,097	$2,567	$3,583	$5,354	$6,576	$8,259
Estimated market value of all machinery and equipment	$3,909,303	$4,636,855	$6,302,106	$8,407,178	$9,241,317	$11,100,050
Average per farm	$58,614	$80,240	$103,427	$143,252	$163,136	$207,098
Farms by size 1-9 acres	5,741	5,436	9,720	6,607	7,622	6,418
10-49 acres	17,937	18,595	19,533	20,770	18,665	18,772
50-179 acres	22,818	18,691	15,993	16,396	15,377	15,062
180-499 acres	11,569	9,263	8,012	7,420	7,419	6,687
500-999 acres	5,194	4,494	3,774	3,562	3,529	2,919
1,000-1,999 acres	2,735	2,827	2,621	2,544	2,585	2,043
2,000 acres or more	713	990	1,285	1,396	1,452	1,698
Total cropland farms	59,496	53,725	51,283	48,851	47,127	44,532
acres	13,065,057	12,909,002	12,716,037	1,590,633	12,909,673	12,534,737
Harvested cropland farms	51,984	44,298	41,743	41,965	41,693	39,094
acres	11,844,628	11,937,370	12,108,940	12,146,538	12,345,774	11,955,458
Market value of agricultural products sold	$5,323,116	$4,783,158	$8,271,291	$11,210,818	$11,107,336	$18,029,033
Average per farm	$79,798	$79,328	$135,733	$191,001	$196,073	$336,369

Table 3-14 Indiana Agricultural Census, 1997 – 2022

	1997	2002	2007	2012	2017	2022
Farms by value of sales						
Less than $2,500	18,568	21,620	22,470	20,283	18,583	15,869
$2,500 to $4,999	6,617	5,469	4,971	4,859	4,660	4,033
$5,000 to $9,999	7,398	5,760	5,686	5,204	5,396	4,648
$10,000 to $24,999	9,476	7,329	6,325	5,681	6,092	6,047
$25,000 to $49,999	6,529	5,112	4,531	4,101	4,117	4,113
$50,000 to $99,999	5,827	4,945	4,273	4,254	4,069	3,982
$100,000 to $499,999	10,290	8,505	8,655	9,020	8,398	7,973
$500,000 or more	2,002	1,856	4,027	5,293	5,334	6,934

Notes:
Source: USDA NASS, 2024
[1] Data for 2002 and prior years are based on a sample of farms.

Table 3-15 Indiana Agricultural Production Expenses, 1997 – 2022

	1997	2002	2007	2012	2017	2022
Total farm production expenses	$4,120,616	$4,310,513	$6,280,586	$9,117,075	$9,124,760	$12,547,989
Selected farm production expenses						
Livestock and poultry purchased or leased	294,217	307,156	511,239	508,824	663,606	801,227
Feed purchased	834,291	660,587	1,092,067	1,592,005	1,401,597	2,080,607
Fertilizer, lime, and soil conditioners purchased	458,618	435,657	888,112	1,444,469	1,034,849	1,728,700
Gasoline, fuels, and oils purchased	198,454	171,335	344,253	457,781	369,510	553,243
Hired farm labor	255,577	300,988	320,902	445,331	540,959	741,445
Interest expense	283,583	284,199	316,937	375,856	417,576	457,847
Chemicals Purchased	296,398	258,403	373,897	564,224	619,764	976,217

Notes:
Source: USDA NASS, 2024
[1] Data for 2002 and prior years are based on a sample of farms.

3.9.3 Environmental Consequences Evaluation Criteria

A significant effect on socioeconomic conditions would occur if a socioeconomic change from the Proposed Action would be outside the normal or anticipated range of those conditions and would adversely affect the economy and community. For small percentage changes in individual attributes, it would be unlikely that the changes would result in significant impacts at the highest level of analysis (i.e., statewide). Changes to the statewide economy of greater than agriculture's normal contribution could be considered significant, as this could affect the general economic climate of other industries on a much greater scale.

Additional changes in demographic trends (i.e., population movements) would be considered significant if a substantial percentage of the population were to enter or leave a particular area based on the changing economic conditions associated with the alternatives, rather than projected changes or changes generated by economic activities as a whole.

3.9.4 Environmental Consequences – Proposed Action Alternative

3.9.4.1 Population and Economy

The Proposed Action Alternative does not include the direct creation of new jobs or the modification or elimination of existing jobs. Therefore, the Proposed Action Alternative would have no direct effects on local employment, or on local populations, demography, or other socioeconomic conditions from the creation or elimination of jobs in areas where CPs would be implemented. Some new jobs could result from the need to maintain vegetation installed under the CPs, indirectly resulting in beneficial effects on local economic conditions, but the number of any such new jobs would likely be small in the context of local, regional, and statewide employment.

Federal and state incentives to landowners who enroll in the expanded CREP under the Proposed Action Alternative would have beneficial effects on the local, regional, and state economies if those incentives are reinvested into equipment, supplies, improvements, and other expenditures related to farm operations and periodic maintenance of vegetation installed under the CPs. However, it is unlikely that the enrollment of lands in the CREP and the installation of CPs under the Proposed Action Alternative would result in substantial increases or decreases in overall property values. Therefore, no significantly beneficial effects on local tax revenues would be expected.

The Proposed Action Alternative would remove farmland from agricultural production. However, in the context of statewide agricultural production, the conversion of up to 100,000 acres of eligible farm and cropland to native vegetation, wetlands, and shallow-water areas would be exceedingly small and would not be expected to have a noticeable effect on overall agricultural productivity in the state. Land enrolled in the CREP under the Proposed Action Alternative could be converted back to farm or cropland following the expiration or cancellation of a CREP contract. Therefore, any adverse impacts from the Proposed Action Alternative on the agricultural sector of the state economy would not be significant.

3.9.4.2 Outdoor Recreation

Lands enrolled in the CREP under the Proposed Action Alternative would remain in private ownership and access by visitors would likely be restricted in most instances. However, the installation of CPs would improve outdoor recreation experiences on adjacent or nearby publicly

accessible lands, if present, through the enhancement of native vegetation and wildlife habitat, and improvements to water quality. Although the number of additional visitors that would be attracted to these areas would likely be small in the context of the state outdoor recreation industry, they would nonetheless have beneficial effects on local economies through purchases of clothing, equipment, fuel, meals, lodging, equipment rentals, and other related expenditures. No adverse impacts on outdoor recreation would be expected.

3.9.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on socioeconomics and outdoor recreation in the state, but to a lesser extent because they would be limited to eligible lands in the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse effects on socioeconomics from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.9.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Beneficial effects from the Proposed Action, when considered with beneficial effects from reasonably foreseeable future actions listed in **Table D-1**, particularly other federal, state, and local conservation programs, would contribute to cumulatively beneficial effects on socioeconomics and recreational resources in the vicinity of lands enrolled in the Indiana CREP under the Proposed Action. Any potential adverse effects on socioeconomics would be highly localized and would not contribute to cumulatively significant adverse effects when considered with reasonably foreseeable future projects.

3.10 Environmental Justice

3.10.1 Definition of Resource

USEPA defines environmental justice as the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other federal activities that affect human health and the environment so that people:

- are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and
- have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices (USEPA, 2024c).

E.O. 12898 requires federal agencies to address disproportionate environmental and human health effects on minority and low-income communities potentially resulting from federally funded or authorized activities. For the environmental justice analysis presented in this PEA, minority populations are defined as persons identifying as Alaska Native and American Indian, Asian, Black

or African American, Native Hawaiian, or Pacific Islander or persons of Hispanic origin (of any race). Low-income populations include persons living below the poverty threshold as determined by the U.S. Census Bureau.

3.10.2 Affected Environment

The majority of Indiana residents, 84%, identify as White, and 10.3% identify as Black or African American. Hispanic or Latino residents account for 7.9%, 2.8% identify as Asian, and 2.4% are two or more races. Less than 1% of the population identifies as American Indian or Native Hawaiian. Approximately 6% of the state's population was born outside the United States (U.S. Census Bureau, 2020).

In Indiana, 90% of persons 25 years of age or older are high school graduates while 28.2% have earned a bachelor's degree or higher level of educational attainment (U.S. Census Bureau, 2022). As of the fourth quarter of 2023, the statewide unemployment rate was 3.6%. Among persons identifying as unemployed, 6.7% identified as Black or African American, 4.9% as Hispanic or Latino, 3% as Asian, and 2.8% as White. Between 2020 and 2023, unemployment among those identifying as White decreased by 0.3% while unemployment rates among those identifying as Black, Hispanic, and Asian rose by 1.9%, 0.8%, and 0.3% respectively (Economic Policy Institute, 2023).

Farm ownership in 2022 among persons identifying as part of a racial or ethnic minority group are summarized in **Table 3-16**. Overall, minority-owned farms in Indiana accounted for approximately 0.6% of all farms and 0.3% of all farmland (acreage) in the state (USDA NASS, 2024).

Table 3-16 Minority Farm Ownership in Indiana, 2022

Race or Ethnicity of Farm Owner	Number of Farms Owned	Acres Owned
Black or African American	80	11,960
Asian	103	13,033
Native American	124	24,216

Source: USDA NASS, 2024

Based on a query of the Climate and Economic Justice Screening Tool (CEJST), 554 of Indiana's 1,510 census tracts are identified as disadvantaged because they exceed indicators for one or more burdens in the following categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development (CEJST, 2024). These tracts are distributed throughout the state, in both urban and rural areas, and contain approximately 29 percent of the state's total population **(Figure 3-4)**.

3.10.3 Environmental Consequences Evaluation Criteria

Disproportionately high and adverse impacts on minority and low-income populations resulting from the Proposed Action would be considered significant. A disproportionately adverse impact is one that is experienced by a minority or low-income population at a greater intensity, severity, or duration relative to a similar impact experienced by a non-minority or non-low-income population.

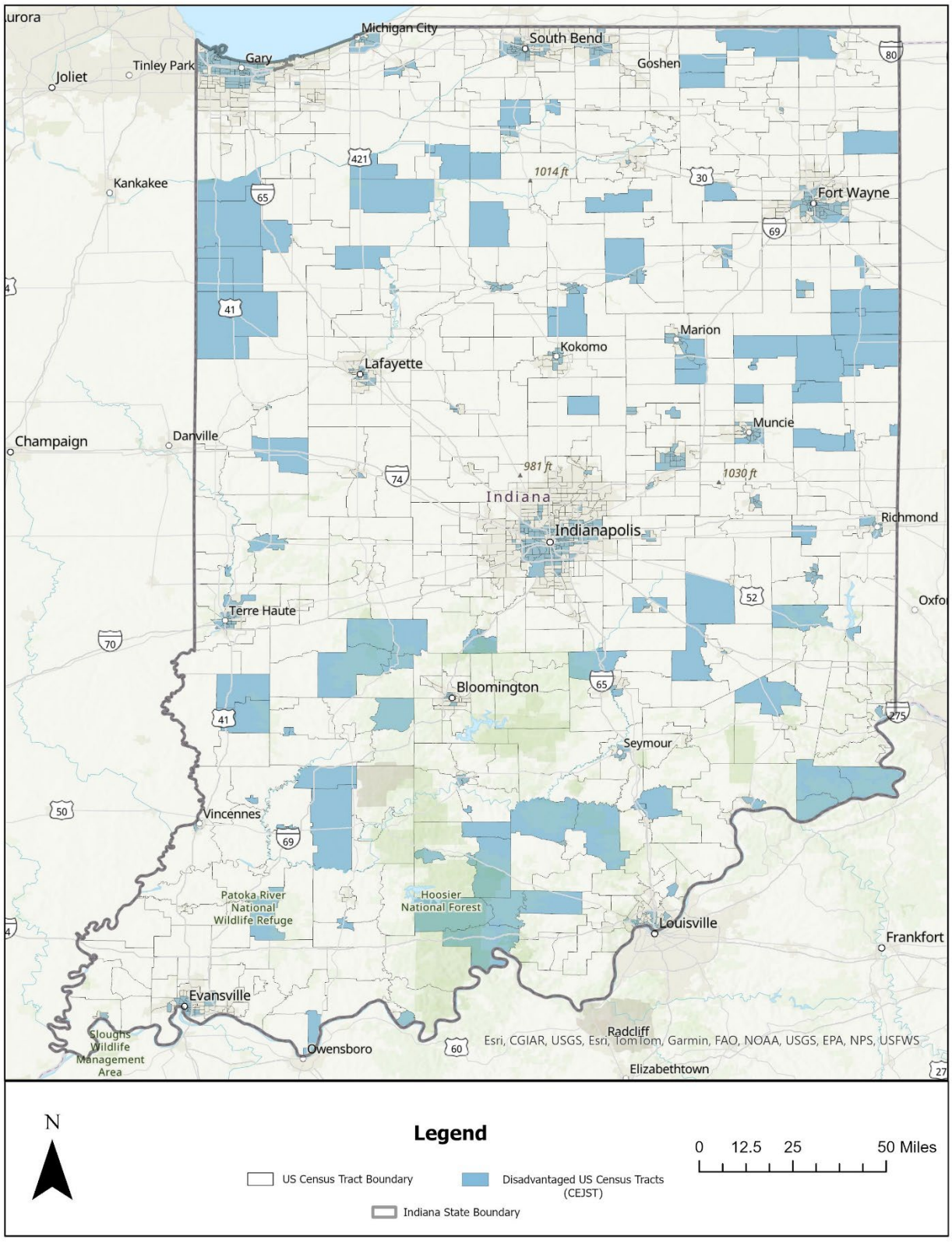

Figure 3-4 Disadvantaged U.S. Census Tracts in Indiana

3.10.4 Environmental Consequences – Proposed Action Alternative

The size and location of lands that would be enrolled in CREP under the Proposed Action Alternative, if implemented, is not currently know. Overall, however, it is anticipated that the Proposed Action Alternative would have beneficial long-term effects on minority and low-income populations from the installation of CPs on up to 100,000 acres of land throughout the state and corresponding beneficial effects on other resources such as air and water quality, and socioeconomics. Although minority or low-income populations adjacent to or near lands enrolled in the CREP could experience increased levels of noise or air pollutant emissions during installation or periodic maintenance of the CPs, resulting in an adverse effect, such effects would not be substantively worse than those that could be experienced by nearby non-minority or non-low-income populations. These effects would be infrequent, would occur intermittently over a period of several years rather than occurring simultaneously, would be distributed throughout the state, and would cease upon the completion of CP installation activities. Potential adverse effects from the Proposed Action Alternative would not be expected to further exceed indicators of burdens on disadvantaged communities identified in CEJST or cause non-disadvantaged communities to exceed those indicators and subsequently be considered disadvantaged.

Prior to enrolling lands in CREP under the Proposed Action Alternative, FSA would complete Form FSA-850, the Environmental Evaluation Checklist (or the NRCS equivalent, SCS-52) as part of the site-specific environmental review process. Completion of this checklist would include identifying any potential environmental justice concerns, such as in Question 9 of Form FSA-850. Any potential disproportionately high and adverse effects on minority or low-income populations identified during the site-specific review process would be addressed and prevented prior to enrolling lands in the CREP.

For these reasons, any potential adverse effects on minority or low-income populations would not be significant.

3.10.5 Environmental Consequences – No Action Alternative

Under the No Action Alternative, the Indiana CREP would continue to be administered as it currently is and CP9 would not be added to the inventory of available CPs. The installation and maintenance of CPs under the Indiana CREP would continue to have beneficial effects on minority and low-income populations in the state, but to a lesser extent because they would be limited to eligible lands in the 11 watersheds currently included in the CREP and a total enrollment of up to 26,250 acres. Adverse effects on minority and low-income populations from the installation and periodic maintenance of CPs under the No Action Alternative would not be significant.

3.10.6 Reasonably Foreseeable Future Actions and Other Environmental Consideration

Beneficial effects from the Proposed Action, when considered with beneficial effects from reasonably foreseeable future actions listed in **Table D-1**, particularly other federal, state, and local conservation programs, would contribute to cumulatively beneficial effects on environmental justice communities in the vicinity of lands enrolled in the Indiana CREP under the Proposed Action. Any potential adverse effects on environmental justice populations, which would be infrequent, temporary, and limited to relatively small areas throughout the state, would not contribute to cumulatively significant adverse effects when considered with reasonably foreseeable future actions.

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APPENDICES

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TABLE OF CONTENTS

LIST OF TABLES

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APPENDIX A

AGENCY, TRIBAL, AND PUBLIC COORDINATION

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Appendix A – Agency, Tribal, and Public Coordination

A.1 USFWS Section 7 Consultation Letter

USDA Farm Service Agency
U.S. DEPARTMENT OF AGRICULTURE

Indiana FSA State Office
5981 Lakeside Blvd
Indianapolis, IN 46278

April 3, 2024

US Fish and Wildlife Service
Indiana Ecological Services Field Office
Attn.: Susan Cooper, Field Supervisor
620 South Walker Street
Bloomington, Indiana 47403-2121

Subject: Programmatic Environmental Assessment for Proposed Expansion of Indiana Conservation Reserve Enhancement Program (USFWS Project Code 2024-0063806)

Dear Ms. Cooper,

The United States Department of Agriculture (USDA) Farm Service Agency (FSA), in coordination with the Indiana State Department of Agriculture (ISDA), proposes to expand the Indiana Conservation Reserve and Enhancement Program (CREP) (Proposed Action). CREP is a voluntary program in which participants remove cropland from agricultural production and convert the land to native vegetation and wetlands. CREP is authorized under provisions of the Food Security Act of 1985, as amended (1985 Act) (16 USC § 3831 et. seq.) and regulations at 7 CFR Part 1410. The USDA FSA administers CREP on behalf of the USDA Commodity Credit Corporation.

Under the Proposed Action, the Indiana CREP would be expanded to a targeted enrollment of up to 100,000 acres in 38 watersheds covering all or parts of all 92 counties in the state. The Proposed Action would also include the addition of USDA FSA Conservation Practice (CP) 9, *Shallow Water Areas for Wildlife*, to the inventory of eight existing CPs available to owners of lands eligible for the Indiana CREP. Primary components of the existing Indiana CREP and Proposed Action are summarized in **Attachment 1**. Watersheds and counties included in the existing Indiana CREP and Proposed Action are shown on **Attachment 2**.

FSA is preparing a Programmatic Environmental Assessment (PEA) in accordance with the National Environmental Policy Act (NEPA) of 1969 to evaluate potential effects from the Proposed Action. The size and location of lands that would be enrolled under the Proposed Action, if implemented, is not currently known. Therefore, potential effects on federally listed threatened, endangered, and candidate species, and federally designated critical habitat, cannot be determined at this time. Prior to enrolling new lands under the expanded CREP, FSA would conduct site-specific reviews to evaluate potential effects on environmental resources. These reviews would include further consultation with USFWS in accordance with Section 7 of the Endangered Species Act (ESA) to identify potential effects on federally listed species and critical habitat, and appropriate measures to prevent or minimize any potential

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adverse effects. Overall, it is anticipated that the establishment of native vegetation and wetlands under the Proposed Action would have beneficial effects on all wildlife and vegetation, including federally listed species.

FSA has obtained an Official Species List for the state of Indiana from the USFWS Information for Planning and Consultation website to support development of the PEA (**Attachment 3**). In accordance with Section 7 of the ESA, FSA also requests additional information or any comments that may be beneficial in the development of the PEA and determination of potential effects on federally listed species or federally designated critical habitat. When available, the Draft PEA will be provided to your office for review during the 30-day public comment period.

Please send your comments or requests for additional information via US Mail to my attention at 5981 Lakeside Blvd., Indianapolis, IN 46278 or via email to samantha.garrison@usda.gov. Your comments are requested within 60 days of receiving this letter to ensure that they are sufficiently addressed in the PEA. Thank you for your assistance.

Sincerely,

SAMANTHA GARRISON

Digitally signed by SAMANTHA GARRISON
Date: 2024.04.03 14:35:41 -04'00'

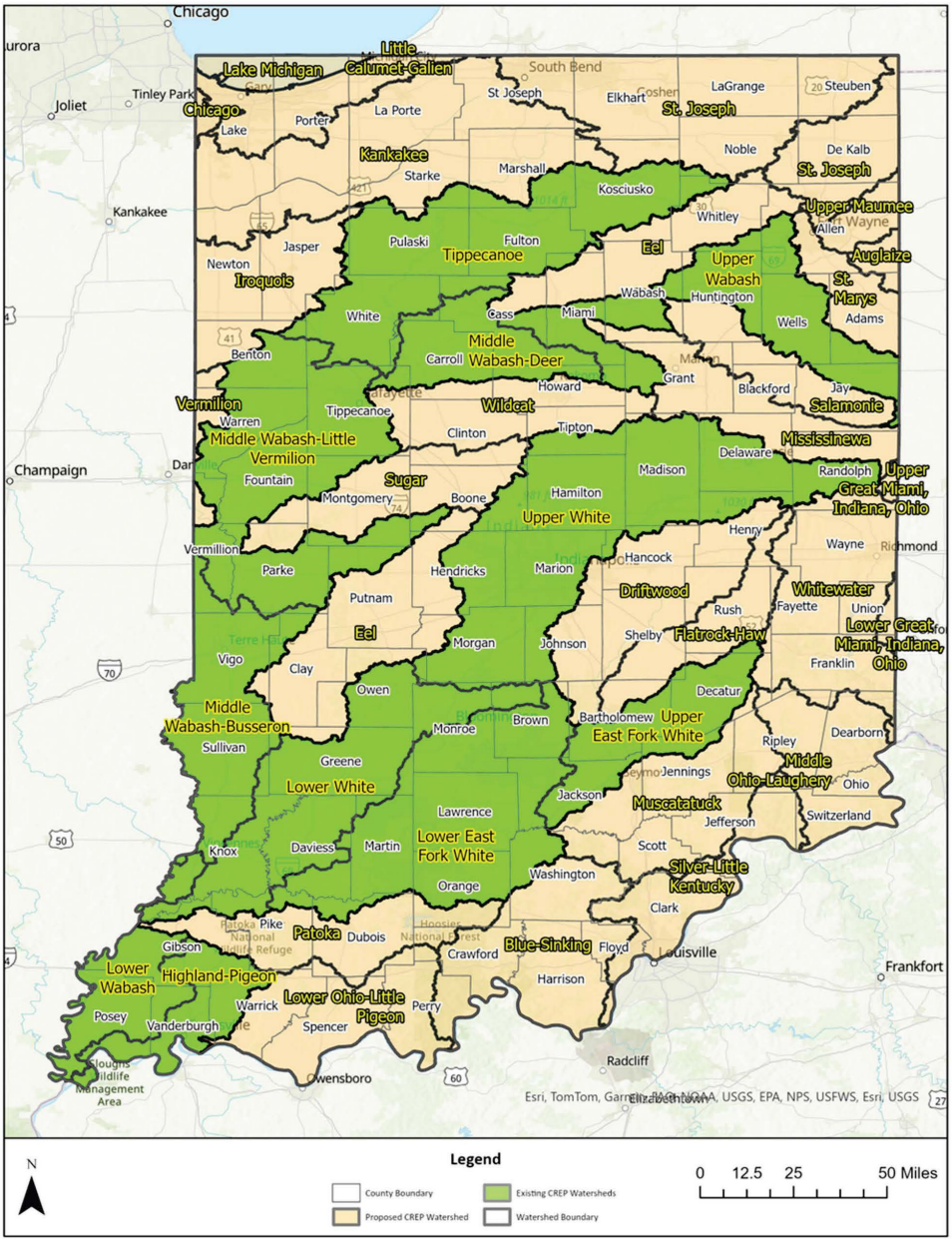
Samantha A. Garrison
State Environmental Coordinator
Indiana Farm Service Agency

Attachments:
Attachment 1 – Comparison of Existing Indiana CREP and Proposed Action
Attachment 2 – Existing and Proposed Indiana CREP Watersheds
Attachment 3 – USFWS Official Species List

Attachment 1: Comparison of Existing Indiana CREP and Proposed Action

CREP Component	Existing Indiana CREP	Proposed Action
Acreage	26,250	100,000
Linear Miles of Watercourses Protected	3,000	4,000
Watersheds	11	38 (27 additional)
Geographic Area (Watersheds)	• Tippecanoe • Upper White River • Highland-Pigeon • Upper Wabash • Middle Wabash – Deer • Middle Wabash – Little Vermillion • Middle Wabash – Busseron • Lower Wabash • Lower White • Lower East Fork White • Upper East Fork White	(*Additional watersheds that would be added to the Indiana CREP under the Proposed Action are shown on Attachment 2 and will be listed in the Draft PEA.*)
Counties	65	92 (27 additional)
Conservation Practices (CPs)	• CP-2, *Establishment of Permanent Native Grasses* • CP-3A, *Hardwood Tree Planting* • CP-4D, *Permanent Wildlife Habitat, Noneasement* • CP-21, *Grassed Filter Strips* • CP-22, *Riparian Buffer* • CP-23, *Wetland Restoration – Floodplain* • CP-23A, *Wetland Restoration – Non-floodplain* • CP-31, *Bottomland Timber Establishment on Wetlands*	All existing CPs with the addition of CP9, *Shallow Water Areas for Wildlife*
Contract Duration	14 to 15 years	No change
Cost Share	50% of reimbursable practice cost	No change

Attachment 2: Existing and Proposed Indiana CREP Watersheds



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A.2 List of Stakeholders

A.2.1 Federal and State Agencies

- U.S. Fish and Wildlife Service (ESA Section 7 consultation)
  Will Meeks, Midwest Regional Director
- Indiana Ecological Services Field Office
  Susan Cooper, Field Supervisor
- Indiana Department of Natural Resources
  Division of Historic Preservation & Archaeology (NHPA Section 106 consultation)
  Beth McCord, Division Director
- U.S. Army Corps of Engineers, Louisville District
  Colonel L. Reyn Mann
- Natural Resource Conservation Service, Indiana Office
  Damarys Mortenson
- Indiana Department of Natural Resources (general)
  Daniel Bortner, Director
- Indiana Department of Natural Resources
  Division of Fish and Wildlife
  Amanda Wuestefeld, Division Director
- Indiana Department of Natural Resources
  Division of Forestry
  John Seifert, Division Director
- Indiana Association of Soil and Water Conservation Districts
  Liz Rice, Executive Director
- Purdue Cooperative Extension
  Henry Quesada, Assistant Director
  Agriculture & Natural Resources Program Leader
- Indiana Department of Environmental Management
  Brian Rockensuess, Commissioner
  Indiana Government Center North
- U.S. Geological Survey Ohio-Kentucky-Indiana Water Science Center
  Jeff Frey, Director

A.2.2 Non-Governmental Organizations

- The Nature Conservancy, Indiana Chapter
  Larry Clemens, State Director
- Indiana Farm Bureau
  Randy Kron, President
- Ducks Unlimited (Indiana office)
  Dane Cramer

- Pheasants Forever
  John Kinney
- Indiana Wildlife Federation
  Emily Wood, Executive Director

A.2.3 Native American Tribes Affiliated with Indiana

The following Native American tribes were identified using the U.S. Department of Housing and Urban Development Tribal Directory Assessment Tool (TDAT) (https://egis.hud.gov/tdat/) as having an affiliation with the State of Indiana:

- Citizen Potawatomi Nation, Oklahoma
  Tracy Wind, THPO
- Delaware Nation, Oklahoma
  Katelyn Lucas, THPO
- Delaware Tribe of Indians
  Susan Bachor, THPO
- Eastern Shawnee Tribe of Oklahoma
  Lora Nuckolls, THPO
- Forest County Potawatomi Community, Wisconsin
  Ben Rhodd, THPO
- Hannahville Indian Community, Michigan
  Kenneth Meshigaud, Chairperson
- Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
  Lester Randall, Chairman
- Little Traverse Bay Bands of Odawa Indians, Michigan
  Melissa Wiatrolik, THPO
- Miami Tribe of Oklahoma
  Logan York, THPO
- Osage Nation
  Andrea Hunter, Director and THPO
- Ottawa Tribe of Oklahoma
  Rhonda Hayworth, THPO
- Peoria Tribe of Indians of Oklahoma
  Craig Harper, Chief and THPO
- Pokagon Band of Potawatomi Indians, Michigan and Indiana
  Matthew Bussler, THPO
- Prairie Band Potawatomi Nation
  Raphael Wahwassuck, THPO
- Quapaw Nation
  Billie Burtrum, THPO

- Seneca-Cayuga Nation
  William Tarrant, THPO
- Shawnee Tribe
  Tonya Tipton, THPO
- Wyandotte Nation
  Sherri Clemons, THPO

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APPENDIX B

ADDITIONAL BACKGROUND INFORMATION

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Appendix B – Additional Background Information

B.1 List of Indiana Counties by Watershed

Watersheds and counties highlighted in yellow in **Table B-1** are included in the existing Indiana CREP. Watersheds and counties that are not highlighted would be added to the Indiana CREP under the Proposed Action evaluated in the PEA.

Table B-1 Indiana Counties by Watershed

Watershed [1]	Counties			
Auglaize	Adams	Allen		
Blue-Sinking	Perry	Floyd	Harrison	Crawford
	Clark	Orange	Washington	Scott
Chicago	Lake			
Driftwood	Brown	Bartholomew	Johnson	Shelby
	Rush	Marion	Hancock	Henry
	Madison			
Eel	Greene	Sullivan	Owen	Clay
	Vigo	Morgan	Putnam	Hendricks
	Parke	Boone	Cass	Miami
	Huntington	Wabash	Fulton	Allen
	Whitley	Kosciusko	Noble	
Flatrock-Haw	Bartholomew	Decatur	Shelby	Rush
	Fayette	Henry		
Highland-Pigeon	Vanderburgh	Posey	Warrick	Gibson
	Pike			
Iroquois	Benton	White	Pulaski	Newton
	Jasper	Starke		
Kankakee	Pulaski	Fulton	Newton	Jasper
	Starke	Kosciusko	Marshall	Porter
	Lake	La Porte	St Joseph	Elkhart
Lake Michigan	Porter	Lake	La Porte	
Little Calumet-Galien	Porter	Lake	La Porte	St Joseph
Lower East Fork White	Dubois	Pike	Orange	Washington
	Daviess	Martin	Lawrence	Jackson
	Greene	Brown	Monroe	Bartholomew
	Johnson			
Lower Great Miami, Indiana, Ohio	Dearborn	Franklin	Union	Wayne
Lower Ohio-Little Pigeon	Vanderburgh	Spencer	Warrick	Perry
	Crawford	Dubois	Pike	
Lower Wabash	Vanderburgh	Posey	Gibson	Knox

Table B-1 Indiana Counties by Watershed

Watershed [1]	Counties			
Lower White	Gibson	Pike	Daviess	Martin
	Knox	Greene	Sullivan	Brown
	Monroe	Owen	Morgan	Johnson
Middle Ohio-Laughery	Switzerland	Ohio	Dearborn	Ripley
	Decatur	Franklin		
Middle Wabash-Busseron	Knox	Greene	Sullivan	Clay
	Vigo	Parke	Vermillion	
Middle Wabash-Deer	Tippecanoe	Howard	Carroll	Cass
	White	Miami		
Middle Wabash-Little Vermilion	Vigo	Putnam	Hendricks	Parke
	Vermillion	Boone	Montgomery	Fountain
	Warren	Tippecanoe	Benton	White
Mississinewa	Randolph	Madison	Delaware	Blackford
	Jay	Grant	Miami	Huntington
	Wabash			
Muscatatuck	Clark	Washington	Scott	Jefferson
	Jackson	Jennings	Ripley	Decatur
Patoka	Spencer	Warrick	Crawford	Dubois
	Gibson	Pike	Orange	Martin
Salamonie	Blackford	Jay	Grant	Wells
	Huntington	Wabash		
Silver-Little Kentucky	Floyd	Harrison	Clark	Washington
	Scott	Jefferson	Switzerland	Ripley
St. Joseph	St Joseph	Whitley	Kosciusko	Noble
	De Kalb	Steuben	Elkhart	LaGrange
St. Joseph	De Kalb	Noble	Allen	Steuben
St. Marys	Wells	Adams	Allen	
Sugar	Parke	Boone	Montgomery	Fountain
	Tipton	Clinton	Tippecanoe	
Tippecanoe	Tippecanoe	Carroll	Benton	Cass
	White	Miami	Pulaski	Fulton
	Jasper	Whitley	Starke	Kosciusko
	Marshall	Noble		
Upper East Fork White	Washington	Jackson	Jennings	Brown
	Bartholomew	Decatur	Shelby	Rush
Upper Great Miami, Indiana, Ohio	Randolph			
Upper Maumee	Allen	De Kalb		
Upper Wabash	Howard	Jay	Grant	Cass
	Wells	Adams	Miami	Huntington
	Wabash	Allen	Whitley	

Table B-1 Indiana Counties by Watershed

Watershed [1]	Counties			
Upper White	Brown	Monroe	Owen	Morgan
	Johnson	Hendricks	Marion	Hancock
	Henry	Boone	Hamilton	Randolph
	Madison	Delaware	Tipton	Clinton
	Grant			
Vermilion	Vermillion	Warren	Benton	
Whitewater	Dearborn	Ripley	Decatur	Franklin
	Union	Rush	Fayette	Wayne
	Henry	Randolph		
Wildcat	Madison	Tipton	Clinton	Tippecanoe
	Howard	Grant	Carroll	

Notes:
Source: State of Indiana, 2024
[1] Watersheds and counties highlighted in yellow are currently included in the Indiana CREP. Watersheds and counties that are not highlighted would be added to the Indiana CREP under the Proposed Action evaluated in the PEA.

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B.2 Conservation Practice Summaries

Table B-2 Conservation Practice Summaries

Conservation Practice	Description [1]	Land Eligibility [1]	Owner / Operator Eligibility [1]	Financial Benefits [2]	Additional Requirements [3]
CP2, Establishment of Permanent Native Grasses	This practice is for the establishment of a permanent vegetative cover of native grasses. This area may be used for both managed and emergency haying and grazing as authorized.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions.	• Have owned or operated the land for at least 12 months prior to program sign-up. • Be in control of the land for the length of the contract. • Meet USDA payment eligibility provisions.	• 14 to 15 years of annual rental payments. • 50% cost-share assistance for establishment costs. • A one-time Clean Water Indiana incentive payment of $100/acre.	• Required to be on a body of water as a buffer practice. • Minimum average width of 50 feet and a maximum width of 120 feet (up to 300 feet in alluvial soils).
CP3A, Hardwood Tree Planting	The purpose of this practice is to establish a stand of predominately hardwood trees. Planting of certain softwood trees is acceptable to ensure survivability of hardwoods. This would enhance environmental benefits to less than the soil loss tolerance.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions.	• Same as CP2.	• 14 to 15 years of annual rental payments. • 50% cost-share assistance for tree planting. • A one-time Clean Water Indiana incentive payment of $400/acre.	• Required to be on a body of water as a buffer practice. • Minimum average width of 35 feet and a maximum width of 180 feet (up to 300 feet in alluvial soils).
CP4D, Permanent Wildlife Habitat, Noneasement	This practice establishes a permanent wildlife habitat cover to enhance benefits for wildlife of the designated and surrounding areas. A wildlife conservation plan is developed for acreage enrolled in this CP.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $100/acre.	• Required to be on a body of water as a buffer practice. • Minimum average width of 35 feet and a maximum width of 180 feet (up to 300 feet in alluvial soils).
CP9, Shallow Water Areas for Wildlife	The purpose of this CP is to restore shallow water areas with depths of 6-18 inches to provide water, food, and cover for	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity.	• Same as CP2.	• 14 to 15 years of annual rental payments. • Under continuous sign-up, a signing	• A minimum of 6 inches, and a maximum of 18 inches average depth of water, will be

Table B-2 Conservation Practice Summaries

Conservation Practice	Description [1]	Land Eligibility [1]	Owner / Operator Eligibility [1]	Financial Benefits [2]	Additional Requirements [3]
CP9, Shallow Water Areas for Wildlife (continued)	wading birds, small mammals, and beneficial insects; reduce downstream flood damage; and improve water quality by intercepting sediment and nutrients.	• Compliant with USDA's highly erodible land and wetland provisions. • Suitable for the restoration of a shallow water area.		incentive payment and a practice incentive payment. • A one-time Clean Water Indiana incentive payment of $950/acre for new enrollments. • A one-time Clean Water Indiana incentive payment of $400/acre for re-enrollments.	maintained for a majority of the year. • An upland buffer at least 20 feet wide, and up to 120 feet wide, is required to protect water quality and provide wildlife habitat. • The total acreage of all CP9 practices, including buffer areas cannot exceed 10 acres per tract.
CP21, Grassed Filter Strips	The purpose of this practice is to remove nutrients, sediment, organic matter, pesticides and other pollutants from surface runoff and subsurface flow by deposition, absorption, plant uptake, denitrification and other processes. This would reduce pollution and protect surface and subsurface water quality.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions. • Immediately adjacent and parallel to a seasonal or perennial stream, a wetland, or another permanent water body.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $100/acre. • Under continuous sign-up, a signing incentive payment and a practice incentive payment.	• Required to be on a body of water as a buffer practice. • Minimum average width of 35 feet and a maximum width of 120 feet (up to 300 feet in alluvial soils).
CP22, Riparian Buffer	The purpose of this practice is to remove nutrients, sediment, organic matter, pesticides and other pollutants from surface runoff and subsurface flow, create shade to lower water temperature to improve aquatic habitat, and provide a	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017 or meets marginal pastureland eligibility requirements. • Suitable for planting trees. • Compliant with USDA's highly erodible land and wetland provisions.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $400/acre. • Under continuous sign-up, a signing incentive payment	• Required to be on a body of water as a buffer practice. • Minimum average width of 35 feet and a maximum width of 180 feet (up to 300 feet in alluvial soils).

Table B-2 Conservation Practice Summaries

Conservation Practice	Description [1]	Land Eligibility [1]	Owner / Operator Eligibility [1]	Financial Benefits [2]	Additional Requirements [3]
CP22, Riparian Buffer (continued)	source of detritus and large woody debris for aquatic organisms and habitat for wildlife. This would reduce pollution and protect surface and subsurface water quality.	• Located immediately adjacent and parallel to a permanent water body, perennial or seasonal stream, sinkhole or karst area, semi-permanent or seasonally flooded area, or wetlands area.		and a practice incentive payment.	
CP23, Wetland Restoration, Floodplain	The purpose of this practice is to restore the functions and values of wetland ecosystems that have been devoted to agricultural use. The level of restoration of the wetland ecosystem shall be determined by the producer in consultation with NRCS or TSP.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions. • Located within the 100-year floodplain of a permanent river or stream.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $950/acre for new enrollments. • A one-time Clean Water Indiana incentive payment of $400/acre for re-enrollments. • Under continuous sign-up, a signing incentive payment and a practice incentive payment.	• Required to be located in the 100-year floodplain. • Not required to be adjacent to a stream, river or waterbody.
CP23A, Wetland Restoration, Non-Floodplain	The purpose of this practice is to restore the functions and values of wetland ecosystems that have been devoted to agricultural use. The level of restoration of the wetland ecosystem shall be determined by the producer in consultation with NRCS or TSP.	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions. • Located outside the 100-year floodplain of a permanent river or stream.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $950/acre for new enrollments. • A one-time Clean Water Indiana incentive payment of	• Not required to be adjacent to a stream, river or waterbody.

Table B-2 Conservation Practice Summaries

Conservation Practice	Description [1]	Land Eligibility [1]	Owner / Operator Eligibility [1]	Financial Benefits [2]	Additional Requirements [3]
CP23A, Wetland Restoration, Non-Floodplain (continued)				$400/acre for re-enrollments. • Under continuous sign-up, a signing incentive payment and a practice incentive payment.	
CP31, Bottomland Timber Establishment on Wetlands	The purpose of this practice is to provide for the long-term viability of bottomland hardwood stands of trees that would control surface erosion, reduce water, air, and land pollution, restore the functions and values of wetlands, promote carbon sequestration, and restore and connect wildlife habitat that has been devoted to agricultural use	• Planted or considered planted at least 4 out of 6 years between 2012 and 2017. • Capable of being planted to an agricultural commodity. • Compliant with USDA's highly erodible land and wetland provisions. • Located within the 100-year floodplain.	• Same as CP2.	• 14 to 15 years of annual rental payments. • A one-time Clean Water Indiana incentive payment of $400/acre. • Under continuous sign-up, a signing incentive payment and a practice incentive payment.	• Required to be located in the 100-year floodplain. • Not required to be adjacent to a stream, river or waterbody.

Sources:
[1] USDA FSA. 2024
[2] USDA FSA. 2022
[3] ISDA. 2024

B.3 Indiana Conservation Reserve Enhancement Program Fact Sheet

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Conservation Reserve Enhancement Program

Indiana

Overview

The U.S. Department of Agriculture (USDA) and the State of Indiana are partners in implementing a voluntary Conservation Reserve Enhancement Program (CREP) to enroll up to 26,250 acres of agricultural land in 11 designated watersheds in the Wabash and White River systems, including the Tippecanoe, Upper White River, Highland/Pigeon, Upper Wabash, Middle Wabash-Deer, Middle Wabash-Little Vermillion, Middle Wabash-Busseron, Lower Wabash, Lower White, Lower East Fork White and the Upper East Fork White watersheds. The purpose of the Indiana CREP is to improve water quality by reducing sediment and nutrient runoff and enhance wildlife habitats.

Background

CREP is part of the USDA Conservation Reserve Program (CRP). CRP is a federally funded voluntary program that contracts with agricultural producers so that environmentally sensitive agricultural land is not farmed or ranched, but instead used for conservation benefits. CRP participants establish permanent, resource-conserving plant species, such as approved grasses or trees (known as "covers") to control soil erosion, improve water quality and develop wildlife habitat. In return, the Farm Service Agency (FSA) provides participants with rental payments and cost-share assistance.

With CREP, high-priority conservation goals are identified by the state, and then federal funds are supplemented with non-federal funds to achieve those goals.

Through the Indiana CREP, federal and state resources are made available to program participants to voluntarily enroll in CRP for 14 to 15-year contracts. Participants remove sensitive and frequently flooded croplands from agricultural production and convert the land to grasses, trees, or other approved vegetation, such as filter strips, riparian buffers, and wetland areas to assist in erosion control, sediment reduction, water retention, and nutrient uptake. This will improve water quality by reducing sediment, nutrients, nitrogen and other pollutants from entering streams and rivers, and enhance wildlife habitat in the area.

Goals

The goals of the Indiana CREP include:

- protect a minimum of 3,000 linear miles of watercourses through the installation of buffer practices,
- reduce the amount of sediment, phosphorus, and nitrogen entering rivers and streams in the designated watersheds by 2,450 tons/year of sediment, 2,400 lbs./year of phosphorus, and 4,700 lbs./year of nitrogen, and
- increase the acres of wetlands in the watersheds for erosion control, sediment reduction, stormwater retention, and nutrient uptake.

More Information

Consult your local FSA office for details. For more information, contact your local service center and USDA Farm Service Agency office: farmers.gov/service-locator.

Indiana State Farm Service Agency
5981 Lakeside Blvd
Indianapolis, IN 46278
Phone: (317) 290-3315
Fax: (855) 374-4066

Eligible Conservation Practices

The following specific CRP conservation practices are available under the Indiana CREP:

- CP2, Establishment of Permanent Native Grasses
- CP3A, Hardwood Tree Planting
- CP4D, Permanent Wildlife Habitat
- CP21, Filter Strips
- CP22, Riparian Buffer
- CP23, Wetland Restoration
- CP23A, Wetland Restoration, Non-Floodplain
- CP31, Bottomland Timber Establishment on Wetlands

Enrollment and Eligibility Requirements

Enrollment in CRP through the Indiana CREP is on a continuous basis. To be eligible, land must be located in Indiana. Land must be cropland that meets CRP land eligibility criteria to be eligible for enrollment and must be located adjacent to a body of water or located in the floodplain.

Payments

Under the Indiana CREP, eligible participants may receive the following payments:

- A one-time signing incentive payment (SIP) is paid in accordance with FSA National CRP Directives for land as follows:
  - $100 per acre for CP21, CP22, & CP31
  - $150 per acre for CP23 & CP23A
- A one-time practice incentive payment (PIP) equal to 40% of the total eligible cost of practice installation for CP21, CP22, CP23, CP23A, and CP31.
- An annual rental payment consisting of:
  - A base soil rental rate, determined by the soils of the land offered
  - An incentive payment equal to 40% of the base rental rate without regard to other incentive payments, except for land enrolled or re-enrolled under infeasible-to-farm provisions
  - A maintenance incentive payment for practices in accordance with FSA National CRP Directives, if applicable.
- A cost-share payment of up to 50 percent of the eligible cost to install the approved practice.

In addition, Indiana will offer the following payments after the practice is established:

- A one-time Clean Water Indiana incentive payment of $100/acre for CP2, CP4D, and CP21.
- A one-time Clean Water Indiana incentive payment of $400/acre for CP3A, CP22, and CP31.
- A one-time Clean Water Indiana incentive payment of $950/acre for newly enrolled CP23 and CP23A.
- A one-time Clean Water Indiana incentive payment of $400/acre for re-enrolled CP23 and CP23A.

Enrollment Options

CREP is another option under CRP that farmers and ranchers may select to enhance their land. Eligible producers may still enroll land in CRP through general or continuous signup; however, the Indiana CREP provides additional benefits not available through general and/or continuous signup. Under the Indiana CREP, producers receive higher incentive payments and longer contract lengths that increase the total amount of rental payments received.

Haying and Grazing

Contact your local FSA office for more information about authorized haying and grazing activities.

B.4 References

ISDA. 2024. Approved Practices. https://www.in.gov/isda/divisions/soil-conservation/conservation-reserve-enhancement-program/approved-practices-and-incentives/. Accessed March 20, 2024.

State of Indiana. 2024. IndianaMap Geospatial Data Portal. https://www.indianamap.org/. Accessed March 20, 2024.

USDA FSA. 2022. Conservation Reserve Enhancement Program Indiana. https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2022/202204_fsa_crep_fact_sheet_v4_508_compliant_final.pdf. Accessed April 22, 2024.

USDA FSA. 2024. CRP Practices Library. https://www.fsa.usda.gov/programs-and-services/conservation-programs/crp-practices-library/index. Accessed March 20, 2024.

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APPENDIX C

USFWS OFFICIAL SPECIES LIST

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To: 03/15/2024 20:33:26 UTC
Project Code: 2024-0063806
Project Name: Indiana CREP

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
(312) 485-9337

Illinois-Iowa Ecological Services Field Office
Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022
(309) 757-5800

Kentucky Ecological Services Field Office
J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670
(502) 695-0467

Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
(517) 351-2555

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

Southern Illinois Sub-Office
Southern Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
(618) 998-5945

PROJECT SUMMARY

Project Code: 2024-0063806
Project Name: Indiana CREP
Project Type: Conservation Agreement
Project Description: Indiana is expanding its CREP program to the entire state.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.7708823,-86.17194368846162,14z

Counties: Illinois, Indiana, Kentucky, Michigan, and Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 39 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/6422.pdf	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/6422,6982.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/6422.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover *Charadrius melodus* Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Endangered
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

REPTILES

NAME	STATUS
Copperbelly Water Snake *Nerodia erythrogaster neglecta*	Threatened
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus*	Threatened

Copperbelly Water Snake *Nerodia erythrogaster neglecta* — Threatened
- Population: Indiana north of 40 degrees north latitude, Michigan, Ohio
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/7253

Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* — Threatened
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/2202
- General project design guidelines:
  https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5280.pdf

CLAMS

NAME	STATUS
Clubshell *Pleurobema clava*	Endangered
Fanshell *Cyprogenia stegaria*	Endangered
Fat Pocketbook *Potamilus capax*	Endangered
Longsolid *Fusconaia subrotunda*	Threatened
Northern Riffleshell *Epioblasma rangiana*	Endangered
Orangefoot Pimpleback (pearlymussel) *Plethobasus cooperianus*	Endangered

Clubshell *Pleurobema clava* — Endangered
- Population: Wherever found; Except where listed as Experimental Populations
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/3789
- General project design guidelines:
  https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Fanshell *Cyprogenia stegaria* — Endangered
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/4822
- General project design guidelines:
  https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Fat Pocketbook *Potamilus capax* — Endangered
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/2780
- General project design guidelines:
  https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Longsolid *Fusconaia subrotunda* — Threatened
- There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
- Species profile: https://ecos.fws.gov/ecp/species/9880

Northern Riffleshell *Epioblasma rangiana* — Endangered
- No critical habitat has been designated for this species.
- Species profile: https://ecos.fws.gov/ecp/species/527
- General project design guidelines:
  https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Orangefoot Pimpleback (pearlymussel) *Plethobasus cooperianus* — Endangered
- No critical habitat has been designated for this species.

NAME STATUS

Species profile: https://ecos.fws.gov/ecp/species/1132
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Pink Mucket (pearlymussel) *Lampsilis abrupta* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/7829
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Rabbitsfoot *Quadrula cylindrica cylindrica* Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5165
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Rayed Bean *Villosa fabalis* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/5862

Ring Pink (mussel) *Obovaria retusa* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/4128
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Rough Pigtoe *Pleurobema plenum* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6894
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

Round Hickorynut *Obovaria subrotunda* Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9879

Salamander Mussel *Simpsonaias ambigua* Proposed Endangered
There is **proposed** critical habitat for this species. Your location overlaps the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/6208

Sheepnose Mussel *Plethobasus cyphyus* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6903
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DQMCREIRPVG4HAG65M5BMN4IYA/documents/generated/5639.pdf

NAME	STATUS
Snuffbox Mussel *Epioblasma triquetra* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4135	Endangered
White Catspaw (pearlymussel) *Epioblasma perobliqua* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6893	Endangered

INSECTS

NAME	STATUS
Hine's Emerald Dragonfly *Somatochlora hineana* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7877	Endangered
Karner Blue Butterfly *Lycaeides melissa samuelis* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/6656	Endangered
Mitchell's Satyr Butterfly *Neonympha mitchellii mitchellii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8062	Endangered
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Rusty Patched Bumble Bee *Bombus affinis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9383	Endangered

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/601	Threatened
Lakeside Daisy *Hymenoxys herbacea* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3615	Threatened
Leafy Prairie-clover *Dalea foliosa* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5498	Endangered
Mead's Milkweed *Asclepias meadii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8204	Threatened

NAME	STATUS
Pitcher's Thistle *Cirsium pitcheri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8153	Threatened
Short's Bladderpod *Physaria globosa* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7206	Endangered
Short's Goldenrod *Solidago shortii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5367	Endangered
Virginia Sneezeweed *Helenium virginicum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6297	Threatened

CRITICAL HABITATS

There are 6 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat *Myotis sodalis* https://ecos.fws.gov/ecp/species/5949#crithab	Final
Piping Plover *Charadrius melodus* https://ecos.fws.gov/ecp/species/6039#crithab	Final
Rabbitsfoot *Quadrula cylindrica cylindrica* https://ecos.fws.gov/ecp/species/5165#crithab	Final
Round Hickorynut *Obovaria subrotunda* https://ecos.fws.gov/ecp/species/9879#crithab	Final
Salamander Mussel *Simpsonaias ambigua* https://ecos.fws.gov/ecp/species/6208#crithab	Proposed
Short's Bladderpod *Physaria globosa* https://ecos.fws.gov/ecp/species/7206#crithab	Final

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

FACILITY NAME	ACRES
FARM SERVICE AGENCY INTEREST OF IN https://www.fws.gov/our-facilities?$keywords="%5C%22FARM+SERVICE+AGENCY+INTEREST+OF+IN%5C%22"	7,998.952
FARM SERVICE AGENCY INTEREST OF IN https://www.fws.gov/our-facilities?$keywords="%5C%22FARM+SERVICE+AGENCY+INTEREST+OF+IN%5C%22"	11,678.476
FARM SERVICE AGENCY INTEREST OF IN https://www.fws.gov/our-facilities?$keywords="%5C%22FARM+SERVICE+AGENCY+INTEREST+OF+IN%5C%22"	50,886.185
FARM SERVICE AGENCY INTEREST OF IN https://www.fws.gov/our-facilities?$keywords="%5C%22FARM+SERVICE+AGENCY+INTEREST+OF+IN%5C%22"	26.592
FARM SERVICE AGENCY INTEREST OF IN https://www.fws.gov/our-facilities?$keywords="%5C%22FARM+SERVICE+AGENCY+INTEREST+OF+IN%5C%22"	379.953

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

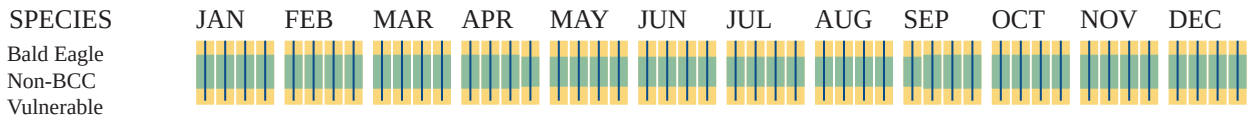
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data



Golden Eagle
Non-BCC
Vulnerable

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	Breeds elsewhere

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Field Sparrow *Spizella pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9446	Breeds Mar 1 to Aug 15
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Golden-winged Warbler *Vermivora chrysoptera* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Hudsonian Godwit *Limosa haemastica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	Breeds elsewhere

NAME	BREEDING SEASON
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Kirtland's Warbler *Setophaga kirtlandii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8078	Breeds May 25 to Jul 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds May 1 to Jul 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10633	Breeds elsewhere
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere

NAME	BREEDING SEASON
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Upland Sandpiper *Bartramia longicauda* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294	Breeds May 1 to Aug 31
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31
Yellow Rail *Coturnicops noveboracensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9476	Breeds May 15 to Sep 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

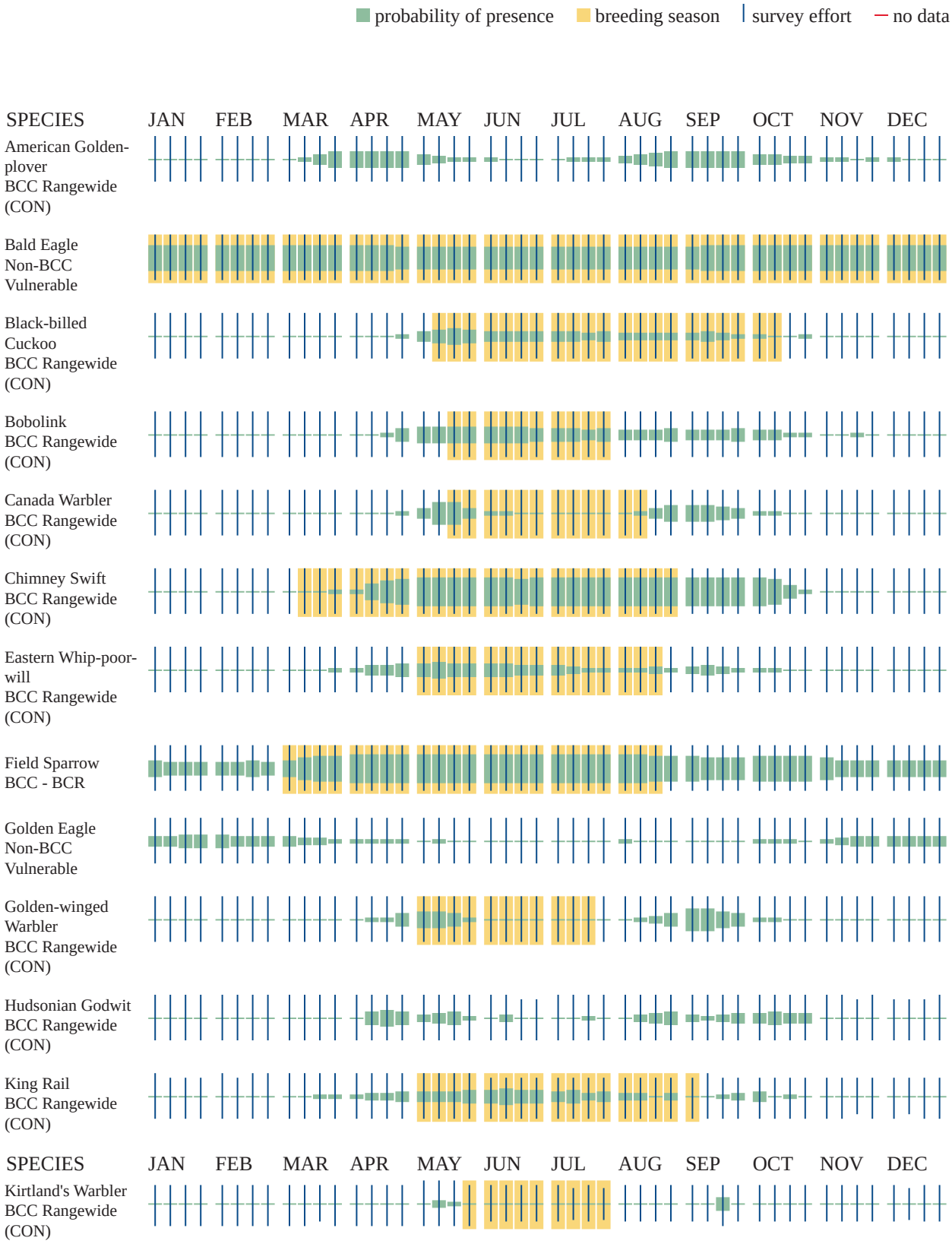
Probability of Presence (■)

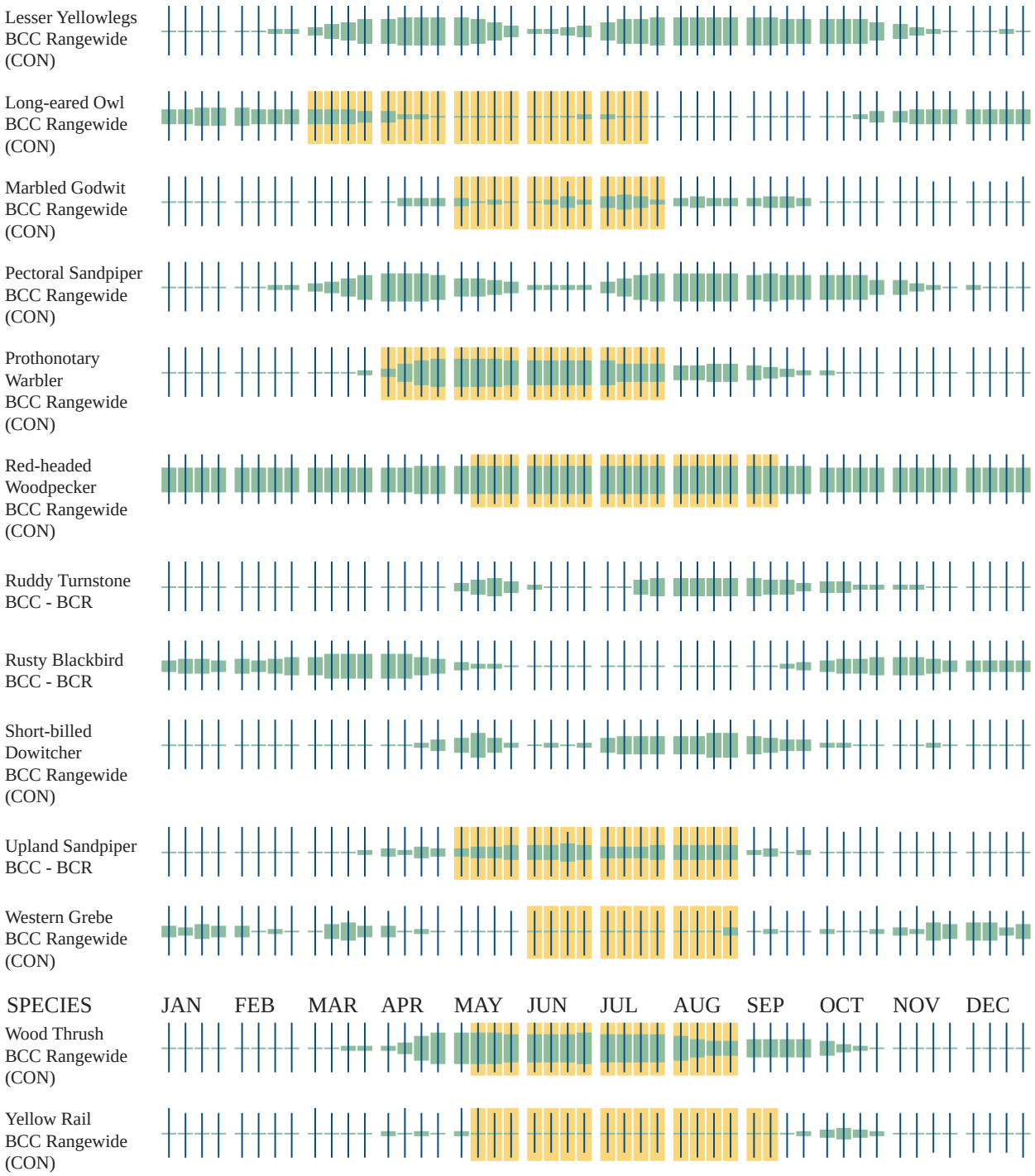
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.


probability of presence
breeding season
survey effort
no data
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
American Golden-plover BCC Rangewide (CON)
Bald Eagle Non-BCC Vulnerable
Black-billed Cuckoo BCC Rangewide (CON)
Bobolink BCC Rangewide (CON)
Canada Warbler BCC Rangewide (CON)
Chimney Swift BCC Rangewide (CON)
Eastern Whip-poor-will BCC Rangewide (CON)
Field Sparrow BCC - BCR
Golden Eagle Non-BCC Vulnerable
Golden-winged Warbler BCC Rangewide (CON)
Hudsonian Godwit BCC Rangewide (CON)
King Rail BCC Rangewide (CON)
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Kirtland's Warbler BCC Rangewide (CON)



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

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WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit https://www.fws.gov/wetlands/data/mapper.HTML

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Cd
- PSS1A
- PFO1Ah
- PSS1Cd
- PSS1Ch
- PFO1A
- PFO1/EM1A
- PSS1/EM1A
- PFO1/SS1A
- PSS1Ad
- PFO1C
- PSS1/EM1C
- PFO1/EM1Cd
- PSS1F
- PFO1F
- PFO1Ad
- PFO1Ax
- PSS1C

- PFO1Ch
- PFO1/SS1C
- PFO1/4Ad
- PFO1/EM1C

FRESHWATER POND

- PUBK
- PABF
- PABGh
- PUBFh
- PUBGx
- PABG
- PABGx
- PAB4Gx
- PUBFx
- PAB4Gh
- PUB4Fh
- PUBG
- PUBF
- PUBGh

RIVERINE

- R2USC
- R4SBC
- R2UBG
- R5UBH
- R4SBCx
- R2UBHx
- R2UBH

FRESHWATER EMERGENT WETLAND

- PEM1Fh
- PEM1C
- PEM1A
- PEM1Cd
- PEM1F
- PEM1Ch
- PEM1Fx
- PEM1Af

- PEM1Bd
- PEM1Ad

LAKE

- L1UBHx

IPAC USER CONTACT INFORMATION

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APPENDIX D

REASONABLY FORESEEABLE FUTURE ACTIONS

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Appendix D – Reasonably Foreseeable Future Actions

Table D-1 Reasonably Foreseeable Future Actions

Project and Proponent	Project Summary	Implementation Date	Relevance to Proposed Action
I-69 Finish Line (INDOT)	INDOT is constructing the sixth and final section of the new Interstate 69. It will begin in Martinsville and end at I-465 in Indianapolis and will include more than 26 miles of new highway, 8 miles of new lanes on I-465, and 35 lane-miles of new access roads. Dozens of bridges will be built, rehabilitated, or replaced.	End of 2024	Construction and operation of new and larger roadways would have the potential to affect air quality; biological, cultural, and water resources; soils; socioeconomics/recreation; environmental justice; and other protected resources.
Clear Path Northeast (INDOT)	Construction of new travel lanes on 4.5 miles of I-465, ramp lanes, and 14 new bridges, as well as 2 rehabilitated bridges, interchange modifications and maintenance work.	2024 (mainline); 2026 (interchange)	Action could occur within the same timeframe. Construction and operation of new and larger roadways could impact biological, cultural, and water resources; air quality; and socioeconomics.
Ohio River Crossing (INDOT), (KYTC)	Construction of the final connection of I-69 between Evansville, Indiana and Henderson, Kentucky to reduce traffic congestion and delays and improve safety. Projects include 11+ miles of new roadways, new and rehabilitated bridges, retention basins, and retaining walls.	2022-2031	Action could occur within the same timeframe. Construction and operation of new and larger roadways could impact air quality, biological and cultural resources, and socioeconomics.
I-465 SE Transportation System Management Operations (INDOT)	Roadway improvements to include ramp metering, variable speed limits, and dynamic message signs to alleviate congestion and increase safety.	Spring 2024	Action could occur within the same timeframe. Construction and operation of traffic safety features could impact biological, cultural, and water resources; socioeconomics/recreation; and air quality.
House Enrolled Act 1383 (Indiana General Assembly)	Administrative changes to wetland definitions, rulemaking and authorization requirements, and clarification of compensatory mitigation for wetlands.	July 2024-ongoing	Action could occur within the same timeframe. Changes to wetland rules and regulations could impact biological and cultural resources and socioeconomics/recreation.
Conservation Stewardship Program and other federal programs	The Conservation Stewardship Program and other federal conservation programs aim to enhance water quality, wildlife habitat, agricultural resilience, and other environmental parameters through registration and conversion of active farmland.	Ongoing	Continued or enhanced implementation of federal conservation programs is likely to have beneficial effects on socioeconomics/recreation; soils; biological, cultural, and water resources.

Table D-1 Reasonably Foreseeable Future Actions

Project and Proponent	Project Summary	Implementation Date	Relevance to Proposed Action
Landowner and Wildlife Habitat Assistance and other state programs	IDNR conducts programs such as Landowner and Wildlife Habitat Assistance to enhance water quality, wildlife habitat, agricultural resilience, and other environmental parameters by registering and protecting land in the program.	Ongoing	Continued or enhanced implementation of state conservation programs is likely to have beneficial effects on biological, water and cultural resources; soils; and socioeconomics/recreation.
Ongoing private development	Construction, demolition, and other private development actions will continue to occur throughout the state in sectors such as energy, industrial, and residential.	Ongoing	Private development actions have the potential to impact air quality, noise, biological, cultural and water resources; soils; socioeconomics/recreation; and environmental justice.

Notes:

Sources: INDOT. 2024. I-69 finish line - the finish line is in sight. https://i69finishline.com/

INDOT. 2024. A project to improve safety and traffic flow. Clear Path 465. https://clearpath465.com/

INDOT, KYTC. 2023. I-69 Ohio River Crossing - Completing the Connection. https://i69ohiorivercrossing.com/

INDOT. 2024. I-465 SE Transportation System Management Operations. https://www.in.gov/indot/about-indot/central-office/welcome-to-the-greenfield-district/i-465-se-transportation-system-management-operations-tsmo/

Indiana General Assembly. 2024. House Enrolled Act 1383 – Wetlands. https://iga.in.gov/pdf-documents/123/2024/house/bills/HB1383/HB1383.04.ENRS.pdf

IDNR. 2023. Landowner and wildlife habitat assistance. https://www.in.gov/dnr/fish-and-wildlife/landowner-and-wildlife-habitat-assistance/

USDA. 2022. Conservation Stewardship Program - Indiana. Natural Resources Conservation Service. https://www.nrcs.usda.gov/programs-initiatives/csp-conservation-stewardship-program/indiana/conservation-stewardship-program

IDNR = Indiana Department of Natural Resources

INDOT = Indiana Department of Transportation

KYTC = Kentucky Transportation Cabinet

APPENDIX E

LIST OF PREPARERS AND CONTRIBUTORS

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Appendix E – List of Preparers and Contributors

Table E-1 List of Preparers and Contributors

Consultants – Versar, Inc.

Name	Education	EA Role	Years of Experience
Jessica Botte	MAS, Environmental Policy and Management	Other Protected Resources, Soils	14
Christopher Bowen	MA, Archaeology and Heritage	Cultural Resources	32
Craig Carver	Master of Urban and Regional Planning	Project Management	14
Rahul Chettri	MS, Environmental Studies	Air Quality	41
Kenneth Erwin	MS, Natural Resources	Biological and Water Resources	10
Megan Grove	BS, Environmental Geography	Socioeconomics / Recreation and Environmental Justice	15
Radhika Narayanan	MS, Environmental Science	Air Quality	28
Alex Noble	BS, Environmental Science; BA, Biological Sciences	Biological and Water Resources	2
Angela Northrop	BS, Marketing	Technical Editing	26
Maria Shepherd	BA, Zoology	Technical Review	35
Travis Smith	BA, Geography	GIS/Cartography	28
Christa Stumpf	MS, Forest Resources and Land Use Planning	Senior Technical Review	29
Michael Waters	Undergraduate	GIS/Cartography	17

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