

**Final Environmental Assessment
for the
Multi-Bat Species General Conservation Plan for Routine
Development Projects
in
New York, Pennsylvania, and West Virginia**

U.S. Fish and Wildlife Service
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Abbreviations and Acronyms

°F – Degrees Fahrenheit	NRI – Natural Resources Inventory
AAR – All-American Roads	NSB – National Scenic Byways
ACHP – Advisory Council on Historic Preservation	NWI – National Wetlands Inventory
BGEPA – Bald and Golden Eagle Protection Act	NWR – National Wildlife Refuge
CEC – North American Commission for Environmental Cooperation	NYCRR – New York Codes, Rules and Regulations
CFR — Code of Federal Regulations	NYDOT – New York Department of Transportation
CM – Conservation Measure	NYECL – New York Environmental Conservation Law
CWA – Clean Water Act	NYSDEC – New York State Department of Environmental Conservation
dB – Decibels	O₃ – Ozone
dbh – Diameter at Breast Height	OSHA – Occupational Safety and Health Administration
DOI – Department of the Interior	PennDOT – Pennsylvania Department of Transportation
EA – Environmental Assessment	Pb - Lead
EIS – Environmental Impact Statement	PDCNR – Pennsylvania Department of Conservation and Natural Resources
EO – Executive Order	Pub.L. – Public Law
EPA – U.S. Environmental Protection Agency	PM₁₀ and PM_{2.5} – Particulate Matter smaller than 10 and 2.5 microns, respectively
ESA – Endangered Species Act	PNDI – Pennsylvania Natural Diversity Inventory
FEMA – Federal Emergency Management Agency	PNHP – Pennsylvania Natural Heritage Program
FIRM – Flood Insurance Rate Map	RHA – Rivers and Harbors Act
FPPA – Farmland Protection Policy Act	SDWA – Safe Drinking Water Act
FR – <i>Federal Register</i>	Service – U.S. Fish and Wildlife Service
GCP – General Conservation Plan	SGCN – Species of Greatest Conservation Need
GHG – Greenhouse Gas	SHPO – State Historic Preservation Officer
HAP – Hazardous Air Pollutant	SO_x – Sulfur Oxide
HCP – Habitat Conservation Plan	SWAP – State Wildlife Action Plan
ILF – In-Lieu Fee	THPO – Tribal Historic Preservation Officer
ITP – Incidental Take Permit	U.S.C. – U.S. Code
Ldn – Average Day Night Sound Level	USACE – U.S. Army Corps of Engineers
MBTA – Migratory Bird Treaty Act	USDA – U.S. Department of Agriculture
NAAQS – National Ambient Air Quality Standards	USFS – U.S. Forest Service
NEPA – National Environmental Policy Act	USGS – U.S. Geological Survey
NFIP – National Flood Insurance Program	VOC – Volatile Organic Compound
NHPA – National Historic Preservation Act	WMA – Wildlife Management Area
NLCD – National Land Cover Database	WNS – White-Nose Syndrome
NLEB – Northern Long-Eared Bat	WOTUS – Waters of the U.S.
NPS – National Park Service	WVDNR – West Virginia Division of Natural Resources
NRCS – Natural Resources Conservation Service	WVDOT – West Virginia Department of Transportation

Glossary of Terms

active season – The bat annual period from spring staging and migration through fall migration and swarming. This includes all key stages in the Covered Species annual cycle except hibernation. The timing and duration of the active season varies with weather, latitude, and elevation. See Appendix L of the Service’s Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines¹ for dates and timing that apply to specific project locations. See GCP Figures 6 and 7 for general timing of the Covered Species annual cycle.

Applicant – Refers to any person, as defined in the ESA section 3(13), who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action (50 CFR² 402.02). Under the GCP, a Project Proponent is a potential Applicant and becomes an Applicant at the time they submit a complete application as determined by the Service.

candidate species – Candidate species are plants and animals for which the Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

conservation measures (CMs) – CMs describe the specific actions that the Permittee will implement to achieve the project objectives in support of the HCP’s goals (or GCP, as related to this document). There may be multiple CMs associated with each objective. Conservation measures can be any of the avoidance, minimization, or mitigation actions taken to meet the goals and objectives of an HCP/GCP. CMs can take many forms, but in all cases must be based on the biological needs of covered species. HCPs/GCPs often combine these measures to meet the needs of species (HCP and ITP Processing Handbook Chapter 9, section 9.3).

conservation plan – The plan required by ESA section 10(a)(2)(B) that an Applicant must submit when applying for an ITP. Conservation plans also are known as “habitat conservation plans” or “HCPs.” Incidental take is authorized through a section 10(a)(1)(B) permit (HCP and ITP Processing Handbook, 50 CFR 17.3). *See also* “general conservation plan” (“GCP”).

Covered Activities – Activities that a permittee will conduct for which take is authorized in an ESA section 10(a)(1)(B) permit (HCP and ITP Processing Handbook).

Covered Species – Species for which incidental take is authorized in an ITP and is adequately covered in an HCP or GCP. Covered Species also include species that are not federally listed as threatened or endangered that have been adequately addressed in an HCP or GCP as though they were listed and are therefore, included in an ITP (HCP and ITP Processing Handbook). Covered Species included in this EA and GCP are the IBAT, NLEB, and TCB.

ecoregions – Areas where ecosystems (and the type, quality, and quantity of environmental resources) are generally similar. Ecoregions are identified by analyzing the patterns and composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem

¹ <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

² CFR stands for Code of Federal Regulations.

quality and integrity. These phenomena include geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology.

endangered species – Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of the ESA would present an overwhelming and overriding risk to man (ESA section 3; 50 CFR 424.10(e)).

Environmental Assessment – A concise public document, prepared in compliance with the NEPA, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an Environmental Impact Statement or Finding of No Significant Impact.

Environmental Impact Statement – A detailed written statement required by NEPA section 102(2)(C) containing, among other things, an analysis of environmental impacts of a proposed action and an alternative considered, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources (NEPA section 102(2)(C)).

Endangered Species Act – Federal statute that provides for listing and conservation of species (16 U.S.C. 1531-1543; 87 Stat 884).

extirpation – Loss of a local population of a species. Compared to extinction, in which no populations survive.

fall swarming area – Fall swarming zones are found in forested/wooded areas where the Covered Species roost, forage, and travel, around a hibernaculum during the fall swarming period, from mid-August to mid-November for IBATs and NLEBs, and mid-August to mid-October for TCBs. Bats also use these areas for mating and to build up fat reserves before hibernation. These areas include forested patches, as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

general conservation plan – A completed landscape level conservation plan and the NEPA compliance document produced either by the Service, or by another entity in cooperation with the Service; however, no Permit is issued at the time the conservation plan is approved. This approach is recommended in situations where it is anticipated that numerous individual HCPs would be needed to cover many similar but unrelated proposed actions, but where no Applicant is appropriate to serve as a master Permittee. In this type of HCP, the Service defines the geographic scope of the GCP, the conservation plan and associated mitigation requirements. In this process, the Service completes a single Findings document, a single section 7 Biological Opinion, and a single NEPA document for all actions covered under the GCP. The GCP is made available for adoption and use by numerous Applicants who become eligible to receive individual Permits when they can demonstrate compliance with the conservation plan and

mitigation requirements of the GCP (Service Policy Memo October 5, 2007; HCP and ITP Processing Handbook).

harm – “...an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering” (50 CFR 17.3, 1981 Final Rule, 46 FR 54750).

historic property – Under the NHPA, any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register, including artifacts, records, and material remains relating to the district, site, building, structure, or object (NHPA section 106; 36 CFR 800.16(1)(1)).

inactive season – The annual period when the Covered Species hibernate. The timing and duration of the inactive season for each species varies with weather, latitude, and elevation. See Appendix L of the Service’s Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines³ for dates and timing that apply to specific project locations.

incidental take – Take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or Applicant (50 CFR 402.02, HCP and ITP Processing Handbook).

incidental take permit – An ITP/ permit issued under ESA section 10(a)(1)(B) to a non-Federal party undertaking an otherwise lawful project that might result in the take of an endangered or threatened species. Application for a permit is subject to certain requirements, including preparation by the permit Applicant of a conservation plan, generally “Conservation Plan” or “HCP” (ESA section 10(a)(1)(B)).

National Environmental Policy Act (NEPA) – The NEPA of 1969 (NEPA), as amended (42 U.S.C. § 4321, *et seq.*), is a Federal statute that requires Federal agencies to evaluate and disclose the effects of their discretionary proposed actions on the human environment.

Non-Federal lands – Non-Federal lands include privately owned lands, tribal and trust lands, and lands controlled by state and local governments.

Permit Area – The geographic area where an ITP applies (HCP and ITP Processing Handbook). The permit area for ITPs issued in association with the proposed GCP would be defined for each individual project and must be completely within the GCP Plan Area consisting of the states of NY, PA, and WV, excluding Federal lands.

Permittee – A person(s) (“any individual, firm, corporation, association, partnership, club, or private body, any one or all, as the context requires.” 50 CFR §10.12) that holds an active ITP. An Applicant becomes a Permittee upon issuance of an ITP.

³ <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

Plan Area – The specific geographic area where Covered Activities described in the GCP, including mitigation, may occur (HCP and ITP Processing Handbook). The Plan Area for this GCP includes the states of NY, PA, and WV, excluding Federal lands.

Project Proponent – A potential Applicant. For the purposes of the GCP, a Project Proponent is any person⁴ planning to engage in activities within the Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.

spring staging area – Spring staging areas are found in forested areas where the Covered Species roost, forage, and travel, around a hibernaculum, during the spring staging period from mid-March to mid-May for IBATs and NLEBs, and late April to early May for TCBs. The bats may spend a few hours or days around hibernacula preparing for migration or migrate immediately to summer habitat. These areas include forested patches as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

suitable summer habitat:

Indiana bat (IBAT) – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed nonforested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 5 inches diameter at breast height (dbh) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested habitat. IBATs have also been observed roosting in manmade structures, such as bridges and bat houses; therefore, these structures should also be considered potential summer habitat.

Northern long-eared bat (NLEB) – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed nonforested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of forested habitat. The NLEB has also been observed roosting in manmade structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat.

Tricolored bat (TCB) – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may include some adjacent and interspersed nonforested

⁴ See definition in ESA section 3(13).

habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. This includes forests and woodlots containing trees with potential roost substrate (i.e., live and dead leaf clusters of live and recently dead deciduous trees), as well as linear features such as fencerows, riparian forests, and other wooded corridors. TCBs will roost in a variety of tree species, especially oaks (*Quercus* spp.), and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (e.g., 4-inch [10-centimeter]). Occasional summer roosts also include clusters of dead pine needles of large live pines (*Pinus echinata*), live branches of Norway spruce (*Picea abies*), eastern red cedar (*Juniperus virginiana*), abandoned gray squirrel (*Sciurus carolinensis*) nests, and under exfoliating birch (*Betula* spp.) bark. TCBs commonly roost in the mid to upper canopy of trees although males will occasionally roost in dead leaves at lower heights (e.g., less than 16 feet [5 meters] from the ground). TCBs seem to prefer foraging along forested edges of larger forest clearings, along edges of riparian areas, and over water and avoid foraging in dense, unbroken forests, small forest openings, and narrow road cuts through forests. TCBs also roost in manmade structures, such as bridges and culverts, and occasionally in barns or the underside of open-sided shelters (e.g., porches, pavilions); therefore, these structures should also be considered potential summer habitat.

See the Service's Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines for additional details on suitable habitat.⁵

threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (ESA section 3).

take – "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct" (ESA section 3).

⁵ <https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

Chapter 1 Purpose and Need for Action

1.1 Introduction

The U.S. Fish and Wildlife Service (Service) prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended⁶; the Department of the Interior (DOI) NEPA Implementing Regulations⁷; the NEPA Procedures in the DOI Handbook of National Environmental Policy Act Implementing Procedures⁸; and section 10(a)(1)(B) of the Endangered Species Act (ESA), as amended.⁹ This EA evaluated the impacts of, and alternatives to, the proposed approval and implementation of the Multi-Bat Species General Conservation Plan for Routine Development Projects in New York (NY), Pennsylvania (PA), and West Virginia (WV) (GCP) incorporated herein by reference.

The GCP, if approved, would facilitate issuance of ESA section 10(a)(1)(B) incidental take permits (ITPs) for the federally listed Indiana bat (*Myotis sodalis*; Endangered; IBAT) and northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered, TCB) (individually and collectively called the Covered Species) resulting from tree removal or habitat modification associated with certain residential and commercial development, transportation, and utility infrastructure projects where these species are known or are likely to occur on non-Federal lands in the three-state Plan Area. If approved, individual Project Proponents could apply for ITPs for the Covered Species by adopting and agreeing to comply with the conservation program outlined in the GCP.

This EA compares the potential direct, indirect, and cumulative effects on the human and natural environment resulting from the proposed Federal action of approving the proposed GCP and subsequent issuance of ITPs with a baseline No Action Alternative. The Service prepared this EA rather than an Environmental Impact Statement (EIS) because, after initial assessment, there is no reasonable expectation that the proposed Federal action would result in significant impacts.

1.2 Background

Congress enacted the ESA to establish a program for the conservation of endangered and threatened species and the ecosystems on which they depend. The Secretaries of the Interior and Commerce have the responsibility for administering the ESA and have delegated this responsibility to the Service and the National Marine Fisheries Service (NMFS). The Service has primary responsibility for terrestrial and freshwater organisms, while NMFS is responsible for marine wildlife including whales and anadromous fishes, such as salmon.

ESA section 9 and the Service's implementing regulations prohibit "take" of fish and wildlife species that are listed as endangered¹⁰ but does not provide these same prohibitions to threatened species. Instead, ESA section 4(d) requires that the Secretary issue regulations necessary and

⁶ 42 U.S.C. § 4321 *et seq.*

⁷ 43 CFR 46

⁸ 516 DM 1

⁹ 16 U.S.C. § 1531–1544

¹⁰ 16 U.S.C. §§ 1531–1544

advisable to provide for the conservation of threatened species; these are referred to as “4(d) rules.” Exceptions to prohibitions against take may be obtained through consultation with the Service under ESA section 7 or through issuance of a Permit under ESA section 10.

If a proposed project that may affect an endangered or threatened species is funded, authorized, or carried out by a Federal agency, the responsible Federal agency must consult with the Service or NMFS pursuant to ESA section 7(a)(2). Federal agencies are directed to utilize their authorities in furtherance of the purposes of the ESA by developing conservation programs¹¹ and must ensure that the projects that they fund, authorize, or carry out do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of designated critical habitat.¹² “Jeopardize the continued existence of...” means to “engage in an action that would reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”¹³ “Destruction or adverse modification” means a “direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.” Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features. Regulations specifying how Federal agencies fulfill their ESA section 7 consultation requirements are described in Title 50 of the Code of Federal Regulations (CFR) Part 402.

If a proposed project has no federal nexus (i.e., it is not funded, authorized, or carried out by a Federal agency), the Project Proponent can seek an exception by applying for an ITP under ESA section 10. To receive an ITP, the proponent must develop and submit a “conservation plan” that meets specific statutory¹⁴ and regulatory¹⁵ requirements. The Service issues ITPs upon determining that specific issuance criteria have been met.¹⁶

The GCP is a conservation plan developed by the Service that facilitates a streamlined project review and permitting process to address a defined suite of proposed activities within a specified geographic area. Unlike conservation plans that address incidental take permitting on a project-by-project basis (which have come to be known as Habitat Conservation Plans or HCPs), a GCP establishes a framework under which proposed projects are reviewed for compliance with standardized requirements as individual applications are submitted. As with an Applicant-prepared HCP, the Service can issue ITPs under the GCP pursuant to ESA section 10. However, unlike HCPs, qualified Applicants can adopt the Service’s proactively prepared GCP that provides for a set of specific covered activities rather than develop project-by-project conservation plans.

The proposed GCP was prepared by the Service’s NY, PA, and WV Ecological Services Field Offices (collectively, the Field Offices) in accordance with ESA section 10(a)(2)(A) to provide

¹¹ ESA section 7(a)(1)

¹² ESA section 7(a)(2)

¹³ 50 CFR 402.2

¹⁴ ESA section 10(a)(2)(A)

¹⁵ 50 CFR 13, 17.22, 17.32

¹⁶ ESA section 10(a)(1)(B)

an efficient and standardized mechanism for Project Proponents engaged in specific routine development projects on non-Federal lands. The proposed GCP would allow private individuals, local and state agencies, and other non-Federal entities to meet the statutory and regulatory requirements of the ESA by adopting the GCP as the conservation plan required when applying for an ITP, and agreeing to comply with the standardized avoidance, minimization, and mitigation actions that apply to their individual projects.

This EA provides the required NEPA analysis and documentation for the proposed Federal action (i.e., approval of the GCP and subsequent issuance of ITPs), a discussion of impacts to the human and natural environment that may result from approval and implementation of the GCP, and a comparison with a baseline No Action Alternative in which the GCP would not be approved, and associated ITPs would not be issued. Importantly, the scope of this EA is limited to the evaluation of the proposed GCP as a mechanism to standardize ITP issuance for Covered Activities; this EA neither evaluates nor results in approval of individual development projects or activities. Land use approval(s) for individual projects would continue to be the responsibility of the local or state agency(ies) with appropriate jurisdiction(s) over individual projects.

1.3 Purpose and Need of the Proposed Action

The purpose of the proposed GCP is to provide a mechanism by which the Field Offices can increase efficiency, standardize ESA compliance, and promote consistent conservation outcomes for a range of routine development projects on non-Federal lands that have the potential to impact the Covered Species.

The proposed GCP fulfills a need to facilitate more efficient and consistent conservation practices for the Covered Species in NY, PA, and WV. Rather than requiring each Project Proponent to develop their own HCP as part of the ITP application process, the proposed Federal action would allow qualified Applicants to adopt the GCP as part of their ITP application. The Field Offices would then verify that proposed projects meet standardized GCP requirements. The GCP would facilitate greater consistency in application of avoidance, minimization, and mitigation measures and ensure that multiple unrelated projects within the Plan Area all contribute toward consistent conservation goals for the covered species.

1.4 Agency and Public Involvement

The Service identified and invited participation of Tribal governments throughout the planning and early stages of the EA preparation.¹⁷ A list of the Tribal governments and persons contacted is attached as Appendix B.

Also, a Notice of Availability of the draft GCP and the draft EA was published in the *Federal Register* (FR) on October 29, 2024, for review by the public, agencies, and other interested parties. Additionally, notification was sent to interested stakeholders to encourage review of and comment on the draft EA. All comments received on the draft EA were reviewed, considered, and incorporated into the final EA, as appropriate. Comments received during the public review and comment period will be included as Appendix E.

¹⁷ 43 CFR 46.235(a)

1.5 Scope of the Environmental Assessment

Per NEPA, the DOI NEPA Implementing Regulations, and the NEPA Procedures in the DOI Handbook of National Environmental Policy Act Implementing Procedures, an EA is intended to be focused, relevant, and succinct. Therefore, this EA focuses on describing the expected environmental impacts of the proposed Federal action compared to an alternative in which the proposed action is not selected, and on describing evidence supporting a determination to prepare either a finding of no significant impact (FONSI) or an EIS.¹⁸

Approval and implementation of the proposed action would not directly result in approval of ITPs for any future individual project. In addition, Applicants may require other state or local permits (see Section 1.6).

1.6 Other Regulatory Requirements

The GCP was created to satisfy the statutory and regulatory requirements of a conservation plan for issuance of ITPs and incorporates specific measures consistent with the Service's existing recovery plans and regional conservation strategies for the Covered Species. Applicants that choose to adopt the GCP as part of their application must agree to comply with all applicable Federal, state, and local statutes and regulations to ensure that their actions are otherwise lawful and; therefore, eligible to be covered by an ITP. The GCP is not intended to supersede existing Federal, state, or local laws or regulations. A brief survey of state and local requirements regarding project-specific reviews and approvals is provided below. This list is not intended to be comprehensive, but to acknowledge the important role of state and local authorities in ensuring protection of elements of the human and natural environment under their respective jurisdictions.

New York State

The NY State Department of Environmental Conservation (NYSDEC) specifies that a state-issued ITP is required for any activity not otherwise exempt that is likely to result in take or taking of any species listed by the state as threatened or endangered, or adverse modification of their occupied habitat.^{19, 20} The subsequent permit application and review processes are subject to adherence to the procedures and timeframes set forth in the Uniform Procedures Act.²¹

The NY State Environmental Quality Review Act and its implementing regulations require all state and local government agencies to consider environmental impacts equally with social and economic factors during discretionary decision-making.²² Similar to the NEPA process, if through the completion of an Environmental Assessment Form, an action is determined not to have significant adverse environmental impacts, a determination of nonsignificance (i.e.,

¹⁸ NEPA section 102(2)(E)

¹⁹ 6 New York Codes, Rules and Regulations [NYCRR] Part 182

²⁰ New York Environmental Conservation Law [NYECL] § 11-0535

²¹ 6 NYCRR Part 621

²² 6 NYCRR Part 617

Negative Declaration) is prepared. If an action is determined to have potentially significant adverse environmental impacts, an EIS is required.

Several NY State agencies administer additional regulations related to environmental protection that could apply to projects eligible to participate in the GCP. For example, the NYSDEC implements the 1975 Freshwater Wetlands Act²³ and the Protection of Waters Act,²⁴ and the NY Department of State administers the Waterfront Revitalization and Coastal Resource Act of 1981.²⁵

NY counties, towns, villages, and municipalities can review and process development permit applications in coordination with the NYSDEC and regulate certain resources through zoning and other land use regulation authorities.

Pennsylvania

PA state laws pertaining to take of threatened and endangered species are found under Recreation Code,²⁶ PA Fish and Boat Code,²⁷ the Game and Wildlife Code,²⁸ the Wild Resource Conservation Act,²⁹ and the Conservation of PA Native Wild Plants Act.³⁰ The PA Department of Environmental Protection ensures that permit Applicants utilize the PA Natural Heritage Program's (PNHP) PA Natural Diversity Inventory (PNDI) database and associated PNDI Environmental Review tools³¹ during the permit application process.

Multiple state agencies in PA are responsible for implementing environmental statutes and other regulations related to the human and natural environment that may pertain to projects participating under the GCP, including the PA Department of Conservation and Natural Resources (PDCNR), Department of Environmental Protection, the Game Commission, the Fish and Boat Commission, and the Historical and Museum Commission. Some county and local governments regulate certain resources through zoning and other regulatory authorities.

West Virginia

All federally listed species present within WV are designated as such per state code.³² The WV Department of Natural Resources Rare, Threatened, and Endangered Species Program (WVDNR, RTE) implements conservation actions for all federally listed species within the state. The WV Department of Environmental Protection (WVDEP) is responsible for issuing permits for various facilities and activities, ensuring that proposed activities adhere to all relevant state and Federal environmental laws while minimizing potential impacts to the environment.

²³ NYECL § 24-0107, 24-0301, 24-0701

²⁴ NYECL § 15-0101

²⁵ NY Consolidated Laws, Executive Law Article 42 Parts 910–923

²⁶ 58 Pa. Code § 75, 133, 137, 147

²⁷ 30 Pa. C.S. §§ 102, 2502, 2504, 2506

²⁸ 34 Pa. C.S. §§ 102, 925, 2164–67, 2924

²⁹ 32 P.S. §§ 5301–5314

³⁰ 17 Pa. Code § 45.1–91

³¹ PNHP 2022

³² WV Code §§ 20-1-18a, 20-1-18c.

1.7 National Historic Preservation Act

The National Historical Preservation Act of 1966 (NHPA), as amended,³³ is the primary Federal law governing the preservation of cultural and historic resources in the United States. This act established a national preservation program and the basic structure for encouraging the identification and protection of cultural and historic resources of national, state, tribal, and local significance. NHPA section 106 requires that Federal agencies consider the effects of their undertakings (including permitting the undertakings of other entities) on historic properties and stipulates that affected federally recognized tribes must be consulted. The issuance of ITPs is a federal undertaking requiring review under the NHPA.

Applicants seeking an ITP through the streamlined GCP process agree to follow the prescribed stepwise section 106 process to ensure that compliance requirements are satisfied. This may require consultation with the State Historic Preservation Office (SHPO) and appropriate federally recognized tribes. The process describing NHPA section 106 compliance for projects adopting the GCP is described in (GCP Chapter 1 and GCP Appendix E).

Chapter 2 Alternatives

This EA compares the potential impacts of two alternatives on the human and natural environment: the No Action Alternative and the Proposed Alternative. The No Action Alternative provides a baseline describing the environmental consequences that may occur if the Proposed Alternative is not implemented. The Proposed Alternative is the approval of the GCP and subsequent issuance of individual permits to authorize incidental take of the Covered Species that may result from the Covered Activities.

2.1 The No Action Alternative

Under the No Action Alternative, the proposed GCP would not be approved, and no ITPs would be issued through the streamlined process. Project Proponents engaged in routine residential and commercial, transportation, and utility development projects would be expected to comply with all statutes, regulations, and policies that apply to their projects. Project Proponents could comply with the ESA by avoiding take of listed species. If take could not be avoided and a federal nexus exists (i.e., if the project is funded, authorized, or carried out by a Federal agency), Project Proponents could receive take coverage through consultation and a biological opinion issued by the Service to the Federal action agency through the ESA section 7 process. If no federal nexus exists, Project Proponents could develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Each application would be evaluated independently in compliance with the NEPA and other applicable requirements.

Approval of the GCP would result in issuance of ITPs covering a specified maximum acreage of forested habitat per year. This includes up to 2,000 acres for each state per year per Covered Species in NY, PA, and WV, totaling 6,000 acres annually per state. The No Action Alternative considers effects to equivalent acreages to establish a comparable baseline.

³³ 16 U.S.C. § 470 *et seq.*

2.2 Proposed Alternative: Implementation of the Proposed GCP

The Proposed Alternative is approval and implementation of the GCP and issuance of ITPs subject to implementation of all avoidance, minimization, and mitigation measures prescribed in the conservation program described in the GCP. The Plan Area is the geographic area where Covered Activities described within the GCP may occur, and includes the states of NY, PA, and WV, excluding Federal lands (Appendix C, Figure 1). Actions covered by the GCP may result in take of the Covered Species due to activities associated with certain routine development activities including, but not limited to, residential and commercial construction, transportation, and utility infrastructure (summarized below and described in GCP section 3.1.3). The proposed GCP has an anticipated duration of 10 years and resulting ITPs would each be valid for five years upon issuance.

The GCP quantifies incidental take in terms of acres of habitat within the Plan Area impacted by Covered Activities for each of the Covered Species because expressing the amount of take in number of individuals is impractical. There is a clear causal link between the habitat surrogate and take of the Covered Species, and acres of impacted habitat serves as a clear standard for determining level of take.

The ranges of the three Covered Species overlap portions of the Plan Area (see EA section 2.2.3). The GCP presumes that Covered Activities impact the Covered Species where their ranges co-occur, and participating projects in those areas are provided with ITP coverage for the Covered Species. In such areas, the total authorized acres of annual habitat impact contribute toward the annual state-wide GCP tally for the Covered Species. The GCP specifies that the amount of habitat impact authorized each year cannot exceed the annual total for any Covered Species. The total annual amount of take cannot exceed 2,000 acres of habitat per species per year per state, or a maximum of 6,000 acres of habitat for all three species per year per state. These totals, at a minimum, would be offset by an equivalent amount of conservation actions that benefit the Covered Species.

The GCP has a proposed duration of 10 years and resulting ITPs would each be valid for five years upon issuance. Because Covered Activities may occur up to 5 years after issuance of an ITP, the temporal analysis boundaries for this EA can extend for 15 years from the approval of the proposed GCP. Therefore, even if ITPs are issued in year 10, they are valid for 5 years.

The maximum amount of forested lands that could be impacted per species per state is 60,000 acres, totaling 180,000 acres for all three species over the duration of the proposed GCP. The ultimate acreage impacted is dependent on the quantity and extent of future permitted projects. Recent U.S. Forest Service (USFS) reports estimate that forests cover approximately 47.7 million acres in the Plan Area.³⁴ Therefore, the cumulative amount of forested habitat that could be impacted over the duration of the plan amounts to 0.12 percent per species per state (60,000 acres), or 0.38 percent for all three species within the three states (180,000 acres). The conservation measures (CMs) prescribed in the GCP are intended to achieve ESA statutory permit issuance criteria requiring that the impacts of the taking are minimized and mitigated to

³⁴ Widmann 2016; Albright 2017; Morin et al. 2017

the maximum extent practicable. To fully offset unavoidable impacts that cannot be minimized or mitigated, the GCP is expected to protect, restore, manage, and conserve habitat that provides equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and in-lieu fee (ILF) programs.

2.2.1 GCP Plan Area and ITP Permit Areas

The Plan Area is the geographic area where Covered Activities described within the GCP may occur, and includes the states of NY, PA, and WV, excluding Federal lands (Appendix C, Figure 1). The Permit Area is the geographic area where an ITP applies. Under the Proposed Alternative, each ITP would define the specific Permit Area within the Plan Area where Covered Activities and associated mitigation activities would occur. Mitigation activities that offset the impact of the taking of Covered Species are not required to occur within an ITP's designated Permit Area, but must occur within the Plan Area within the state of impact (unless the local Field Office agrees to out-of-State mitigation projects).

2.2.2 Covered Project Types

Multiple project types are eligible to participate through the proposed GCP, provided they meet certain qualifying conditions. A complete description of the Covered Activities, associated requirements, and exclusions is found in GCP section 3 and associated appendices. Generally, the following project types within the Plan Area are eligible if they meet the requirements and qualifications specified in the GCP:

- **Residential/Commercial/Other Development.** This includes new construction, modifications, postconstruction operations and maintenance activities associated with several development types. Examples include, but are not limited to:
 - Single- or multi-family residential construction or subdivisions
 - Commercial facilities
 - Community facilities (e.g., schools, libraries, and churches)
 - Public works projects (e.g., wastewater treatment plants); and
 - Recreational trails and facilities (e.g., campgrounds, fairgrounds, and playgrounds)
- **Transportation.**³⁵ This includes activities associated with:
 - Postconstruction operations and maintenance or expansion of existing roadways/railways where there is no Federal funding or oversight by the Federal Highway Administration (FHWA), Federal Transit Authority (FTA), or Federal Railroad Administration (FRA)
 - Postconstruction operations and maintenance, replacement or removal of associated structures, bridges, or culverts where there is no Federal funding or

³⁵ An existing rangewide consultation is available for FHWA, FRA, and FTA projects (see <http://www.fws.gov/sites/default/files/documents/programmatic-biological-opinion-for-transportation-projects-2018-02-05.pdf>). Applicants with other Federal agency (i.e., U.S. Army corps of Engineers [USACE] permitting) involvement may use the GCP to demonstrate compliance with the ESA. Please see GCP Appendix F for the process for project sponsors with a federal nexus.

oversight such as that of the FHWA, FTA, or FRA access road construction, post-construction operations and maintenance, and use in conjunction with other project types covered by this GCP

- Construction, postconstruction operations and maintenance of internal private roads such as those associated with residential subdivisions
- **Utilities.** This includes activities associated with:
 - New construction, modifications, postconstruction operations and maintenance activities associated with:
 - Water lines
 - Sewer lines
 - Underground or overhead cable/internet
 - Underground or overhead electrical distribution lines³⁶
 - Electrical substations
 - Postconstruction operations and maintenance or modification of existing electrical transmission lines within existing footprints.

Projects must meet eligibility requirements, and Applicants must agree to implement the CMs that apply to their project to qualify to adopt and submit the GCP as part of their application for a permit. Project types likely to result in effects not analyzed in the GCP or involving complexities requiring additional NEPA analysis are not eligible to participate through the streamlined GCP process.

Anticipated impacts to the human environment resulting from the implementation of the GCP and subsequent issuance of ITPs would vary by project, but are expected to result from activities including:

- Surveys and site preparation activities, such as vegetation clearing and removal, excavation of soils, rock or outcrop removal, vegetation restoration/landscaping, and geotechnical investigation
- Preconstruction actions including debris removal, installation of erosion protection (including construction of stormwater, soil, and sediment control structures, drainage ditches and culverts, and dust abatement activities), and staging area construction
- Lot or site development activities such as installation of septic systems, construction of freshwater wells, grading, stormwater management, and construction of in-ground utilities
- Construction-related actions including installing infrastructure, constructing roads, and building structures

³⁶ New transmission lines are not included in the GCP. Transmission lines carry electric energy from one point to another in an electric power system. They can carry alternating current or direct current, or a system can be a combination of both. Also, electric current can be carried by either overhead or underground lines. The main characteristics that distinguish transmission lines from distribution lines are that they are operated at relatively high voltages, they transmit large quantities of power, and they transmit the power over large distances. Distribution lines are low voltage lines that carry electricity from the substations to the end users for residential and commercial use. <https://www.osha.gov/etools/electric-power/illustrated-glossary/transmission-lines> (Accessed 7/21/2022).

Certain CMs required for GCP participation are expected to reduce or eliminate some impacts to resources and elements of the human and natural environment. For example, the GCP time of year restrictions for tree removal (including whole tree removal, topping, trimming, pruning and limbing) prescribed to minimize impacts to maternity colonies and nonvolant juvenile bats are likely to also reduce impacts to other wildlife and nesting migratory birds. Required buffer zones around key habitat features such as bat hibernacula sites would also be expected to minimize impacts to the geology, soils, and vegetation within those protective buffers. Avoidance, minimization, and mitigation measures are described in GCP section 3.

2.2.3 Species Covered by the Proposed GCP

The GCP covers the federally listed IBAT, NLEB, and proposed TCB where they occur on non-Federal lands in NY, PA, and WV. The GCP Chapter 2 provides details on the ranges of the three species within the three states present in the Plan Area. GCP section 2 describes the status, distribution, life history, and threats in greater detail.

Project activities that may affect the Covered Species are those that occur in wooded or forested areas where the bats occur, or near caves, mines, or other features used as overwintering hibernacula sites. Impacts reasonably certain to result in take of the Covered Species include tree removal, habitat modification, and project-related noise and disturbance.

A summary providing additional background about the Covered Species and their resource needs most pertinent to the analysis of potential impacts analyzed in this EA is provided in GCP section 2.0.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes existing conditions and those aspects of the human environment that could be affected by the Federal action. Each section includes a brief overview of the resource within the Plan Area and describes how that resource may be affected. Each section then describes the baseline conditions expected under the No Action Alternative and compares the potential environmental consequences of the Proposed Alternative with the No Action Alternative.

3.2 Plan Area

The Plan Area for this EA covers approximately 70.4 million acres and consists of all lands within the states of NY, PA, and WV, excluding Federal lands. The Plan Area aligns with the GCP Plan Area in order to analyze potential impacts per each resource evaluated within this EA. The Plan Area includes portions of seven major river basins (the Delaware, Hudson, Lake Champlain, Ohio, Potomac, Susquehanna, and James River Basins), portions of two great lake basins (Lake Erie and Lake Ontario) and their tributaries, drainage to Atlantic Ocean/Long Island Sound, and more than 1.4 million acres of wetlands. Land uses vary, including undeveloped

land, agricultural land, dense urban development, and public and privately-owned lands. Approximately 35 million people reside in the Plan Area.

The Plan Area encompasses a vast array of habitats, land types, and resources, with varying levels of development throughout. Not all the resources located within the Plan Area would be affected by the Proposed Alternative. This EA briefly describes existing resources within the Plan Area, focusing on those with the potential to be affected by the Proposed Alternative. Some cited references pertain to areas that are subsets of or that extend beyond the boundaries of the Plan Area for this EA. Unless otherwise noted in each section, the spatial extent of the analyses in this EA correspond to the Plan Area.

3.3 Scope of the Analysis

Federal agencies are required to analyze the degree of the anticipated effects of their proposed actions upon the potentially affected environment.³⁷ Effects are described at a programmatic level to reflect the geographic scope of the Plan Area and the lack of specificity of where and when impacts would occur over the duration of the proposed GCP. Impacts are qualitatively described by identifying mechanisms that may affect considered resources. The discussion focuses on reasonably foreseeable environmental trends and proposed actions pertinent to resources within the Plan Area and on project activities occurring in or that may affect areas that constitute breeding, feeding, or sheltering habitat for the Covered Species (i.e., where individually issued ITPs would apply).

This analysis stratifies the Plan Area by ecoregions in order to accurately analyze potentially impacted resources in relation to a standardized spatial framework. The U.S. Environmental Protection Agency (EPA) defines ecoregions as areas where ecosystems, and the type, quality, and quantity of environmental resources, are generally similar. Ecoregion classifications provide a standard spatial framework for research, assessment, management, and monitoring of ecosystems and their components. Ecoregions are identified by analyzing the patterns and composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity. These phenomena include geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology.³⁸ Ecoregions generally describe naturally occurring physical conditions and the communities they support.

Ecoregions are described in accordance with a hierarchical classification scheme, designated by Roman numerals I through IV, ranging in resolution from general to more detailed. Level I categories provide ecological context at a global or continental scale. North America is divided into 15 broad Level I ecoregions (not including water), and the Plan Area includes portions of two of these ecoregions. Most of the lands in the Plan Area fall within the Eastern Temperate Forests category, with some portions of NY and PA classified as Northern Forests.

Level II ecoregions provide greater detail useful for ecological context within the broader Level I categories. The Plan Area includes portions of four of North America's 50 Level II ecoregions (excluding water), including the Atlantic Highlands in portions of NY and PA; the Mixed Wood

³⁷ 42 U.S.C. 4321

³⁸ Omernik 1987, 1995

Plains in NY and northern portions of PA; the Southeastern U.S. Plains of central and southwest PA and all of WV; the Ozark, Ouachita-Appalachian Forests of southeastern PA, and the Mississippi Alluvial and Southeast U.S. Coastal Plains of Long Island, NY, and portions of southeastern PA.

Level III ecoregions identify locally defining biotic and abiotic characteristics and provide information at a resolution that facilitates regional environmental monitoring, assessment, and decision-making. The North American Commission for Environmental Cooperation (CEC) further refines ecoregional descriptions to facilitate comparisons among these categories.³⁹ Level III ecoregion data provides helpful context for considering the potential effects of the Proposed Alternative upon the human and natural environment. The Plan Area includes 13 of the 182 Level III ecoregions in North America (excluding water).

Though the 13 Level III ecoregions within the Plan Area are further refined into 60 Level IV ecoregions, for the scope and scale of the analysis considered in this EA, the most relevant decision-making distinctions are described per Level III ecoregions, and several potentially impacted resources are described in relation to the spatial framework provided by this standard approach.

This analysis also considers how land use has changed over time by assessing changing land cover using the U.S. Geological Survey (USGS) National Land Cover Database (NLCD); a large-scale, public domain collection of satellite imagery and supplementary datasets used for a variety of environmental, land management, and modeling applications. The NLCD portrays data in multiple categories useful for different analyses, such as thematic classes (barren land, medium intensity development, woody wetlands, etc.), percentage of impervious cover, and acreage of tree canopy cover by forest type.⁴⁰ The NLCD represents the presence of natural vegetation, as well as human-created cover types including cultivated crops and constructed development features on the land surface. Because the NLCD is updated on a five-year interval, this 30-meter resolution data allows consideration of change over time at a scale that provides helpful context for several of the resources described in this EA.

3.4 Resources Considered

This EA analyzes potential effects from the proposed Federal action on air quality; geology and soils; water quality; waters of the U.S. (WOTUS) and floodplains; vegetation; fish and wildlife (including threatened and endangered wildlife species evaluated under the GCP); land use; aesthetics and noise; cultural resources; and socioeconomics; .

3.4.1 Air Quality

The Clean Air Act (CAA) identifies six common air pollutants found in the U.S.⁴¹ These pollutants can impact human health, harm the environment, and cause property damage. The EPA designated these pollutants as “criteria air pollutants” and established human health criteria-

³⁹ CEC 1997

⁴⁰ USGS 2012

⁴¹ 42 U.S.C. § 7401 *et seq.*

based National Ambient Air Quality Standards (NAAQS) that apply to the concentrations of each pollutant in outdoor air. Geographic areas that meet the NAAQS requirements are described as being ‘in attainment’, and areas that do not meet the standards are designated as ‘nonattainment areas.’⁴² Some pollutants can affect air quality by contributing to regional haze and reduced visibility. The CAA lists other pollutants known as Hazardous Air Pollutants (HAPs). However, EPA has not set NAAQS for visibility or for HAPs.

Existing air quality is characterized in this section by describing the NAAQS, indicating the portions of the Plan Area where air quality is of concern, and identifying locations designated as nonattainment areas where NAAQS requirements and standards are unmet. The analysis area for this resource extends beyond the defined Plan Area given the fluid nature of this resource and potential for impacts originating outside of the Plan Area.

3.4.1.1 Affected Environment

Air quality is characterized by measuring and comparing ground-level ambient (outdoor) pollutant concentrations to the NAAQS. Criteria pollutants are commonly emitted from a variety of sources, and include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter smaller than 10 and 2.5 microns (PM₁₀ and PM_{2.5}, respectively), and sulfur oxides (SO_x). Primary standards are set at levels to protect public health, including sensitive populations (such as asthmatics, children, and the elderly). Secondary standards protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Air quality in the analysis area both meets and exceeds NAAQS. Reported NAAQS exceedances in the analysis area are primarily associated with ozone, particulate matter, and sulfur oxides, and are most common near urban centers (Appendix D, Table 1). Some identified areas extend beyond the geographic bounds of the Plan Area but are included here to account for effects within the Plan Area originating from these areas. Air quality can be influenced by meteorological and climatic factors such as wind direction, weather, and temperature.

3.4.1.2 Environmental Consequences

No Action Alternative

Project Proponents under the No Action Alternative would be expected to comply with the ESA by avoiding take of the Covered Species where practicable for their routine residential and commercial, transportation, and utility development projects within the Plan Area. Project Proponents whose projects are reasonably certain to result in take would develop an HCP and apply for incidental take coverage on a project-by-project basis. Each application would continue to be evaluated independently under NEPA. Each project would be expected to comply with applicable Federal, state, and local air quality requirements.

Impacts of past, present, and planned actions could reasonably be expected to contribute to ongoing air quality trends in the analysis area under the No Action Alternative. The routine

⁴² <https://www3.epa.gov/pmdesignations/2012standards/index.htm>

residential and commercial development, transportation, and utility and infrastructure projects considered typically involve the use of various vehicles, heavy equipment, and small equipment (e.g., chainsaws) that emit air pollutants. Emissions associated with vehicles and equipment would consist of criteria pollutants, volatile organic compounds (VOCs), and HAPs from engine exhaust and fuel combustion, fugitive particulate matter (dust) from unpaved roads and disturbed earth surfaces, and potential chemical or petroleum spills or releases.

Potential impacts associated with the Covered Activities and associated emissions and spills or releases would be localized, short in duration, and specific to the conditions and equipment in use at each site. Vehicle and equipment use typically would be temporary and of short duration at any one location. Emissions would occur intermittently depending on the work schedule and the specific equipment in use on a particular day.

Postcompletion use of existing and planned projects could contribute to regional emissions. Increased population levels and expanded transportation networks could result in an overall increase in exhaust emissions as well as increased prevalence of chemical and/or petroleum spills or releases.

Implementation of the No Action Alternative would not be expected to result in impacts to the air quality resource in relation to baseline conditions and current trends. Current sources and quantities of emission and pollutant discharge would be expected to remain consistent with baseline levels and the No Action Alternative would not be expected to result in significant impacts on long term air quality in the analysis area or violations of ambient air quality standards.

Proposed Alternative

Air quality impacts under the Proposed Alternative are expected to be similar to those described for the No Action Alternative. Equipment and vehicle usage are expected to be similar or the same under both alternatives. Air quality effects are expected to be limited to small-scale and localized short-term effects associated with development and construction activities capped at 2,000 acres per year per state per species over the duration of the GCP. During construction activities, ambient concentrations of fugitive dust and emissions are expected to decrease rapidly with increasing distance from the source, and off-property air quality indicators would rarely exceed baseline ambient levels.

The Covered Activities would not create new point sources or increase amounts of emissions, spills, or releases of any NAAQS criteria pollutants, VOCs, or HAPs in relation to baseline levels. Activities associated with the Proposed Alternative are not anticipated to cause violation of ambient air quality standards or have significant impact on long-term air quality in the analysis area. Direct and indirect air quality impacts are expected to be of short duration and intensity and would not be expected to result in significant impacts to the resource.

3.4.2 Geology and Soils

Geologic resources consist of surface and subsurface materials and their inherent properties. Geology varies greatly throughout the Plan Area, and a brief description of the primary geologic features in the Plan Area is provided. Additional detail about the geology and soils characteristics of the 13 ecoregions within the Plan Area provides additional context.

Soils in the Plan Area are highly diverse due to the wide range of parent materials, climate, topography, biological factors, and age of surface materials throughout the Plan Area. The U. S. Department of Agriculture, Natural Resources Conservation Service (NRCS) classifies soils into 12 orders based on specific physical and chemical properties, and six of these are common in the Plan Area.⁴³ Soil types, including designated prime farmland soils, that may be affected by the Proposed Alternative are briefly described.

3.4.2.1 Affected Environment

Lands within the Plan Area first formed during the Jurassic and Cretaceous periods. The Appalachian orogenic belt is an ancient mountain range that extends along the eastern margin of North America from Mississippi and Alabama north into Newfoundland, Canada. Although the region is characterized by high peaks and mountainous areas, heavy weathering and erosion processes have modified the topography and landscapes throughout the region.

The Appalachian Mountain Range is composed of deformed sedimentary rocks cut through by numerous thrust faults. The Appalachians were formed through several periods of lateral compression and folding of the earth's crust during the Paleozoic period, making interpretation of the region's geologic history difficult.

The Middle Paleozoic (Silurian, Devonian, and Mississippian) sedimentary rocks are the most abundant geologic members occurring within the Plan Area. These include:

- Silurian dolomites, limestones, and shales
- Devonian shales and limestones; and
- Mississippian shales, sandstones, and limestones.

The Upper Paleozoic (Pennsylvanian, Permian) sedimentary rocks are the second most abundant geologic member occurring within the Plan Area. These sedimentary rocks include:

- Pennsylvanian sandstones, shales, and carbonates; and
- Permian shales and limestones.

Topography within the Plan Area varies widely from the sandy beaches of the Atlantic coast to the Mountains of the Appalachian and Blue Ridge ranges. The lowest elevations in the Plan Area are the sea level beaches on NY's Atlantic coastline, and the highest elevations are associated with Appalachian Mountains. The highest point in the Plan Area is NY's Mount Marcy (Mohawk: Tewawé éstha) at 5,344 feet.

⁴³ untitled

The Plan Area includes portions of 13 Level III ecoregions, identified by analyzing the spatial patterns and composition of factors such as geology, physiography, climate, and hydrology. Appendix D, Table 2 summarizes geologic features for the Level III ecoregions within the Plan Area.

Karst Features

Karst topography is a landscape shaped by the dissolution of a layer or layers of soluble bedrock such as limestone or dolomite. Surface water such as rivers and lakes may be limited or absent in karst landscapes due to the characteristic drainage through subterranean flow paths and caves. Many karst regions display distinctive surface features including natural depressions and sinkholes. However, distinctive karst surface features may be completely absent where the soluble rock is mantled by glacial debris or confined by nonsoluble rock strata.

Each state in the Plan Area contains carbonate (limestone) bedrock with karst topography, as well as sinkhole hotspots. Karst features and associated underground caverns and caves can serve as overwintering hibernacula sites for bats, including the Covered Species.

Landslide Potential

A landslide is a geological phenomenon that includes a variety of ground movement types, such as rock falls, deep failure of slopes, and shallow debris flows. Landslides are caused when the stability of a slope changes from a stable to an unstable condition. The Plan Area includes areas with landslide susceptibility and incidence. Although the action of gravity on an over-steepened slope is the primary reason for a landslide, several factors contribute to the original slope stability.

Landslides may have natural causes due to:

- Groundwater pressure
- Loss or absence of vertical vegetative structure, soil nutrients, and soil structure
- Erosion of the toe of a slope by rivers or ocean waves
- Weakening of a slope through saturation by snowmelt, glaciers melting, or heavy rains
- Earthquakes adding loads to barely stable slopes
- Earthquake-caused liquefaction

Landslides may have human causes due to:

- Vibrations from machinery or traffic
- Blasting
- Earthwork that alters the shape of a slope or imposes new loads on an existing slope
- In shallow soils, the removal of deep-rooted vegetation that binds colluvium to bedrock
- Construction, agricultural, or forestry activities that change the amount of water that infiltrates into the soil

Landslides can impact summer breeding, feeding, and sheltering sites as well as overwintering areas important for the Covered Species.

Soils

The NRCS State Soil Geographic Database describes soils and their specific properties such as erosion potential, compaction, and productivity.⁴⁴ Soils representing four of the 12 NRCS soil orders are found within the non-Federal lands that make up the Plan Area. The seven dominant soil suborders and associated acreages within the Plan Area per state are displayed in Appendix D, Table 3.

Soil erosion can be naturally occurring or influenced by humans. The accelerated erosion related to human uses can be as much as 1,000 times more damaging than naturally occurring processes.⁴⁵ Soil erodibility describes how susceptible a soil is to erosion, and considers infiltration capacity, texture, and structural stability. Generalized soil data suggest that most soils in the Plan Area are resistant to the effects of erosion and compaction under normal conditions. However, areas with high erosion and compaction potential can be found throughout the Plan Area, especially on steep slopes and in landscapes highly modified by human activities.

Prime farmland is defined by the U.S. Department of Agriculture (USDA) as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, or oilseed and is also available for these uses.⁴⁶ These lands have suitable soil quality, growing season, and moisture supply needed to economically sustain high yields of crops when treated and managed properly. Some soils are considered prime farmland in their native state, while others are considered potential prime farmland or prime farmland if they are drained or irrigated in order to grow the main crops in the area. A prime farmland designation represents the extent of lands capable of, but not necessarily managed for, agricultural production. Though prime farmland designations are generally independent of current land use, it excludes water, built, and urban areas.

The USDA designates 4,152,200 acres (13 percent of all land) in NY, 3,519,800 acres (12 percent of all land) in PA, and 457,400 acres (3 percent of all land) in WV as prime farmland.⁴⁷ Because the USDA prime farmland designations are based on physical and chemical characteristics and do not consider land ownership, these totals may include some Federal lands that fall outside of the Plan Area. These totals are provided to support relative comparisons and context for the purposes of this analysis.

The Agriculture and Food Act of 1981⁴⁸ created the Farmland Protection Policy Act (FPPA)⁴⁹ to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Projects that may directly or indirectly convert farmland and which are completed with assistance from a Federal agency may be subject to compliance with the FPPA. Projects that may irreversibly convert prime farmland to nonagricultural use are required to consult with the NRCS to meet the requirements of the FPPA and the NEPA. While Project Proponents subject to FPPA are not prohibited from developing a HCP and pursuing an

⁴⁴ USDA 2016

⁴⁵ Brady and Weil 2007

⁴⁶ 7 CFR Part 657

⁴⁷ USDA 2018

⁴⁸ Public Law [Pub.L.] 97098

⁴⁹ 7 CFR Part 658

ITP to address their ESA compliance needs, it is assumed that projects with such a federal nexus with the NRCS would choose to secure coverage through consultation under ESA section 7 and not be subject to the GCP.

3.4.2.2 Environmental Consequences

No Action Alternative

Routine development and construction projects pursued under the No Action Alternative have the potential to impact geology and soils. Impacts to geology from these project types would occur at the surface or near-surface level. Direct effects would be expected from trenching, excavation of soils, soil compaction, decreased soil permeability, and cut-and-fill instabilities such as those associated with road construction. Indirect effects could result from vegetation clearing and earth disturbance-related erosion; installation of erosion protection measures (including construction of stormwater, soil, and sediment control structures, drainage ditches and culverts, and dust abatement activities); site development activities such as installation of septic systems, construction of freshwater wells, grading, stormwater management, and construction of in-ground utilities; and other construction-related actions such as installing utilities, constructing roads, and building structures.

These activities, when implemented in accordance with required erosion and sediment controls and relevant best management practices (BMPs), generally have limited potential to increase erosion rates over baseline conditions. Due to the geographic breadth of the Plan Area and the lack of information on the precise location and timing of future Covered Activities, impacts on geology and soils are described qualitatively and may include:

- Trenching and digging during construction activities could open sinkholes and contribute to landslide potential.
- Tree clearing has potential to increase erosion rates, particularly on steep, unstable slopes. Complete removal of trees in these areas can increase the potential for erosion.
- State regulations typically require natural and human-caused soil disturbances to be reestablished with vegetative cover quickly to minimize soil erosion. As a result of this mitigation, erosion risks typically decline rapidly following a disturbance.

Routine construction and development activities could increase erosion rates in localized areas where soils have high potential for erosion by wind or water. Most soil types in the Plan Area are relatively resistant to the effects of wind erosion under normal conditions.

Increased soil erosion rates from construction and development activities are likely to be temporary in most cases when required erosion and sediment controls and BMPs are followed. Most erosional impacts from construction activities are likely to diminish rapidly with postconstruction revegetation and would; therefore, be expected to be temporary in duration and localized.

The Covered Activities, with the proper implementation of applicable erosion and sediment control measures and BMPs, are not anticipated to alter surface or near surface geology or

change erosion rates or frequency of sinkholes or landslides occurring relative to current conditions within the Plan Area.

Prime farmlands could be impacted under the No Action Alternative. These effects could result from the same construction and development-related activities previously described. Because projects that may irreversibly convert prime farmland to nonagricultural use are required to consult with the NRCS, and such projects are likely to choose to secure incidental take coverage through consultation under ESA section 7 and analysis through the NEPA, this EA presumes that projects participating in the GCP and the comparable projects under the No Action Alternative would not result in permanent conversion of prime farmland.

Because it is not possible to know where in the Plan Area future projects may occur, the range of possible outcomes would include a result in which all impacted lands were designated prime farmlands. In that scenario, the total amount of prime farmland that could be affected over the studied period totals approximately 0.7 percent of the designated prime farmland in NY, 1.1 percent in PA, and 4.3 percent in WV. Because designated prime farmland only constitutes a limited area in each of the three states, it is more likely that the effects of routine development could impact only a subset of designated prime farmland.

Project-related activities impacting prime farmlands would be subject to all erosion and sediment control measures and BMPs required under Federal, state, and local regulations, and impacts to the lands affected would; therefore, be expected to be localized and temporary in duration and would not be expected to result in significant impacts compared to baseline conditions and current trends.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, effects to geology or soils under the Proposed Alternative are expected to remain consistent with the No Action Alternative.

Issuance of ITPs and implementation of the GCP under the Proposed Alternative would not be anticipated to result in different effects to geology or soils relative to the baseline conditions described for the No Action Alternative. Activities associated with potential impacts to the geology and soil resources within the Plan Area would continue to occur at baseline levels, adhering to all applicable BMPs and erosion prevention and control measures currently implemented per individual projects.

Projects that involve deep excavation or movement of large volumes of geologic materials such as quarrying or mining operations are not eligible to participate in the proposed GCP. Similarly, soil disturbance resulting from the Covered Activities would be expected to be limited to the area of construction. Projects eligible to participate in the proposed plan and would not be expected to remove or redistribute extensive volumes of soils.

Additional avoidance and minimization measures required for participation through the GCP prescribe specific setbacks and buffer areas around caves and karst features that serve as hibernacula for the Covered Species. These requirements are intended to reduce noise, vibration, and other effects that could disturb the species or their overwintering sites. The limited potential impacts to prime farmland would be the same under the Proposed Alternative as described for the No Action Alternative.

Overall, impacts resulting from approving and implementing the proposed GCP, and associated ITPs are not expected to result in significant impacts to geology and soils, provided that regulatory requirements and BMPs are implemented.

3.4.3 Water Quality

Surface water includes naturally occurring waters found above the ground surface, such as lakes, ponds, rivers, streams, and springs. Semi-permanent, manmade water features such as reservoirs, retention ponds, ponds, canals, and regularly flooded ditches are also usually included when considering surface waters. Surface waters are relied on for agriculture, drinking water, industrial and recreation uses throughout the Plan Area. Groundwater is an important source for drinking water, agricultural irrigation, mining, and other industrial uses in portions of the Plan Area.⁵⁰ Water quality in the Plan Area is governed under Federal statutes, including section 404 of the Clean Water Act (CWA)⁵¹ and the Safe Drinking Water Act of 1974 (SDWA),⁵² as well as applicable state and local regulatory mechanisms.

3.4.3.1 Affected Environment

Surface Water

The drainage areas or watersheds of the United States are categorized and mapped as a series of Hydrologic Units by the USGS. This standardized system describes watershed resource regions and drainage basins based on surface hydrologic features, with Hydrologic Unit Codes that define these features at increasingly finer scales. The USGS National Hydrography Dataset and companion Watershed Boundary Datasets delineate the geospatial extent of the nation's surface waters.

The Plan Area includes portions of three watershed resource regions—Mid-Atlantic, Ohio, and Great Lakes. Most of the Plan Area falls within the Mid-Atlantic region. Portions of all three states within the Plan Area drain into the Ohio River. Portions of NY and PA are within the Great Lakes Region that drain into Lake Erie, Lake Ontario, and the St. Lawrence River.

The quality of surface waters in the Mid-Atlantic Region is impacted by pollution from several sources. Key concerns in the region include nutrient enrichment from agricultural runoff that causes low dissolved oxygen levels and associated negative impacts to aquatic organisms, the presence of legacy contaminants from previous industrial practices, runoff from urban and

⁵⁰ Penn State Extension 2016

⁵¹ 33 U.S.C. Chapter 23

⁵² 42 U.S.C. § 300f *et seq.*

industrial sites, and sewage discharges. In some areas, water quality is impacted by acid drainage from abandoned mines.

The Great Lakes Region contains vast areas of surface waters as well as concentrations of both people and industrial manufacturing that can impact water quality. Fish consumption advisories due to chemical contamination are common in portions of the region. Contaminated sediments, air deposition, and leaks or overflows from the area's aging sewage systems introduce pollutants into adjacent waters. Nonnative and invasive species also contribute to water quality concerns in this region, as they have altered regional food webs and caused significant economic impacts to recreational and commercial industries.

Surface water quality in the Ohio Region is affected primarily by nonpoint source pollution from urban runoff, agricultural activities, and abandoned mines. Key concerns include dioxin contamination in portions of the watershed, sewage overflows especially in areas with combined sanitary and storm water systems, acid mine drainage and contamination from heavy metals, and thermal pollution from industrial discharges.

Many surface waters in the Plan Area are impacted by urbanization and development that increases sedimentation, turbidity, nutrient levels, and urban runoff.

NY includes approximately 87,000 miles of rivers and streams, about 7,900 lakes and ponds, totaling about 1,078 square miles (690,000 acres) of surface freshwater, and over 400 miles of Great Lakes coastline. Approximately 85,146 miles of streams and rivers; and nearly 4,000 lakes, ponds, and reservoirs with a surface area of approximately 563 square miles (168,320 acres) of surface freshwater are in PA. WV includes approximately 40,000 miles of streams, and 192 square miles (122,880 acres) of surface freshwater in lakes, ponds, and reservoirs.⁵³

States are required under the CWA Section 305(b) to report on the quality of water resources and whether water use, recreation activities, and aquatic life are fully supported. These reports describe each category according to standardized measures and include the percentage of each category assessed, impaired, with minor impacts or threats, with no known impacts, and those that require verification. CWA section 303(d) requires states to identify waterbodies that do not meet water quality standards and require development of a Total Maximum Daily Load. Reports for these impaired waterbodies are submitted to the EPA on a biannual basis.

Several pollutants and stressors contribute to impaired surface water conditions in the Plan Area. Leading pollutants and stressors identified in parts of the Plan Area include nutrients, metals, mercury, sediment/siltation, salinity/chlorides, organic enrichment/low dissolved oxygen, algal growth/chlorophyll A, pesticides, polychlorinated biphenyls, pathogens, flow alteration, suspended solids, and noxious aquatic plants. Likely sources of these threats include agriculture, hydromodification, urban runoff and storm sewers, atmospheric deposition, municipal point source pollution, land disposal, and construction activities.

Groundwater

⁵³ <https://www.usgs.gov/special-topics/water-science-school/science/how-wet-your-state-water-area-each-state>

An estimated six million residents in NY, about three million residents in PA and two million in WV rely on groundwater from various aquifer types as their primary source of drinking water.⁵⁴

A principal aquifer is defined as a regionally extensive aquifer or aquifer system that has the potential to be used as a source of potable (drinkable) water. The USGS Ground Water Atlas of the United States indicates the areal extent of the nation's uppermost principal aquifers. Principal aquifer types underlying the Plan Area include unconsolidated sand and gravels, sandstone, sandstone and carbonate rock, carbonate rock, and crystalline rock aquifers.⁵⁵

Unconsolidated sand and gravel aquifers that occur throughout the Plan Area, may be comprised of sand, gravel, clay, or silt; and often produce soft water with relatively low dissolved solid concentrations. Local conditions result in high iron concentrations in some locations.

Sandstone aquifer systems also occur throughout the Plan Area. These systems are the result of sedimentary processes, and these formations are often interbedded with siltstone or shale. These aquifer systems typically confine water, and groundwater movement is generally along bedding planes, though some vertical transmission occurs through fractures and joints. These are typically highly productive aquifers, and water quality tends to be minerally enriched, with increasing dissolved solids and chloride concentrations with depth.

Sandstone and carbonate-rock aquifers are common in portions of PA and WV and are present but uncommon in NY. Water in these aquifers may be confined or unconfined, and yields are dependent on localized geologic structure. These systems are primarily composed of calcium and magnesium carbonate, which readily dissolves and affects the chemical composition of associated groundwater. Water from these systems tends to be very hard with a slightly basic pH.

Carbonate-rock aquifers are found in NY and PA. These systems are typically composed of limestone, dolomite or marble, and karst topographies are common in these systems. Dissolution of calcium and magnesium carbonate in these systems typically produces water with high degrees of hardness and basic pH.

Some crystalline rock aquifers are present in the Plan Area. These systems are usually composed of fractured schist and gneiss and produce soft water that is low in dissolved solids. Conditions at some sites produce moderately hard water with high iron concentrations.

All the principal aquifers in the Plan Area are generally described as meeting or exceeding Federal and state standards for drinking water, though local conditions can result in high dissolved solids or concentrations of ions such as iron, manganese, and sulfate that can be objectionable. Groundwater in the Plan Area is generally described as good quality and acceptable for most purposes.⁵⁶

⁵⁴ Penn State Extension 2016

⁵⁵ <https://pubs.usgs.gov/publication/ha730>

⁵⁶ USGS 2000

Sole Source Aquifers

Under the SDWA section 1424(e), the EPA defines a sole source aquifer as an aquifer that supplies at least 50-percent of the drinking water for an overlying area and stipulates that no alternate source of drinking water could physically, legally, or economically supply the population dependent upon a designated aquifer.⁵⁷ Appendix D, Table 4 lists the 13 sole source aquifers within or partially within the Plan Area.

3.4.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Project Proponents would continue to comply with the ESA through the development of individual HCPs and apply for incidental take coverage per each individual project. Permitted projects of similar type, size, and scope would continue to occur throughout the Plan Area and would not be expected to change with the implementation of the No Action Alternative. Project activities could affect water quality through delivery of pollutants to surface and groundwater and by affecting how water moves across the landscape. The greatest potential effects would be expected from ground exposing or disturbing activities that cause erosion and siltation, alteration of vegetation, or accidental spills and leaks.

Routine construction and development projects include ground exposing or disturbing activities such as grading, digging, and contouring that can affect surface runoff volumes and overland flow patterns. Such alterations can increase erosion and sedimentation of surface waters that impact water quality. Vegetation removal can also result in decreased filtration capacity of suspended sediment, pollutants, and other particulates within the water column, affecting water quality downstream. Several factors, including soil type, ground slope, precipitation, and management practices affect the amount of resulting sedimentation. Most soils in the Plan Area are generally resistant to erosion under normal conditions; however, areas with high erosion potential are present. Sedimentation into nearby streams and waterbodies can alter aquatic habitat, increase turbidity, decrease light penetration, and increase nutrient and pollution levels; all of which can degrade water quality. Because projects within the Plan Area are expected to adhere to all Federal, state, and local measures intended to protect surface waters and prevent or minimize adverse impacts to water quality, these activities would not be expected to generate significant water quality impacts.

The use of vehicles and other equipment during routine construction and development activities could result in spills or leaks into the land adjacent to surface waters. Accidental spills that reach surface waters may degrade water quality, kill aquatic organisms or vegetation, or limit the use of waters for drinking or recreation. Implementation of CWA-required Spill Pollution Prevention Plans, adherence to BMPs, and required riparian and stream buffer guidelines would be expected to minimize potential impacts from these sources.

Removal of vegetation during project activities could affect surface waters. Trees affect forest surface water budgets through the evaporation of precipitation intercepted by leaves and

⁵⁷ EPA 2010

branches and through direct uptake and transpiration; water that is evaporated or transpired is effectively unavailable to surface waters.⁵⁸ Activities that remove trees and other vegetation within riparian areas may increase streamflow and peak water flows due to reduced woody debris and stabilizing vegetation. Significantly increased water flows may scour stream banks or channels and increase sedimentation to downstream areas. As vegetation is regenerated, stream flows would be expected to return to baseline conditions.⁵⁹ Potential impacts associated with project activities would be expected to be localized and of short duration. Projects are required to comply with required Federal, state, and local erosion management protocols and riparian and stream protection measures and would not be expected to generate effects threatening or impairing surface waters or water quality within the Plan Area.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, effects to water quality under the Proposed Alternative are expected to remain consistent with the No Action Alternative.

The effects of approving and implementing the proposed GCP and resulting issuance of ITPs are expected to be the same as described for the No Action Alternative. Though project activities in forested areas identified as suitable habitat for the Covered Species have the potential to result in short-term degradation of surface water and groundwater water quality, compliance with required Federal, state, and local erosion, stream and riparian, and water quality regulations would be expected to prevent or minimize potential impacts. The Proposed Alternative would not be expected to introduce new or different contaminants or increase the amounts of pollutants that could cause violation of water quality standards. Approval of the proposed GCP would; therefore, not be expected to result in significant effects to water quality in the Plan Area.

3.4.4 Waters of the U.S. and Floodplains

The RHA section 10⁶⁰ established permit requirements for certain activities affecting navigable WOTUS, and Executive Order (EO) 11990 directed prevention of adverse impacts associated with destruction or adverse modification of wetlands.⁶¹ The CWA section 404 provided regulatory authority to the U.S. Army Corps of Engineers (USACE) for oversight of discharge of dredged or fill material into waters and wetlands of the U.S.⁶² Six USACE Districts have jurisdiction over lands within the Plan Area, including the Baltimore, Buffalo, Huntington, NY, Philadelphia, and Pittsburgh Districts.

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal

⁵⁸ Swank et al. 1989

⁵⁹ Swank et al 1989

⁶⁰ 33 U.S.C. § 401 *et seq.*

⁶¹ 42 FR 26961, May 24, 1977

⁶² 33 U.S.C. § 1344

circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”⁶³ The USACE guidelines require one indicator for each of three criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) to designate wetlands subject to regulation under the CWA section 404.⁶⁴

Freshwater wetlands are classified as riverine (rivers, streams, and creeks), lacustrine (lakes and reservoirs), and palustrine (forested, scrub-shrub, and emergent wetlands and ponds).⁶⁵ Examples of each of these wetland types are found within the Plan Area. Wetland functions include biological productivity, fish and wildlife habitat, water quality improvement, aesthetics, and floodwater storage.

Data from the National Wetlands Inventory (NWI)⁶⁶ identifies, describes, and estimates wetland acreages within the Plan Area. The Service created the NWI in 1974 to “conduct a nationwide inventory of U.S. wetlands to provide its biologists and others with information on the distribution of wetlands to aid in wetland conservation efforts.” The NWI classifies wetlands with a standardized system and class descriptors. Palustrine wetland systems (open water bodies of less than 20 acres in which water is less than two meters [6.6 feet] deep)⁶⁷ are the most common system in the Plan Area, and emergent, scrub-shrub, forested and unconsolidated bottom are the most common wetland classes within that system.

Floodplains are areas adjacent to rivers and streams that experience flooding during periods of high discharge. Floodplains in the Plan Area were identified from the National Flood Hazard Layer database, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) data,⁶⁸ and the USDA NRCS soil data.⁶⁹ The FIRMs delineate FEMA special flood hazard areas for regulatory purposes under the National Flood Insurance Program (NFIP). Special flood hazard areas are also known as 100-year floodplains, or areas that have a one percent annual chance of flooding.

3.4.4.1 Affected Environment

Wetlands provide multiple ecosystem functions, including surface and subsurface water storage; nutrient cycling; sediment and shoreline stabilization; removal, retention, and transformation of nutrients; pollutant filtration, and fish and wildlife habitat. As a result of these functions, wetlands can provide measurable benefits described as wetland values. Values can include protection of property from floodwater, aesthetic or visual quality, recreational opportunities, educational or scientific opportunities, and food production. Functions and values vary among wetlands depending on size, landscape position, and wetland type.⁷⁰

⁶³ 33 CFR 328.3(c)(1)

⁶⁴ Environmental Laboratory 1987

⁶⁵ Cowardin et al. 1979

⁶⁶ <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>

⁶⁷ USGS 1996

⁶⁸ <https://www.fema.gov/blog/fema-flood-maps-and-zones-explained>

⁶⁹ USDA 2016

⁷⁰ USACE 2015

Projects that place permanent fill in wetlands affect these functions, causing a loss of wildlife habitat and loss of wetlands' capacity to filter pollutants and retain stormwater and floodwater flows. For example, adding fill to a wetland or clearing vegetation can interrupt and alter a wetland's natural hydrological regime and habitat structure. These actions can drain or impound water, affecting vegetation, pollutant filtration, and runoff retention and fragmenting habitat.

Wetland impoundments can decrease water circulation and may alter water quality (e.g., increased water temperature). Tree removal can alter wetland hydrology through a rise in water table due to decreased transpiration, soil compaction from the use of heavy equipment, increased erosion potential, and ditching and draining actions during tree removal activities.

Larger intact, undisturbed forested wetland areas that have not been recently disturbed provide important wildlife habitat. The diversity of vegetation composition and structure in these areas provides foraging, sheltering, breeding, and nesting habitat for a variety of fish and wildlife. Tree removal activities disturb the structure of the forest and the natural water flow through the floodplain. As cleared areas revegetate, assemblages of vegetation and wildlife species often shift as a result.

The initial clearing of the land during construction removes the vegetative cover and underlying topsoil layer. These activities increase surface runoff and contribute to soil erosion. Runoff and erosion add soil solids to drainage areas and tributaries and eventually into wetland areas, resulting in increased water turbidity and sedimentation. High turbidity is one of the primary construction site impacts,⁷¹ as it diminishes the suitability of aquatic habitat for supporting vertebrates, invertebrates, phytoplankton, and rooted vegetation.⁷²

The quantification of NY's palustrine wetlands vary widely and estimates of as many as 2.4 million acres have been reported.⁷³ The NYSDEC estimated that 88 percent of the state's freshwater wetlands consisted of palustrine forested wetlands, palustrine scrub-shrub wetland, and palustrine emergent wetlands.⁷⁴

PA's 392,000 acres of palustrine wetlands include 178,000 acres of deciduous and evergreen forested wetlands, 62,000 acres of open water, 52,000 acres of emergent wetlands, 49,000 acres of deciduous and evergreen scrub-shrub wetlands, 25,000 acres of mixed deciduous scrub-shrub and emergent wetlands, and 26,000 acres of other types of wetlands.⁷⁵

WVs estimated 102,000 acres of wetlands⁷⁶ include 42,000 acres of forested wetlands, 24,000 acres of scrub-shrub wetlands, 20,000 acres of emergent wetlands, and 16,000 acres of ponds.⁷⁷

⁷¹ Shuldiner et al. 1979

⁷² Darnell et al. 1976

⁷³ USGS 1996

⁷⁴ O'Connor and Cole 1989

⁷⁵ Tiner 1990

⁷⁶ USGS 1996

⁷⁷ Tiner 1987

3.4.4.2 Environmental Consequences

No Action Alternative

Residential and commercial, transportation, and utility development project activities in forested areas identified as suitable habitat for the Covered Species could generate impacts that alter or affect WOTUS, wetlands, and floodplains.

Activities that could impact wetlands are managed under several regulatory requirements, such as the 1899 RHA⁷⁸; the 1972 CWA⁷⁹; the 1985 Food Security Act⁸⁰; the 1990 Food, Agriculture, Conservation, and Trade Act⁸¹; the 1986 Emergency Wetlands Resources Act⁸²; as well as state and local regulatory requirements. Projects that require diking, deepening, filling, excavating, and placing of structures within jurisdictional wetlands beyond the allowances provided in CWA Nationwide Permits,⁸³ for example, require USACE Individual Permits and mandatory compensatory mitigation to offset the loss of wetland functions and values.

Projects that require approvals or permits from Federal agencies, including CWA section 404 permits, create a nexus with the responsible Federal action agency, and ESA compliance may be addressed through the ESA section 7 interagency consultation process. While not prohibited from developing a HCP and pursuing an ITP, for the purposes of this EA, projects with a federal nexus are expected to seek coverage for their ESA compliance needs through consultation with the Federal action agency funding, authorizing, or approving their activities. Such projects would be reviewed for compliance with the ESA and the NEPA on a case-by-case basis. Projects that lack such a federal nexus may develop a HCP and apply for incidental take coverage. Because activities covered under an ITP must be otherwise lawful, adherence to all applicable Federal, state, and local regulations would be expected.

Project activities that result in land exposure or disturbance could affect floodplain extent or function. Resulting effects could include altered floodwater storage and conveyance capacity, erosion and sedimentation, and availability or quality of aquatic habitats. Construction of roads or trails can interfere with the storage and passage of floodwater as well as the infiltration of water into the soil. A decrease in floodwater storage capacity can result in direct, short- and long-term increases in floodwater levels downstream. Road or trail construction can also redirect floodwaters, potentially causing erosion in adjacent areas. Creation of hardened roads and trails impedes infiltration rates on modified surfaces, though gravel roads and trails maintain higher infiltration rates than harder surfaces.

Vegetation removal affects the capacity of floodplains to retain and absorb floodwaters. Dense vegetation generally has a higher capacity to retain floodwaters. Therefore, vegetation removal can increase potential downstream flooding, runoff, and erosion. Vegetation removal also can reduce a floodplain's capacity to filter sediment, pollutants, and nutrients in water, which can

⁷⁸ 33 U.S.C. § 401 *et seq*

⁷⁹ 33 U.S.C. § 1251 *et seq.*

⁸⁰ Pub.L. 99–198

⁸¹ Pub.L. 101–624

⁸² Pub.L. 99–645

⁸³ 77 FR 10184–10290, February 12, 2012

affect water quality especially during heavy rainfall events. These short term effects would be expected to be minor and limited to the duration of construction activities. Regulatory requirements and BMPs typically address water resources by specifying protective measures near waterways, such as requiring that stream bank vegetation be left intact, where possible, and as appropriate for the project, and by requiring that when vegetation removal cannot be avoided, affected areas should be stabilized immediately following construction activity. These mitigation measures collectively minimize the risk of impacts to the resource.

If forested wetlands are cleared, the resulting increased sunlight could alter wetland species composition by altering the number and/or density of shade tolerant species, while increasing the number and/or density of species better adapted to full or partial sun. Spread of invasive nonnative species could also result from vegetation clearing.

Similarly, construction and development activities would not be expected to result in more than minor or negligible impacts to flood channels or to floodplains. Permanent structures and roads associated with Covered Activities within 100-year floodplains would be expected to meet standards established by the governing flood control authorities to prevent the creation of waterflow hazards during flooding. Project activities adhering to applicable Federal, state, and local requirements are expected to result in minimal floodplain impacts.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities, which could occur in the Plan Area. As such, impacts to wetlands, floodplains, or WOTUS under the Proposed Alternative would be expected to be the same as those described for the No Action Alternative. The same project types and impact sources are subject to the same Federal, state, and local guidelines and regulatory mechanisms under both alternatives. Required erosion and sediment controls and BMPs would be implemented during project activities to avoid or minimize potential adverse effects.

The anticipated direct and indirect impacts of approving the proposed GCP would be expected to be minimal and not expected to alter the ability of these features to continue to provide ecological service functions. The Proposed Alternative would; therefore, not be expected to result in significant effects to wetlands, WOTUS, and floodplains compared to the baseline expected under the No Action Alternative.

3.4.5 Vegetation

Vegetation within the Plan Area is described following the EPA ecoregions of North America and the CEC resource descriptions.⁸⁴ Ecoregions generally describe physical conditions and the ecological communities they support, and this section focuses on the vegetation communities typically associated with ecoregions within the Plan Area. Additional context is provided by briefly describing the distribution and extent of current vegetation land cover types within the

⁸⁴ Omernick 1987

Plan Area from recent USFS reports and NLCD information.⁸⁵ A brief description of nonnative/invasive plants and noxious weeds, and plants regulated or granted special status under Federal or state authorities is provided.

3.4.5.1 Affected Environment

The Plan Area includes 13 of the 182 Level III ecoregions in North America. Vegetation across the Plan Area varies widely depending on geology, soils, climate, and topography. The vegetation typical of each ecoregion is summarized in Appendix D, Table 5.

Recent USFS reports show forests to be the dominant land cover type throughout the Plan Area, comprising about 18.9 million acres in NY, 16.8 million acres in PA, and 12 million acres in WV.⁸⁶

NY's forest land occupies approximately 51 percent of the State's land area. Ninety percent of NY's forests are composed of hardwood forest types. The maple/beech/birch group occupies 55 percent of forest land, and the oak/hickory group occupies 17 percent.⁸⁷ A forest cover type change analysis shows a loss of approximately 32,525 acres of deciduous forest and a loss of approximately 4,502 acres of coniferous forests in NY over the 10-year period for which data is available (2006 to 2016). Mixed forest types gained approximately 21,532 acres over the same period.⁸⁸

PA's forest lands cover approximately 52 percent of the area in the Commonwealth. The USFS recently reported that five hardwood species (red maple, black cherry, northern red oak, sugar maple, and chestnut oak) made up more than half of the volume of live trees on forest land in the state.⁸⁹ An analysis of NLCD information for PA shows losses of approximately 135,385 acres of deciduous and approximately 6,362 acres of coniferous forests, and a gain of approximately 5,873 acres of mixed forests over the same 10-year period.⁹⁰

The USFS reports that forest lands cover approximately 72 percent of WV's land area. Oak/hickory is the dominant forest type (74 percent), and pitch/Virginia pine is the most abundant softwood forest type, accounting for about two percent of the forest land.⁹¹ Forest cover type change analysis shows a loss of approximately 109,875 acres of deciduous forest and gains of approximately 6,039 acres of coniferous and 23,271 acres of mixed forests between 2006 and 2016 in WV.⁹²

Agriculture, largely in the form of pastureland, hayfields, and row crops, covers approximately 20 percent of NY, 23 percent of PA, and 16 percent of WV.

⁸⁵ Homer et al. 2015

⁸⁶ Widmann 2016; Albright 2017; Morin et al 2017

⁸⁷ Widmann 2016

⁸⁸ <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

⁸⁹ Albright 2017

⁹⁰ <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

⁹¹ Morin et al 2017

⁹² <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

Nonnative Invasive Plants and Noxious Weeds

The USDA defines invasive plants as species that are: 1) nonnative to the ecosystem under consideration; and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive plants can be highly destructive, difficult to control, and cause ecological and economic damage. Noxious weeds are nonnative plant species designated as noxious by Federal, state, or county authorities. Noxious weeds can reduce crop yields, displace native species, and displace native plant and animal habitats.

The USDA Animal and Plant Health Inspection Service maintains lists of prohibited plants, noxious weeds, and parasitic plants and seeds.⁹³ Each state also maintains lists of priority noxious and invasive plants and prohibits propagation, trade, and transport of these plants. Invasive and/or noxious plant species are typically targeted for suppression, control, or eradication through federal or state funding.

State-Protected Plant Species

The state of NY identifies and regulates four categories of protected plants, including those considered rare, threatened, endangered, or exploitably vulnerable. NY's Natural Heritage Program identifies approximately 150 species of mosses as rare and maintains an Active Inventory List of 638 species of plants considered highly vulnerable to extirpation.⁹⁴ The Active Inventory List includes documented extant taxa (N=502), as well as rare and historical taxa with some hope of rediscovery (N=77), and those considered extirpated within the state (N=59). The Active Inventory List also identifies 85 species on a Watch List considered rare or declining, and two weedy species predicted to increase over time.

The PDCNR Bureau of Forestry classifies native plants in accordance with the Wild Resource Conservation Act and the Conservation of PA native Wild Plants regulations.⁹⁵ Of the estimated 2,000 native plants in the state, 232 are classified as endangered, 78 as threatened, three as vulnerable, 39 as rare, and 128 as tentatively undetermined. A total of 102 species are classified as extirpated.

WV is the only state within the Plan Area to include plants among the Species of Greatest Conservation Need (SGCN) in the State's Wildlife Action Plan. WV's list of SGCN includes 479 vascular plants, two mosses, and one hornwort. Of those SGCN, 121 are considered Priority 1 and 361 are considered Priority 2.

Plants Listed as Endangered or Threatened

Eleven plant species native to the Plan Area are currently listed as threatened or endangered under the ESA (Appendix D, Table 6). The Service is responsible for implementing the ESA for species under its jurisdiction, including plants. The ESA section 9 prohibits damage or destruction of plants listed as endangered where they occur on Federal property or on non-

⁹³ USDA 2021

⁹⁴ NYSDEC 2008, 2021

⁹⁵ 17 Pa Code § 45.1–91

Federal lands when doing so in knowing violation of any state law or regulation or during any violation of a state criminal trespass law. Because impacts to plants do not fall under the ESA definition of “take” the Service cannot authorize incidental take of plants. However, the Service cannot undertake an action, including issuance of a permit for other listed species, that is likely to jeopardize the continued existence of listed plants. Appendix D, Table 6 lists plants in the Plan Area that are currently listed as endangered or threatened under the ESA within the Plan Area.

3.4.5.2 Environmental Consequences

No Action Alternative

Residential and commercial, transportation, and utility development project activities generate impacts that could alter or affect vegetation in the Plan Area. Project activities could result in changes to existing levels of vegetation, replace components of native plant communities with nonnative plants, or establish or expand areas of nonnative plants or noxious weeds. Effects would depend on the types and quantities of vegetation removed, the amount of time needed for vegetation to regenerate, and the type and frequency of ongoing vegetation management implemented after project construction activities are complete.

Direct impacts to vegetation from project activities would be expected from clearing, cutting, trimming, and removal of existing woody vegetation. The construction of permanent facilities including buildings, roadways, and other hardened surfaces would result in land cover conversion and permanent loss of vegetation. Once project activities are complete, areas that are not converted to hardened land cover types (e.g., buildings, roads, parking lots), landscaped (e.g., residential lawns, parks, maintained non-hardened commercial spaces), or maintained in another cover type (e.g., roadway and utility rights-of-way) would be expected to be recolonized by herbaceous and woody species. Impacts to native vegetation in areas where invasive plants are present could provide opportunities for these nonnative species to expand or become established. Rights-of-way maintenance typically involves mowing or cutting back and trimming vegetation. These activities would be expected to generate fewer impacts than initial clearing and construction because such areas have already been disturbed and most woody vegetation removed. Maintenance of these areas often involves activities such as mowing that limits reestablishment of woody species. As more sunlight reaches the ground in areas that were previously under forested canopy, herbaceous plants and grasses would be expected to become more common in areas that are frequently mowed.

Forbs, shrubs, and small early successional trees would become more common in forested areas that are temporarily disturbed and left unmaintained. Some project activities could occur in areas that consist of pasture or cropland, though such cover types are typically represented by swathes of nonnative vegetation and would not be expected to affect native vegetation compared to baseline levels.

Clearing and construction of linear projects (such as roadways or utility distribution lines) fragments existing vegetation communities. Such fragmentation of continuous blocks of existing vegetation can sever riparian forest corridors, modify hydrologic and nutrient cycling processes, and impact natural communities.

Clearing and removal of vegetation may also indirectly affect vegetation adjacent to the areas disturbed. Indirect effects from construction and development activities can include accumulation of construction dust on vegetation, which can temporarily reduce primary production, increase sedimentation downgradient or downstream of vegetation communities, and increase sunlight and wind exposure in newly cleared areas. Vegetation removal could also create opportunities for colonization by nonnative plant species, which could negatively impact the vegetation resource.

Each Applicant choosing to coordinate with the Service to develop a HCP and apply for an individual ITP under the No Action Alternative would be expected to develop and implement avoidance, minimization, and mitigation measures to conserve the Covered Species. Such measures would likely include identification and avoidance of bat maternity colony and summer roost trees and associated buffers, spring staging and fall swarming zones, and buffers around hibernacula sites. Each of these measures would be expected to conserve vegetation communities in these sensitive areas to ensure that they continue to provide for the breeding, feeding, and sheltering needs of the bats.

Indirect impacts would be expected to be minimized by adherence to regulations and BMPs addressing runoff and erosion control, fugitive dust suppression, and buffers or setbacks from critical environmental features such as wetlands and riparian areas. Though project activities would be expected to alter vegetative composition and structure, these effects are expected to be localized, and many of these effects would be short-term. Overall impacts to vegetation from these activities in compliance with applicable requirements would be expected to be moderate or minor at the Plan Area scale.

Because impacts to plants do not fall under the ESA definition of “take,” incidental take of plants listed as threatened or endangered cannot be authorized. Because the Service cannot issue a permit that would jeopardize the continued existence or adversely modify the designated critical habitat of any listed species, including plants, any project-related impacts that would cause such effects must be avoided. Each state regulates certain plants within their respective jurisdictions and authorities. Because all projects that apply for incidental take coverage must be otherwise lawful, Project Proponents are expected to adhere to all regulations that pertain to plants. The combination of Federal, state, and local requirements would be expected to minimize impacts to protected plant populations.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, impacts under the Proposed Alternative are expected to be similar to or the same as the No Action Alternative. Under both alternatives, loss of existing vegetation and conversion to other land cover and vegetation types is expected. The CMs outlined in the GCP could generate some beneficial effects by ensuring a

consistent and coordinated approach for projects throughout the Plan Area over the duration of the plan, rather than the case-by-case review and permitting expected under the No Action Alternative.

Forest cover represents approximately 47.7 million acres in the Plan Area. The cumulative amount of forested habitat that could be impacted over the duration of the plan amounts to 0.12 percent per species per state (60,000 acres), or 0.38 percent for all three species within the three states (180,000 acres).

Changes to vegetation types and communities may occur due to replanting or landscaping associated with development activities under both alternatives. These changes would be expected to be limited to the vicinity of project disturbance and therefore, unlikely to cause shifts in native plant community types.

3.4.6 Fish and Wildlife

This section provides a general overview of the diversity of wildlife in the area and briefly describes common species within the Plan Area. Fish and wildlife are managed in accordance with multiple state and Federal statutes, regulations, policies, and guidance, and a brief overview of the regulatory context associated with regulated categories of fish and wildlife in the Plan Area is provided. Species of conservation concern and those subject to Federal statutes and regulations, including the Covered Species, are briefly discussed.

3.4.6.1 Affected Environment

Fish and wildlife are associated with specific geology, landforms, soils, vegetation, climate, land use, and hydrology that provide the feeding, breeding, and sheltering needs that constitute their respective habitats. The wide range of landforms and conditions throughout the Plan Area host a rich and diverse assemblage of fishes and wildlife.

In the Plan Area, the distribution and abundance of fish and wildlife species range from wide-ranging and common to those with extremely limited ranges faced with potential extinction. Appendix D, Table 7 provides an estimate of the numbers of species of insects, fishes, amphibians, reptiles, birds, and mammals currently found in each state within the Plan Area. The table includes common as well as declining and rare species and includes native and introduced species currently found in the wild. The table excludes extirpated species, feral domesticated species, and species (such as marine turtles and marine mammals) not expected to occur within the Plan Area. Data collection and reporting methods are not uniform among the multiple sources for this information, and estimates are intended to provide general context regarding the diversity of fish and wildlife throughout the three-state Plan Area, rather than definitive accounts of species presence or distribution.

The Plan Area includes portions of 13 Level III ecoregions that represent distinctive climactic, elevational, and vegetational variations that support a wide variety of fish and wildlife species. A short description of common fish and wildlife species in each of the ecoregions is provided in Appendix D, Table 8.

State-Protected Wildlife Species

States possess broad trustee authorities and primary regulatory responsibility for protection and management of fish, wildlife, plants, and their habitats within their borders, unless preempted by Federal authorities. Each state can designate fish and wildlife species within their respective jurisdictions as threatened or endangered. Some states regulate those species under their statutes and authorities and may share cooperative management with the Service under the ESA.

State agencies responsible for fish and wildlife management develop status, management, and conservation plans, including State Wildlife Action Plans (SWAPs) within their respective jurisdictions. Each SWAP identifies SGCN, potential threats, and actions intended to conserve species, habitats, and systems. The SWAPs are updated according to review/revision schedules defined in each SWAP. Each of the states within the Plan Area revised their SWAP in 2015. The NY 2015 SWAP⁹⁶ identified 366 SGCN, including 27 freshwater mollusks, 38 dragonflies and damselflies, 7 mayflies, 4 stoneflies, 8 beetles, 6 bees, 26 butterflies and moths, 42 freshwater fishes, 12 amphibians, 24 reptiles, 104 birds, and 11 mammals. The remaining 57 species are aquatic or primarily marine-associated species that do not occur within the Plan Area. The complete list of NY SGCN is available at: <https://www.dec.ny.gov/animals/7179.html>.

The NYSDEC is responsible for maintaining the list of fish and wildlife species designated as endangered, threatened, or of special concern in accordance with State law.⁹⁷ The complete list is available at: <https://www.dec.ny.gov/animals/7494.html>.

The 2015 PA SWAP⁹⁸ identified 664 SGCN, including 450 invertebrates, 65 fishes, 18 amphibians, 22 reptiles, 90 birds, and 19 mammals. For information on the entire list of PA SGCN, see: <https://www.pgc.pa.gov/Wildlife/WildlifeActionPlan/Pages/default.aspx>. In PA, the Fish and Boat Commission is responsible for regulation and management of threatened and endangered fishes, amphibians, and reptiles: <https://www.fishandboat.com/Resource/SpeciesofSpecialConcern/Pages/ThreatenedEndangeredSpecies.aspx>. The Game Commission is responsible for other threatened and endangered wildlife: <https://www.pgc.pa.gov/Wildlife/EndangeredandThreatened/Pages/default.aspx>.

The WVDNR 2015 SWAP⁹⁹ identified over 600 SGCN, including 53 freshwater mollusks, 108 gastropods, 12 crayfish, 91 cave invertebrates, 14 butterflies, 17 moths, 13 tiger beetles, 69 dragonflies and damselflies, 74 freshwater fishes, 35 amphibians, 28 reptiles, 75 birds, and 29 mammals. The document is available online at: <http://wvdnr.gov/wp-content/uploads/2021/05/2015-West-Virginia-State-Wildlife-Action-Plan-Submittal-1.pdf>.

The list of threatened and endangered species in WV mirrors the Federal list of species listed under the ESA: <https://wvdnr.gov/plants-animals/rare-threatened-endangered-species/>.

⁹⁶ NYSDEC 2015

⁹⁷ 6 NYCRR Part 182

⁹⁸ PA Game Commission and PA Fish and Boat Commission 2015

⁹⁹ WVDNR 2015

Migratory Birds

The Service ensures compliance with the Migratory Bird Treaty Act of 1918, (MBTA)¹⁰⁰ which implements several international treaties and their subsequent amendments. The MBTA makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The MBTA protects songbirds, raptors, ducks, waterbirds, and others. More than 300 birds protected under the MBTA occur within the Plan Area. The complete list of birds protected under the MBTA is available at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtintro.html>.

Bald and Golden Eagles

Eagles are protected under the Bald and Golden Eagle Protection Act of 1940 (BGEPA),¹⁰¹ which prohibits the taking or disturbance of eagles, their eggs, or their nests. In 2007, the Service developed and published the National Bald Eagle Management Guidelines (Eagle Guidelines) to advise landowners, land managers, and others when and under what circumstances the BGEPA may apply to their activities. For more information on the Eagle Guidelines, see: <http://www.fws.gov/pacific/eagle/NationalBaldEagleManagementGuidelines.pdf>.

After nearly disappearing from the contiguous United States, bald eagle (*Haliaeetus leucocephalus*) populations recovered, and the species was subsequently removed from the federal list of threatened and endangered species.¹⁰² Populations are now stable or expanding and bald eagles nest within the entire Plan Area. Bald eagle nests are often associated with coastlines, rivers, or large lakes and streams and are typically located in mature trees, snags, cliffs, or rock promontories. Bald eagle nest building, egg-laying, incubation, hatching, rearing, and fledging of young occurs between January and August in the Plan Area.

In the Plan Area, golden eagles (*Aquila chrysaetos*) are known to sometimes migrate along ridges of the Appalachian Mountains and overwinter on steep forested ridges in PA and WV. This species is also known to migrate through NY.¹⁰³

Threatened and Endangered Species

The Service is responsible for implementing the ESA for species under its jurisdiction.¹⁰⁴ A total of 55 species of fish and wildlife are within the Plan Area and are either receiving protection under the ESA, are proposed for listing as threatened or endangered or are candidate species, including 17 freshwater mussels, two snails, three crustaceans, four insects, two amphibian, two reptiles, four fish, five birds, and five mammals. Critical habitat has been designated or is proposed in the Plan Area for 15 of those species. A list of these species with their respective listing status, critical habitat designation, and distribution by state within the Plan Area are found

¹⁰⁰ 16 U.S.C. §§ 703–713

¹⁰¹ 16 U.S.C. §§ 668–668c; 50 CFR Part 22

¹⁰² 72 FR 37345, July 9, 2007

¹⁰³ <https://dec.ny.gov/nature/animals-fish-plants/golden-eagle>

¹⁰⁴ ESA section 10(a)(2)(A)

in Appendix D, Table 9. Additional information about these species is available from the Service's Environmental Conservation Online System (ECOS)¹⁰⁵ and Field Office websites.

Indiana bat, Northern Long-Eared Bat and Tricolored Bat

The GCP Covered Species are the IBAT, NLEB, and TCB. A summary of the status and distribution, habitat characteristics and use, and threats to these species is provided in GCP Chapter 2.

The IBAT, NLEB, and TCB are temperate, insectivorous, migratory bats that primarily hibernate in mines and caves in the winter and spend summers in wooded areas. The key stages in their annual life cycles include hibernation, spring staging and migration, pregnancy, lactation, volancy/weaning, fall migration, and swarming. All species display a high degree of site fidelity, and reproductive females return to the same wooded areas each spring, where they form maternity colonies and remain to bear and raise their young throughout the summer. In the Plan Area, females roost in colonies and may stay close to their hibernaculum, though some will migrate farther to summer habitat. IBAT and NLEB pups are born between late May and early June, while TCBs are born between June and July. Nursing of pups continues until weaning, which is shortly after young become volant (able to fly) about a month later (mid-to late-July for IBATs and NLEBs and mid-July to August for TCBs). Fall migration typically occurs between mid-August and mid-October for the IBAT and NLEB and late July to August for TCBs, though the timing of these events is also influenced by weather and latitude.¹⁰⁶ Upon arrival at hibernacula, all three species “swarm,” a behavior in which large numbers of bats fly in and out of cave entrances from dusk to dawn for several weeks. During this time, bats consume an abundance of insects to prepare for hibernation and mating occurs during the latter part of the period. After mating, females enter directly into hibernation, but not necessarily at the same hibernaculum where mating occurred. Most bats of both sexes hibernate by the end of November (by early to mid-October in northern areas, depending on the species).

Throughout their range, the basic resource needs for the bats include safe winter hibernation sites; forested spring staging and fall swarming zones; connected forested summer habitat for roosting, foraging, and commuting; forested migratory stopover habitat; safe migration passage; insects; and clean drinking water (e.g., streams, riparian areas, and wetlands).

The IBAT was federally listed as endangered due to threats including loss or degradation of occupied habitat, human disturbance at hibernacula, and pesticides.¹⁰⁷ The Service's initial recovery plan for the species identified additional threats including impacts to summer habitat, environmental contaminants, and collisions with manmade objects.¹⁰⁸ Subsequent 5-Year Reviews identified threats posed by white-nose syndrome (WNS) and nonnative invasive species.¹⁰⁹

¹⁰⁵ <https://ecos.fws.gov/ecp/>

¹⁰⁶ Service 2007

¹⁰⁷ Service 1983

¹⁰⁸ Service 2007

¹⁰⁹ Service 2009, 2019

Threats to the NLEB include WNS, loss or degradation of habitat, collisions with manufactured objects, and environmental contaminants.¹¹⁰

On September 13, 2022, the Service published a proposed rule to list the TCB as endangered under the ESA. TCBs face potential extinction primarily due to the rangewide impacts of WNS.

3.4.6.2 Environmental Consequences

No Action Alternative

Residential, commercial, transportation, and infrastructure development and construction projects considered in this EA could continue to occur under the No Action Alternative. Project Proponents would continue to comply with the ESA through the development of individual HCPs and apply for incidental take coverage per each individual project. These projects would subject fish and wildlife to a variety of direct and indirect impacts.

Because the location and site-specific details of individual projects over the study period cannot be predicted, effects are described at a general scale. All projects would be expected to adhere to applicable Federal, state, and local requirements related to fish and wildlife resources and their habitats. Ongoing fish and wildlife management and conservation activities including, but not limited to efforts by state agencies, NRCS conservation programs on working lands, habitat restoration and conservation projects by private individuals and NGOs, and implementation of previously approved HCPs would continue under the No Action Alternative.

This section first describes impacts to common fish and wildlife species from development activities. Additional detail is provided for federally regulated groups of fish and wildlife, including migratory birds, bald and golden eagles, threatened and endangered species, and specifically for IBAT, NLEB, and TCB.

Development-Related Impacts to Common Fish and Wildlife

Construction activities such as surveys, site preparation, and ongoing operations and maintenance can generate direct and indirect impacts to fish and wildlife. Effects may include habitat conversion, modification, and fragmentation; introduction of nonnative species and noxious weeds; and consequences of contamination, spills, dust, and erosion. Project development and construction typically requires vehicular traffic and the use of heavy equipment for activities including but not limited to: vegetation clearing and removal; ground disturbance such as digging, trenching, and excavation of rock or soils; site preparation, grading and re-contouring; and installation of erosion protection and sediment control structures. Use of such equipment and increased noise and human activity generate disturbances that can disrupt wildlife feeding, nesting, sheltering, and/or nurturing behaviors within and adjacent to development sites.

Small and less mobile species including some amphibians, reptiles, nesting birds, and small mammals that cannot escape a development site may experience direct mortality or permanent

¹¹⁰ 87 FR 73488, November 30, 2022

displacement. Construction activities such as the stockpiling of soils, cleared vegetation, or debris; staging of equipment; and installation of erosion control features can create temporary physical barriers to wildlife movement that can trap some small animals. Soil dwelling invertebrates could be impacted directly through movement of soil from one place to another, resulting in some mortality and displacement. These impacts may cause indirect effects to other species, such as reduced forage potential for insectivores. Fossorial animals (species adapted for digging and live underground such as gophers, moles, and some tortoises and toads) could be impacted by digging or trenching activities and by soil compaction caused by heavy machinery. Other animals can be indirectly affected through the reduction in seed banks, resulting in longer recovery times for vegetation that provides forage, cover, and nesting habitat for wildlife.

Larger and more mobile species typically attempt to evade sources of disturbance. Displaced wildlife seeking refuge from development-related disturbances could be exposed to predation and increased competition for available resources with resident wildlife. The added competition can alter population birth and mortality rates and impact species composition on adjacent habitats.¹¹¹ These stressors can result in short term or long term effects. Some displaced wildlife would be expected to return to newly disturbed areas and adjacent, undisturbed areas after construction activities are complete.

Vegetation clearing for construction can reduce wildlife cover, foraging, breeding, and nesting habitat. Wildlife in the immediate area could experience loss of browse or forage material during and after construction. New development would convert some areas of existing vegetation to impervious cover and constructed environments such as residences, roadways, or utility infrastructure. Native vegetation could be replaced with nonnative landscaping which may alter habitat suitability for resident wildlife.

Postconstruction operations and maintenance activities within developed sites and roadway and utility rights-of-way would be expected to generate fewer wildlife impacts than new construction or development. Such activities in previously impacted areas would be expected to result in less intense disturbance for shorter durations than new construction activities. Maintenance impacts would generally be expected to be minor and temporary. Maintained landscaping and rights-of-way may provide suitable habitat for smaller species such as amphibians, reptiles, birds, and small mammals, and those that prefer edge habitat. As with new construction, more mobile species would likely move to avoid disturbance from operations and maintenance activities, whereas less mobile species would be more susceptible to impacts from activities such as mowing and brush removal. Wildlife impacts from noise, human, and vehicular activity from these disturbances would be expected to be minor, less intense, and of a shorter duration than during new construction activities. The creation and maintenance of landscaped areas and rights-of-way would be detrimental to wildlife that rely on mid- and late-successional vegetation but would benefit wildlife that use early successional habitats. Rights-of-way provide suitable habitats for some birds and small mammals.¹¹² Less-frequently mowed grassy areas and shrubby or forested areas along rights-of-way would provide feeding and nesting areas for some bird species and cover for a variety of wildlife.¹¹³

¹¹¹ Dempster 1975; Adams and Geis 1981

¹¹² Leedy 1977

¹¹⁴ Leedy 1977; Adams and Geis 1983

Species that use nonforested areas may be impacted for shorter periods because herbaceous lands, riparian vegetation, and vegetated portions of developed lands would be expected to recover more quickly. Forest-dwelling wildlife species are generally expected to be impacted to a greater degree because forested lands take longer to return to preconstruction conditions.

Residential development typically results in the introduction of domestic pets, and livestock often accompany agricultural land uses. Such introductions can increase predation risk for native wildlife as well as the potential for transmission of diseases such as brucellosis, canine distemper, canine parvovirus, and toxoplasmosis from domestic pets and livestock to wildlife populations.

The No Action Alternative could result in minor to moderate adverse impacts to common wildlife in the vicinity of project construction, operation, and maintenance activities. Though normal behavior of many wildlife species would likely be disturbed during construction, some adverse effects would be temporary due to the short term nature of construction-related noise and human activity impacts. Other impacts, such as conversion of habitat to other uses, would be expected to persist. Overall, the regional impact of these effects to common wildlife would likely be minor due to the limited scope and scale of the projects across the Plan Area over the 10-year duration of the GCP. Implementation of the No Action Alternative would not be expected to result in impacts to these resources compared to baseline conditions and current trends.

Invasive Species and Noxious Weeds

Development and construction activities, including those considered under the No Action Alternative, could introduce, facilitate, or exacerbate the spread of invasive species and noxious weeds in the Plan Area.

The introduction and spread of invasive species can threaten fish and wildlife and the habitats they rely on. Ground disturbing activities and vehicle and equipment use associated with construction and development activities can introduce and spread invasive vegetation and noxious weeds that result in loss of wildlife habitat, reduction of native plant diversity, changes in community functions, and loss of system-dependent wildlife species.

Forest fragmentation can indirectly facilitate the spread of invasive pest species. Fragmentation by development types that cause edges, such as roads, housing, and industrial uses are correlated with higher incidence of nonnative pest invasions in forests.¹¹⁴ Such disturbances can serve as a pathway for insect or other pests to access core or interior forested environments.

Contaminants, Spills, Dust, and Erosion

During construction, operation, and maintenance activities, pollutants such as oil and grease from machinery could be released through accidental spills or leaks. The resulting impacts could be minimized with implementation of spill prevention and control methods. Any escaping pollutant could adversely impact fish and wildlife habitat.

¹¹⁴ Guo et al. 2018

Fuels and other hazardous materials could spill or leak from storage containers, equipment operated near streams, or fuel transfers. Any spill that reaches a water body could be detrimental to aquatic life. Contaminants could have acute, direct effects on fish, or could have indirect, chronic effects such as altered behavior, changes in physiological processes, or changes in food sources. Large spills also could cause the direct mortality of species within the water body and indirect effects on the local food chain through ingestion of contaminated prey.

Such pollutants could affect wildlife directly, but also indirectly by impacting food supplies, or by causing illness or death. In some cases, the pollutants could bioaccumulate in prey species, leading to gradual illness or mortality. Fugitive dust resulting from construction and maintenance activities can also impact wildlife habitat by covering photosynthesizing leaves resulting in reduced primary productivity and by adversely affecting the availability and quality of browse or forage.

Erosion and sedimentation are common byproducts of construction and can impact fish-bearing streams, and storm-event runoff can carry pollutants that decrease oxygen levels, impacting fish and other aquatic organisms. Additional discussion of water quality associated with the Covered Activities is included in EA Section 3.4.4 Water Quality.

These indirect impacts to wildlife could be minimized by implementing measures such as proper runoff and erosion control measures, dust suppression, and control and removal of accidental spills of fuel or waste oil during construction. Erosion and sediment control measures would minimize the amount of sediment from leaving construction sites and entering waterways bodies. Impacts on fisheries and aquatic resources from erosion could also be minimized by limiting the amount of time that construction activities would take place near waterways.

Migratory Birds

Development and construction can impact migratory bird species. Primary impacts include loss and alteration of habitat associated with vegetation removal. Clearing and grading can remove nesting and foraging habitat, impact occupied nests, and result in destruction of eggs and mortality of young and unfledged birds. Construction can also temporarily displace birds into adjacent habitats, which could increase competition for food and other resources. This in turn could increase stress, susceptibility to predation, and impact reproductive success.

Conversion of forested habitats to early successional stages and the increase in forest edge that results could adversely affect forest interior bird species by increasing rates of nest predation, parasitism, or interspecific competition; reducing pairing success; and inhibiting migration, dispersal, foraging, and other movements of species that are hesitant to cross openings.¹¹⁵ The severity of fragmentation on any given species is determined by the duration and seasonal timing of construction, sensitivity of the individual, and parameters such as food availability, climate, cover, and topography. The breeding success of some forest interior birds has been shown to be

¹¹⁵ Terborgh 1989; Faaborg et al. 1992

limited by the size of available unbroken forest tracts. Loss of forest habitat in tracts of marginal size could further reduce breeding success of forest interior birds.¹¹⁶

Project activities could overlap with the nesting seasons for some migratory birds. Construction during this time could cause direct and indirect impacts on the species that occupy the project areas. Direct effects would be from the loss or disturbance of nesting trees, nests, and young; unfledged birds could be lost as habitat is removed. Construction activities occurring adjacent to nesting individuals could result in nest abandonment, which could result in the chilling or mortality of eggs and young, or premature fledging and ejection from the nest. Indirect effects could be associated with human presence and construction noise. These effects could be temporary in areas where suitable habitat remains, as displaced birds could return once construction in that area is completed.

Construction and development activities that pursue ITPs on a project-by-project basis under the No Action Alternative would likely include CMs such as timing restrictions for tree clearing intended to minimize impacts to the Covered Species. Such measures would be expected to also minimize effects to forest dwelling migratory birds whose ranges overlap with the Covered Species. Mitigation measures that permanently protect forested habitat for the Covered Species would also likely benefit migratory birds with overlapping ranges. However, because the mitigation measures would be assessed independently for each project, the No Action Alternative would not provide the landscape-scale coordinated mitigation benefits for migratory birds expected under the proposed GCP.

Bald and Golden Eagles

Construction and development activities could affect bald eagles. Project activities can affect aerial foraging and predatory activities if construction occurs when roosting eagles are present. Disturbance of habitat can impact bald eagle foraging patterns or roosting sites. The Service recommends that Project Proponents adhere to the Eagle Guidelines if nests are found in the vicinity of a project. The Eagle Guidelines also specify that construction of roads and other linear utilities be constructed outside of the eagle nesting season.

Golden eagles could also be impacted by construction and development under the No Action Alternative. Activities that affect the forested ridges along the Appalachian Mountains where golden eagles overwinter and migrate could disturb or disrupt normal feeding and sheltering behaviors.

Project-specific environmental reviews under the No Action Alternative would be expected to identify potential sources of disturbance and provide CMs in keeping with relevant requirements including BGEPA, the Eagle Guidelines, and the MBTA. States may also regulate activities that could impact eagles within their respective jurisdictions.

Threatened and Endangered Species

¹¹⁶ Robbins et al. 1989; Terborgh 1989

Each of the construction and development-related fish and wildlife impacts previously described could also impact threatened or endangered species within the Plan Area. However, because the proposed GCP only covers incidental take of the IBAT, NLEB and TCB, analysis of the No Action Alternative requires similar consideration of only projects that may result in incidental take of the three bat species.

Under both the No Action Alternative and the proposed GCP, projects determined to be reasonably certain to result in take of federally listed or proposed species other than the IBAT, NLEB and TCB, or in addition to the listed/proposed species, could consult with the local Field Office to seek technical assistance. Project Proponents then determine whether a project can be modified to avoid prohibited take and proceed, or whether to develop a GCP as part of an application for an ITP providing coverage for incidental take of all listed/proposed species that cannot be avoided. Because these standard stepwise processes apply to all projects regardless of whether the No Action Alternative or the proposed GCP is selected, effects to other listed/proposed species are considered minor and are not addressed further.

Indiana Bat, Northern Long-Eared Bat and Tricolored Bat

Under the No Action Alternative, construction, operation, and maintenance of residential and commercial development, transportation, and infrastructure development and construction projects would continue within the Plan Area. Project activities likely to impact the IBAT, NLEB and TCB are those that occur in wooded or forested areas where the bats occur, or near caves, mines, or other features used as overwintering hibernacula sites. Impacts reasonably certain to result in take of the Covered Species include tree removal, habitat modification, and project-related noise and disturbance. Take in the form of mortality or injury may result from crushing and collision; impacts to breeding, feeding, and sheltering habitat; increased habitat fragmentation; and permanent shifts from one vegetation community to another.

The type and amount of take and impacts to habitat would differ among construction methods, the time of year when actions take place, and with bat activity level when activities are underway. Construction of permanent structures or facilities such as roads would remove areas that may be used by the Covered Species for breeding, feeding, or sheltering. Project activities that occur during the active season could reduce foraging and reproductive efficiency for affected bats for the duration of the active season. Species that make up food resources for the bats and their habitat would likely be impacted within individual Permit Areas, which could reduce available food sources, adversely affect reproductive potential, and decrease use by bats in affected areas.

To comply with the ESA, non-Federal projects determined to be reasonably certain to result in take of the Covered Species would require project review, development of an HCP and issuance of an ITP to authorize unavoidable incidental take. Each project would be assessed on a case-by-case basis to determine if minimization and mitigation measures offset the impacts of the taking to the maximum extent practicable, and if all required environmental reviews, including the NEPA, are complete prior to ITP issuance. Population-level impacts from each project would be fully offset on a case-by-case basis. However, the No Action Alternative would not provide the coordinated and consistent landscape-scale recovery focused conservation program offered by the proposed GCP.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for Project Proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Areas. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area.

Development Related Impacts to Common Fish and Wildlife

Impacts to fish and wildlife under the Proposed Alternative are generally expected to mirror those of the No Action Alternative. Disturbance of common wildlife species and loss or fragmentation of their habitats would result from the same construction, development, and maintenance activities. Impacts from the Covered Activities could include the same short term effects (e.g., noise, mortality during construction) and long term effects (e.g., habitat modification and fragmentation) expected under the No Action Alternative. The same potential for introduction of invasive species and noxious weeds, and likelihood of contaminants, spills, dust, and erosion would be expected under both the Proposed and No Action Alternatives.

Under the Proposed Alternative, CMs intended to offset adverse impacts to the Covered Species would provide a landscape-scale habitat protection and management program that could also benefit other native wildlife species in the Plan Area. Compared to the No Action Alternative, the Proposed Alternative is expected to result in more positive trends and outcomes for fish and wildlife species through the permanent protection of conservation lands. The degree to which each species benefits from the Proposed Alternative would vary based on their preference for habitat features similar to those of the Covered Species. The overall effect of the Proposed Alternative on fish and wildlife may be positive due to the coordinated and consistent conservation program and the creation of a network of conserved lands managed to meet the mitigation objectives of the GCP.

Migratory Birds

Similarly, impacts to migratory birds from approval of the Proposed Alternative are expected to be the same or more beneficial under the GCP. Though project impacts would be expected to generate the same disturbance and loss, alteration, and fragmentation of habitat expected under the No Action Alternative, the potential benefits of a coordinated and consistent conservation program protecting forested lands for the Covered Species would be expected to also benefit forest-dwelling migratory birds. No migratory birds would be expected to experience population-level declines from approval and implementation of the GCP that would cause status changes or reduce survivability in the wild. Therefore, the Proposed Alternative is not expected to cause significant impacts to migratory birds.

Bald and Golden Eagles

Impacts to bald and golden eagles would be the same under both the proposed GCP and the No Action Alternative. As a condition of participation in the proposed GCP, Project Proponents would agree to follow the Service's Eagle Guidelines if bald eagle nests are found in the vicinity

of a project. The anticipated protection of a network of protected forest areas to meet the mitigation requirements offsetting the population-level effects to the Covered Species may also provide habitat protection benefits for nesting eagles. The Proposed Alternative is not expected to reduce the survivability or recovery of bald or golden eagles or cause a change in listing status for either species. The approval of the proposed GCP is not expected to cause significant impacts to bald or golden eagles.

Threatened and Endangered Species

As described for the No Action Alternative, any project determined to be reasonably certain to result in take of federally listed or proposed species other than IBATs, NLEBs and TCBs would not be eligible to participate through the streamlined GCP process. Though species may be indirectly affected by a proposed project, the effects cannot rise to the level of take. Any project expected to take other listed/proposed species would be directed to the local Field Office for technical assistance.

Because noncovered listed species must be avoided for all projects participating through the proposed GCP, no impacts that could reduce the likelihood of survival and recovery of these species in the wild or generate population-level changes that result in a change in species status could occur. The proposed action of approving and implementing the GCP and issuance of ITPs is therefore, not expected to generate significant impacts to other listed/proposed species.

Indiana Bat, Northern Long-Eared Bat, and Tricolored Bat

Under the Proposed Alternative, eligible construction of residential and commercial development, transportation, infrastructure development and construction projects within the Plan Area could proceed by adopting the GCP and applying for an ITP. The same project activities in forested areas or near caves, mines, or other features used as overwintering hibernacula sites could affect the Covered Species under both alternatives. The Covered Activities are expected to cause habitat fragmentation and loss resulting in the same direct and indirect effects to the Covered Species.

The GCP conservation program was designed to fully offset the impacts of the taking of the Covered Species from habitat loss or disturbance resulting from the Covered Activities. Mitigation measures are expected to fully offset the impacts of the taking by implementing equivalent conservation actions that benefit the Covered Species.

The GCP incorporates monitoring procedures to verify the effectiveness of prescribed CMs, which can be adapted to ensure that the GCP biological goals and objectives are achieved (GCP Chapter 4).

The approval of the Proposed Alternative would result in issuance of incidental take authorization on up to 180,000 acres (with habitat as a surrogate for take of individual bats) across the three states over the 10-year GCP duration. This includes up to 2,000 acres for each state per year per Covered Species in NY, PA, and WV, totaling 6,000 acres annually. The required mitigation for habitat impacts would consist of restoration, enhancement, and

preservation of habitat that provides an equivalent ecological value to the impacted Covered Species.

The Service anticipates that implementation of the GCP could increase benefits to the Covered Species resulting from mitigation within the Plan Area, compared with the No Action Alternative. The mitigation provided under the GCP would likely result in larger, contiguous tracts of land being protected, with greater conservation value, than would likely be achieved if similar acreage were protected on a project-by-project basis under the No Action Alternative. Coordinated mitigation through the ESA compliance would benefit the species by ensuring that anticipated habitat loss and degradation throughout the duration of the GCP would be more comprehensively balanced with conservation actions, such as habitat protection and management in perpetuity.

Under the Proposed Alternative the fully offset impacts of the taking prescribed by the GCP through the network of protected and managed lands is likely to lead to more effective conservation of the Covered Species over the duration of the GCP. The proposal is expected to result in no net loss for the Covered Species and is not expected to cause species declines or reduce the survival and recovery of the Covered Species in the wild. Therefore, the Proposed Alternative is not expected to cause significant adverse impacts to either the IBAT, NLEB or TCB.

3.4.7 Land Use

This section describes existing land uses and reasonably foreseeable environmental trends and foreseeable patterns of land use changes in the Plan Area. Traditional and typical land uses in the Plan Area are described by ecoregion with a summary of long term land use trends within the Plan Area. Fine scale resolution information is then presented for the most recent 10-year period for which data is available. Current and expected future land uses can inform determinations regarding the potential presence of the Covered Species and their habitats within a given area. General information regarding ownership of forested lands likely to be affected by the activities considered in the proposed GCP is also provided.

Land use and land cover are related but not synonymous concepts. Land use reflects human decisions and activity. Land cover describes surface features, including naturally occurring cover such as native vegetation as well as the result of human activities such as built environments or manipulated landscapes including cultivated crops or pastures. Agencies categorize and define various elements for their independent purposes when describing land use and cover. Acreages reported; therefore, vary due to differences in data collection, categorization, and reporting methods among multiple consulted sources. Acreages and percentages are included to provide context for the land uses and trends that may be affected by the Proposed Alternative. Other environmental outcomes related to land use changes, such as impacts to geology and soils, air quality, and water quality are discussed in other sections of this EA.

3.4.7.1 Affected Environment

Traditional and typical land uses are described at a broad scale following the EPA Level III Ecoregions of North America. Appendix D, Table 10 summarizes typical land uses and long term trends by ecoregions within the Plan Area.

The USDA Natural Resources Inventory program (NRI) collects and produces information on the status, condition, and trends related to land, soil, water, and related resources on non-Federal lands in support of efforts to protect, restore, and enhance the nation's lands and waters. The NRI estimated that the total amount of developed non-Federal land increased from less than five percent to almost 7.8 percent for the 25-year period from 1982 to 2007.¹¹⁷ Within the Plan Area, only WV has a statewide percentage of developed non-Federal land (6.4 percent) that falls below the national average, though the rate of land use conversion in WV is the highest of the three states considered (49.6 percent). Land conversion from undeveloped or agricultural uses to suburban and urban development follows national trends for all three states in the Plan Area. Appendix D, Table 11 summarizes changes in land uses based on cover types within the Plan Area from 1982 to 2017.

The NLCD documents and classifies land cover at a resolution of 30 meters and is updated every five years, allowing relatively fine scale analysis of cover types and land uses over time. Appendix D, Table 12 summarizes land cover classes from the most recent NLCD (2016).

Because the routine construction and development activities likely to impact the Covered Species are primarily associated with forested lands, additional context related to these land uses is described for each state within the Plan Area.

Seventy-six percent of NY's forests are owned by families and individuals, corporations, and other private entities. The remaining 24 percent is in public ownership. The largest public owner of forest land is the State, which holds about 1.1 million acres of timberland and 3.0 million acres of reserve forest land. Approximately 83 percent (15.7 million acres) of forest land in NY is classified as timberland, 3.2 million acres is reserved, and an additional 36,000 acres is considered low productivity forest land. The USFS reports that the total area of forest in the state has remained relatively stable since 2007. Historically in the state, abandoned farmland reverting to forest generally offset the loss of forest land to development. Recent changes in forest cover reflect ongoing conversion to nonforest uses and a slowing rate of farmland losses. Future changes to the amount of forest cover in NY are expected to reflect the pace of land development and agricultural economic trends.

About 96 percent of PA's forest lands are classified as timberland. Approximately 30 percent of the state's forests are in public ownership, of which about four percent consist of reserves that restrict commercial timber harvest by law or public policy. The overall area of PA's forests has been relatively stable since 1965. Losses of forest land to development and other nonforest uses have been about equal to that of agricultural and other nonforest land reverting to forest. The USFS reports a lack of sufficient data to determine whether recent decreases in forest land are part of a trend or a continuation of short-term acreage fluctuations observed in the past.

¹¹⁷ USDA 2007

The USFS reports that the total area of WV's forests has been relatively stable since the late 1980s. Timberland accounts for 97 percent of forest lands in the state. Less than three percent of forest land is reserved from timber production and less than 0.1 percent is identified as unproductive. Families and individuals, corporations, and other private entities own about 86 percent of the forest land in the state. The USFS, State of WV, and other public entities hold the remainder.

3.4.7.2 Environmental Consequences

No Action Alternative

For this analysis, land use trends described previously are expected to continue over the GCP duration. Under the No Action Alternative, projects that cannot avoid take of the Covered Species would be expected to seek ITPs to authorize incidental take resulting from their otherwise lawful construction and development activities. To meet ITP issuance criteria, each Project Proponent would independently develop a mitigation and conservation program tailored to meet their project needs. Each unique HCP and mitigation proposal would be reviewed for compliance with the ESA, NEPA, NHPA, and all other applicable requirements. The pace of construction, development, and infrastructure activities could; therefore, be limited by the individual project-by-project review and permit approval process.

The siting and design process for new development and construction typically considers and must adhere to land use plans developed by Federal, regional, State, local, or other entities with land planning authorities. Project Proponents must adhere to land use requirements such as zoning regulations or development density constraints to secure building permits or other needed project approvals. Variances or other changes from existing land use plans typically require review and approval by the entity with regulatory authority. Therefore, impacts to land use from conflicts with land use plans are therefore not expected.

As described in EA Section 3.4.10, Socioeconomics, the human population in the Plan Area is expected to continue to increase over the plan duration. The expanding population would be expected to facilitate ongoing trends converting other land uses to residential and commercial uses and associated increases in transportation and utility infrastructure needs.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, the impacts under the Proposed Alternative are generally expected to mirror those described for the No Action Alternative. The primary differences between the considered alternatives are the shorter expected project permitting timelines possible with the streamlined approach and the planning certainty resulting from the consistent avoidance, minimization, and mitigation components of the conservation program under the Proposed Alternative.

The proposed conservation program outlines a standardized approach to mitigation and encourages protection of sites deemed to have high conservation value for the Covered Species. Land targeted for mitigation would be acquired in fee and/or encumbered by conservation easements requiring that properties be managed for the benefit of the Covered Species. Mitigation sites would be maintained or restored to forested conditions suitable for bat sheltering, breeding, and feeding activities. Because mitigation sites would not be subject to conversion to other land uses, the Proposed Alternative would be expected to foster creation of a permanent network of forested habitat reserves in the Plan Area.

While current land uses including conversion to residential and commercial uses and expanding suburban and urban development are expected to continue, the Proposed Alternative is not expected to accelerate or alter this ongoing long-term trend. The issuance of ITPs under the Proposed Alternative could result in up to 2,000 acres of impact per year in NY, which represents 0.08 percent of the forested areas in the state over the GCP duration. Under the Proposed Alternative up to 2,000 acres in PA could be impacted per year, totaling 0.12 percent of the forested cover in the state over the GCP duration; and in WV an annual total of up to 2,000 acres results in a cumulative total of 0.18 percent of forest lands. These impacts, at a minimum, would be offset by an equivalent amount of conservation actions that benefit the Covered Species. The GCP is expected to protect, restore, manage, and conserve habitat that provides an equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and ILF programs.

Approval of the GCP and issuance and implementation of resulting ITPs would not be expected to impact residential or commercial development patterns, or the demand for associated transportation or utility infrastructure in the Plan Area. The availability of a consistent and streamlined project review and permitting process could provide certainty for land planning efforts.

Because all projects seeking permits through the GCP process must be otherwise lawful and; therefore, must comply with all applicable Federal, state, and local land planning and use requirements, no unapproved impacts to land uses are anticipated under the Proposed Alternative. Because the Proposed Alternative is not expected to alter current land use trends in the Plan Area, the resulting impacts to land use are not considered significant.

3.4.8 Aesthetics and Noise

The term aesthetics refers to the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities. Potential aesthetic impacts are an issue of increasing concern to both the public and governmental bodies dealing with siting and approving new development, transportation, and utility infrastructure. Consideration of the visual environment includes a determination of aesthetic values where the construction of these elements of the built environment could affect the scenic enjoyment of an area.

Noise is defined as unwanted sound that disrupts or interferes with normal activities or that diminishes the quality of the environment. Noise is usually caused by human activity and is

added to the natural, or ambient, acoustic setting of an area. Though exposure to high levels of noise over an extended period can cause health hazards including hearing loss; the most common human response to environmental noise is annoyance. Individuals respond to similar noise events differently based upon various factors that may include the existing background level, noise character, level fluctuation, time of day, the perceived importance of the noise, the appropriateness of the setting, and the sensitivity of the individual.

3.4.8.1 Affected Environment

Aesthetics

The analysis focuses on potential visual impacts to public spaces with valued aesthetic qualities, such as publicly owned or accessible lands or scenic areas visible from roads or highways. The analysis area for this resource includes all portions of the three-state Plan Area, including potentially sensitive public resources that may include federal lands. Several factors contribute to an assessment of the sensitivity, or potential impact, to a scenic resource from routine construction and development projects. Values which combine to define an area's aesthetic identity may include:

- Uniqueness of the landscape in relation to the region as a whole
- Whether the scenic area is a foreground, middle ground, or background view
- Focus of the view
- Scale of elements in the scene
- Number of potential viewers
- Duration of the view
- Amount of previous modification or disturbance to the landscape

The analysis area exhibits a range of aesthetic qualities because it encompasses a wide variety of regions and landscapes. As described previously, the topography of the analysis area is highly variable, ranging from the beaches of the Atlantic Coast and Great Lakes to the extensive wetlands and bottomland hardwood forests, to densely forested hills and mountains. Landscapes with major water elements such as rivers and lakes are generally highly valued aesthetic qualities, and water features are prevalent throughout portions of the Plan Area. The Plan Area includes aesthetic resources such as designated scenic views, scenic roadways, and unique visual elements as well as large areas of agricultural, industrial, and urban development. Many parts of the analysis area are visually pleasing while others have been highly impacted by human activity.

Aesthetic resources may be natural or manmade, and include landforms, water resources, vegetation, and the built environment that make up the overall visual impression of an area. Potentially sensitive resources within the analysis area include public lands including those managed by the National Park Service (NPS), USFS, the Service, Wild and Scenic Rivers, and nationally and state-designated scenic byways.

The NPS is responsible for management of Battlefields, Historic Sites, Scenic Trails, Historic Trails, Historic Parks, Memorials, Military Parks, Monuments, Parks and Preserves, Recreation Areas, and Seashores of national importance. Appendix D, Table 13 provides a list of NPS lands within the analysis area.

The USFS manages four National Forests within the analysis area, identified in Appendix D, Table 14.

The National Wild and Scenic Rivers Act¹¹⁸ allows the designation of rivers or portions of rivers due to their scenic, natural, historic, cultural, or recreational characteristics. The stated purpose of the Act is to preserve certain waters in a free-flowing condition for the enjoyment of present and future generations by safeguarding the special character of these places while providing for appropriate development and use. Designated areas are classified as wild, scenic, or recreational. Wild River Areas are free of impoundments, with primitive shorelines, unpolluted waters, and generally accessible only by trail. Scenic River Areas are also free of impoundments and mostly free of developed shorelines but are accessible by roads. Recreational River Areas may have been impounded or diverted in the past, may include some shoreline development, and are readily accessible by road or railroad. Designated river segments may be administered by Federal or state agencies, and management often includes Federal, state, and local partners. There are seven designated river segments in the Plan Area, listed in Appendix D, Table 15.

The Service manages National Wildlife Refuges (NWRs) and Wildlife Management Areas (WMAs) as part of a national network of lands and waters administered for the conservation, management, and restoration of fish, wildlife, and plant resources and their habitats for the benefit of present and future generations. The public often cites the aesthetic qualities that NWRs and WMAs provide, and these areas often provide scenic and recreational opportunities valued by local communities. Appendix D, Table 16 lists NWRs and WMAs located in the Plan Area.

The Intermodal Surface Transportation Efficiency Act of 1991¹¹⁹ and subsequent legislation authorized the FHWA to designate roadways as All-American Roads (AAR) or National Scenic Byways (NSB) based on their archaeological, cultural, historic, natural, recreational, or scenic qualities. Each state within the Plan Area has passed similar legislation authorizing the respective departments of transportation (NY Department of Transportation [NYDOT], PA Department of Transportation [PennDOT], and WV Department of Transportation [WVDOT]) to issue state-level designations for similarly important roadways. There are three AARs, nine NSBs, and 13 State Scenic Byway designations in the Plan Area, identified in Appendix D, Table 17.

Noise

Noise can refer to a sound or sounds that are above ambient levels and are loud, unpleasant, unexpected, or undesired. Noise-sensitive receptors are facilities or areas where excessive noise may disrupt normal activity, cause annoyance, or loss of business. Land uses such as residential, religious, educational, recreational, and medical facilities are more sensitive to increased noise levels than commercial and industrial land uses. Human responses to noise can vary depending on the time of day, the type of noise, the sensitivity of the receptor, and the distance between the source of noise and the receptor. The analysis area for this resource extends beyond the defined Plan Area due to the potentially farther-reaching impacts of noise beyond its origin.

¹¹⁸ Pub.L. 90-542; 16 U.S.C. § 1271 *et seq.*

¹¹⁹ Pub.L. 102-240

Numerous noise-sensitive receptors are located within the Plan Area; and thus, it is not reasonable or practical to identify all noise receptors, or to identify receptors adjacent to projects that could be constructed within the Plan Area because the location of those facilities is largely unknown.

Noise within the Plan Area is produced by a variety of human activities. Transportation, including road traffic (automobiles, tractor trailers, and motorcycles on U.S. Highways, State Highways, county roads, and residential streets), rail traffic, and air transportation causes a variety of noise at different levels. Construction of housing, commercial facilities, and roads increases noise within the analysis area through use of bulldozers, backhoes, and other types of construction equipment. Agricultural equipment such as tractors are common throughout the Plan Area and also contribute to noise levels.

Sound is measured in decibels (dB) and is based on a logarithmic scale. A 10 dB increase corresponds to a 100 percent increase in perceived sound or noise. An A-weighted decibel scale that measures sound perceptible to the human ear is commonly utilized to measure environmental noise or potential noise pollution.

Sound levels are often reported in terms of day-night average sounds level (Ldn). The Ldn is the average noise level over a 24-hour period with the noise between the hours of 10 PM and 7 AM artificially increased by 10 dB to compensate for the increase in sensitivity to noise events and the lower level of background noise during these night-time hours. An Ldn of 55 dB is recognized by the EPA, as an outdoor limit for protecting public health and welfare in residential areas. Ldn of 65 dB is the noise level at which residential land use becomes questionable for structures with average or below average acoustic insulation. An Ldn exceeding 75 dB is considered by many Federal agencies to be unacceptable for residential areas.¹²⁰

Reasonably foreseeable environmental trends related to noise in the analysis area include sound levels from ongoing uses including urban areas, major roadways, airports, and industrial and manufacturing sites. Densely populated areas including residential, commercial, and industrial developments tend to have higher sustained noise levels than less populated and more rural settings. Noise levels would be expected to increase with population growth and urban development.

3.4.8.2 Environmental Consequences

No Action Alternative

Aesthetics

Construction and development activities would result in conversion of undeveloped open space, native vegetation, and natural terrain to residential, commercial, transportation, and infrastructure uses. Aesthetic impacts would occur when construction and development of these projects create an intrusion into, or substantially alter the character of, the existing view or aesthetic character of a site. The significance of the impact is directly related to the quality of the view in the case of

¹²⁰ EPA 1974

natural scenic areas, or to the importance of the existing setting in the use or enjoyment of an area in the case of valued community resources and recreational areas.

The construction of new structures and linear features like utility transmission lines could have both temporary effects, such as views of construction activities including the movement of construction workers and vehicles, as well as permanent aesthetic impacts, including views of cleared sites, rights-of-way, and the resulting built structures/towers.

Where forested areas are cleared, the brush and woody debris could have a temporary impact on the local visual environment. However, the visual disturbances associated with construction activities would be expected to involve relatively small areas and most would be of short duration limited to the work or construction time frame. Permanent impacts would involve views of constructed features and associated infrastructure, as well as views of cleared sites and rights-of-way. Depending on project specifics, measures to protect visual resources could include but are not limited to siting of proposed facilities (e.g., locating utility infrastructure in areas without public access on private property), finished grade contouring of rights-of-way, and landscape design and revegetation of cleared sites.

Offsite and indirect impacts to aesthetic resources may occur because constructed projects, cleared rights-of-way, and construction or maintenance equipment could be visible from roadways, residential areas, parks, and other community facilities.

Noise

Construction and development activities would be expected to increase sound levels in the vicinity of each project and noise levels would vary during the construction period. The type of mechanical equipment used and project duration both affect the amount of noise generated. Project timelines could last from several days to several months or years depending on the scope and scale of each project. Projects adhering to applicable state and local regulations and ordinances would be expected to minimize impacts to noise sensitive areas to the extent possible.

Construction and development activities that involve use of motorized equipment would create temporary noise level increases. Because sound is attenuated with distance, noise levels would be higher at receptors in closer proximity to project activities compared to those at greater distances. Noise level standards associated with sensitive receptors such as residences are relied on to assess anticipated project impacts.

Based on the 55 day-night level (Ldn) noise contour associated with EPA noise level standards for residences, noise levels from machinery and equipment associated with project activities are predicted to result in a noise exposure of 55 Ldn to a maximum distance of 900 feet during daytime hours. Noise exposure of 55 Ldn could occur up to 1,600 feet during nighttime hours, though nighttime noise levels would normally be unaffected because most construction and development-related activities occur during daylight hours.

Noise at these levels would result in perceptible increases in ambient noise where receptors exist within these distances. These noise level increases would likely result in temporary annoyance.

Sound from project activities beyond these distances are not likely to contribute to ambient noise.

Noise from project activities could affect workers on site. Occupational Safety and Health Administration (OSHA) guidelines require monitoring and mitigation (e.g., hearing protection) for workers exposed to noise levels that exceed 85 A-weighted decibels. Because onsite workers would be protected by projects following OSHA requirements, workers would not be expected to experience adverse noise impacts.

While construction and development activities would be expected to generate noise, these impacts are expected to be temporary and short in duration. Noise impacts from project activities would be expected to be minor. Long term trends in increasing noise levels resulting from increasing vehicular traffic, ongoing population growth and continuing urbanization would be expected to continue.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area.

Aesthetics

Impacts under the Proposed Alternative are expected to largely mirror those of the No Action Alternative. The main difference between the considered alternatives is the availability of the streamlined GCP mitigation program expected to result in coordinated and consolidated habitat mitigation sites. While similar aesthetic impacts would occur under both alternatives, offsetting mitigation under the GCP would result in prioritized and more consistently applied habitat management. The establishment of fewer and more consistently managed long term mitigation sites is less likely to generate negative impacts to valued aesthetic qualities. Impacts to aesthetic resources under the Proposed Alternative are not expected to be significant.

Noise

The noise sources are the same for both alternatives, and the Proposed Alternative would not be expected to generate additional noise compared to the No Action Alternative. Impacts under the Proposed Alternative are expected to mirror those of the No Action Alternative and are not expected to be significant.

3.4.9 Cultural Resources

Cultural resources are prehistoric and historic archeological sites, districts, structures, or locations considered significant to a culture, a subculture, or a community for scientific, traditional, religious, or other reasons. The NHPA, as amended, created a framework for

managing cultural resources in the U.S. The law expanded the NRHP; established SHPOs, Tribal Historic Preservation Officers (THPOs), and the Advisory Council on Historic Preservation (ACHP). The NHPA section 106 directs all Federal agencies to consider the effects of their actions/authorizations on historic properties and provides the ACHP an opportunity to comment.

In addition to the requirements prescribed by the NHPA section 106, states also have an interest in and authority to manage and protect cultural resources within their respective jurisdictions. In NY, the State Parks, Recreation, and Historic Preservation Law of 1980 and the State Environmental Quality Review Act of 1978 address cultural and historic resource preservation. Additional information is available from the NY State Historic Preservation Office.¹²¹ In PA, the PA History Code is implemented by the PA Historical and Museum Commission.¹²² In WV, the State Historic Preservation Act is implemented under the authority of the WV Department of Arts, Culture, and History.¹²³

3.4.9.1 Affected Environment

The Plan Area has been occupied and used by people since long before record keeping began. There are numerous cultural resource sites from both prehistoric and historic periods throughout the Plan Area, and others may yet be identified. It is not practical to identify all known cultural resources in the Plan Area, and it is not possible to identify those that may be impacted by projects that could be constructed within the Plan Area because the location of those future project sites is unknown.

Prehistoric archeological resources may include rock shelters, artifacts, lithic scatters, flaked stone scatters, rock rings or alignments, tool procurement sites, and rock art locations. Historic sites may include buildings, structures, features such as mine shafts, transportation routes, bridges, refuse deposits, historic homes and/or associated property, cemeteries, trails, and rural schools.

3.4.9.2 Environmental Consequences

No Action Alternative

Any construction or development activity that would disturb the ground surface/subsurface has the potential to adversely impact cultural resources. Under the No Action Alternative, Applicants seeking individual ITPs would be expected to comply with all applicable local, state, and Federal regulations pertaining to cultural resource protection for each of their proposed projects.

The NHPA section 106 process would occur during the development and review of individual project HCPs. Proposed projects would be reviewed by a local Field Offices in coordination with the Service's Regional Historic Preservation Officer. Projects that may affect cultural or historic resources would be required to complete consultation with SHPOs and/or THPOs for clearance or completion of compliance documentation (e.g., Phase I survey). If a project requires further

¹²¹ NY State Parks, Recreation, and Historic Preservation 2021

¹²² PA Historical and Museum Commission 2022

¹²³ WV Department of Arts, Culture, and History 2022

planning related to impacts on historic or cultural resources, the SHPO in the state where the project would occur typically serves as the non-Federal representative to complete those plans. Direct impacts from construction and development activities can cause physical destruction or alteration of all or part of a cultural resource. Direct impacts may result from construction activities (e.g., clearing, grading, excavation, or trenching) or through increased vehicular and pedestrian traffic. Increased vehicular traffic may damage surficial or shallowly buried sites, while pedestrian traffic may result in vandalism of some sites. Construction activities may also directly alter, damage, or destroy historic buildings, engineering structures, landscapes, or districts. Direct impacts can include isolation of a historic resource from or alteration of its surrounding environment (i.e., setting).

Indirect impacts include those effects caused by the project that are further removed in distance, or that occur later in time, but are reasonably foreseeable. These indirect impacts may include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts may result from alterations in the pattern of land use, changes in population density, accelerated growth rates, or increased pedestrian or vehicular traffic. Historic buildings, structures, landscapes, and districts are resources that can be adversely impacted by the indirect impact of proposed construction and development activities.

Avoidance is the preferred method to address impacts to cultural resources. Indirect impacts can often be minimized during the design and planning stages when cultural and historic resources are considered early in the project development process. Mitigation of unavoidable impacts to archeological and historical sites can be addressed with development and implementation of a program reviewed and approved by a Historic Preservation Officer with authority and jurisdiction over the project site.

Because Project Proponents seeking individual ITPs under the No Action Alternative would be required to adhere to all applicable cultural and historic preservation regulations, the project review and consultation process would ensure that projects do not result in cultural resource impacts that are not accounted for and addressed in accordance with the NHPA and other applicable requirements.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, impacts under the Proposed Alternative are expected to mirror those of the No Action Alternative. To participate in the GCP, Applicants must agree to complete historical and cultural reviews of their project site and work with a SHPO and/or THPO to address any significant impacts; accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and avoid adversely affecting the physical integrity of such sacred sites in accordance with applicable regulations.

Projects that cannot meet these requirements would be directed to coordinate with their local Field Office to seek technical assistance and additional NHPA coordination and would not be authorized through the GCP streamlined permitting process. The Service would ensure that

projects seeking ITP authorization would adhere to these historic and cultural resource protections by incorporating permit conditions requiring regulatory compliance. GCP Appendix E describes the stepwise approach that participating projects would follow to assist the Service in meeting the requirements of the NHPA section 106 and associated directives. Therefore, impacts to cultural resources are anticipated to be negligible or minor and not significant.

3.4.10 Socioeconomics

3.4.10.1 Affected Environment

The affected environment for socioeconomics includes consideration of regional population trends, demographics, employment by job sector, personal income, and economic activity across the Plan Area that could be influenced by the proposed action. Significance thresholds for socioeconomics include any communities or economic sectors that are negatively affected economically by a proposed project. The affected environment description includes the most recent available data (2020). The socioeconomics analysis includes all portions of the three states within the Plan Area (NY, PA, and WV) and was collected from the U.S. Census Bureau, U.S. Bureau of Economic Analysis, and the U.S. Department of Commerce.

Recent Trends in Population

The 2020 census recorded 34,997,665 people in the Plan Area, with 95 percent of the population in NY and PA (58 and 37 percent, respectively). The Plan Area accounts for 3.3 percent of the nation's total land area but contains 10.5 percent of the nation's total population, as of the 2020 census. Within the Plan Area, the total population has risen by 113,667 between 2010 and 2019 (Appendix D, Table 18). PA saw the highest percent growth, increasing by 0.8 percent, NY grew by 0.4 percent, and WV's population decreased by 3.3 percent. At the county level, populations grew modestly near larger population centers and decreased in more rural areas. McDowell and Wyoming Counties in southern WV saw the largest population decreases in the Plan Area, decreasing by 15.6 and 10.6 percent respectively, from 2010 to 2019. Berkeley County, in eastern WV, saw the highest population growth in the Plan Area at 10.7 percent growth.¹²⁴

Demographics

All three states are below the national average for persons 18 or younger and above the national average for persons 65 years and older. NY is the most racially diverse state in the Plan Area, while WV is the least diverse state and one of the least diverse states in the country.

Employment by Job Sector

Exploring employment by job sector across the Plan Area highlights some similarities and stark differences between the states. The largest employing sector in NY and PA is health care and is just over 15 percent for all three states. WV's largest job sector is governmental, at 18 percent of the total jobs, followed closely by health care.¹²⁵

¹²⁴ U.S. Census Bureau 2021a

¹²⁵ U.S. Bureau of Economic Analysis 2021

Personal Income and Economic Activity

All three states have poverty rates above the national average, with WV having the highest at 16 percent. WV also has the lowest median household income, per capita income, and home values. Economic activity is robust across the Plan Area, accounting for 11.1 percent of the nation's total employment and 12.4 percent of the nation's payroll in 2019. However, NY and PA account for the majority of the economic activity. Minority owned firms account for 35, 13, and 5 percent of the total firms for NY, PA, and WV, respectively.

3.4.10.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no ITPs would be issued under the proposed GCP. Project Proponents engaged in residential and commercial, transportation, and utility development projects within the Plan Area would continue to comply with the ESA by avoiding take of the Covered Species, where practicable. Project Proponents would develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Each application would continue to be evaluated independently under the NEPA.

Under the No Action Alternative, residential, commercial, transportation, and utility development projects would have to undergo current permitting processes, NEPA review, and development of HCPs. Current socioeconomic conditions and trends would be unaffected by the No Action Alternative because it would be the same as current management.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. Under the Proposed Alternative, residential, commercial, transportation, and utility development projects may benefit from the streamlined permitting process. Proposed projects would be faster to implement, which could positively affect socioeconomic conditions. More efficient project implementation could result in increased job availability and more competitive wages, as well as facilitate timely completion of projects that ultimately improve or maintain socioeconomic conditions. The Plan Area has such a robust economy that the maximum footprint of projects over the 10-year GCP duration would not be appreciable for an area contributing 11.1 percent of the nation's total employment and 12.4 percent of the nation's payroll. Current socioeconomic conditions and trends would not be negatively impacted by the Proposed Alternative.

Chapter 4 Irreversible and Irretrievable Commitment of Resources

The NEPA regulations require that the discussion of environmental consequences include "any irreversible or irretrievable commitments of resources which would be involved with the proposal should it be implemented."¹²⁶ Irreversible and irretrievable resource commitments are

¹²⁶ 42 U.S.C. 4321

related to the use of nonrenewable resources and the effects that this use could have on future generations. Irreversible effects primarily result from the use or destruction of specific resources that cannot be replaced within a reasonable timeframe (i.e., energy or minerals). Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored because of the action, such as extinction of a threatened or endangered species or the disturbance of a cultural resource.

The issuance of ITPs under the Proposed Alternative for take of the Covered Species during residential and commercial development, transportation, and utility infrastructure would require little to no commitment of irreversible or irretrievable resources. The Covered Activities of the Proposed Alternative would result in the loss of Covered Species' preferred habitat within the Plan Area. However, the GCP's prescribed avoidance, minimization and mitigation measures would help preserve habitat for the Covered Species; thus, the viability of the IBAT, NLEB, and TCB are not expected to be adversely affected.

The commitment and funding by each Applicant for acquisition and permanent management of mitigation properties would be irreversible. The commitment and funding of mitigation and monitoring activities for the duration of the Permit would also be irretrievable.

Chapter 5 Short Term Use of the Environment Versus Long Term Productivity

This section discusses the long-term effects of the GCP by evaluating the relationship between the short-term uses of the environment and the maintenance and enhancement of long-term productivity, as required by regulation.¹²⁷

The GCP objectives involve the need to conserve biological resources in an organized and effective manner with the anticipated construction, operation and/or maintenance activities expected to occur within the Plan Area. Thus, long term environmental productivity would be maintained through avoidance, minimization, and mitigation measures. Short term uses of the environment, such as clearing activities associated with new construction, would be accommodated in a manner least likely to result in permanent damage to the Plan Area's natural resources. The long term result would be an increase in ecological productivity through preservation, management, and maintenance of habitat. Ecological productivity would also be enhanced through the recovery of potentially imperiled species through mitigation for incidental take under the Proposed Alternative.

¹²⁷ 42 U.S.C. 4321

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Appendix A. List of Preparers

Role	Name	Representing
R5 Bat Coordinator/NY Field Office	Noelle Rayman-Metcalf	U.S. Fish and Wildlife Service
NY and Long Island Field Office-Supervisor	Ian Drew	U.S. Fish and Wildlife Service
PA Field Office-Service Biologist	Pam Shellenberger	U.S. Fish and Wildlife Service
PA Field Office-Supervisor/Project Leader	Jodie Mamuscia	U.S. Fish and Wildlife Service
R5 Regional Recovery Biologist	Tiernan Ware	U.S. Fish and Wildlife Service
WV Field Office-Supervisor	Jennifer Norris	U.S. Fish and Wildlife Service
R5 Regional HCP Coordinator	Eric Tattersall	U.S. Fish and Wildlife Service
R5 GIS/Database Specialist	Lindsay Clough	U.S. Fish and Wildlife Service
R5 Regional Historic Preservation Officer	Amy Wood	U.S. Fish and Wildlife Service
R5 Regional Archaeologist	Esther Westfall	U.S. Fish and Wildlife Service
R5 Regional Tribal Liaison	Timothy Binzen	U.S. Fish and Wildlife Service
R5 Acting Public Affairs Specialist	Susan Wojtowicz	U.S. Fish and Wildlife Service
R5 Public Affairs Specialist	Marilyn Kitchell	U.S. Fish and Wildlife Service
Project Manager	Dessa Dale	DJ&A, P.C.
Biologist	Tyler Andrews	DJ&A, P.C.
Biologist	Allison Hendryx	DJ&A, P.C.
NEPA/GIS Specialist	Travis Benton	DJ&A, P.C.

Appendix B. List of Agencies and Persons Contacted

Name	Representing
Dan Rosenblatt, Wildlife Section Chief	NY State Department of Environmental Conservation
Angelena Ross, State Mammal Lead	NY State Department of Environmental Conservation
Ashley Meyer, State Bat Lead	NY State Department of Environmental Conservation
Jacqueline Lendrum Director – Division of Fish, Wildlife and Marine Resources	NY State Department of Environmental Conservation
Lynn Bogan, Environmental Stewardship Coordinator	NY State Office of Parks, Recreation, and Historic Preservation
Chris Nadeski, Section Chief - Bureau of Water Supply, Watershed Protection Plan	NY City Department of Environmental Protection
Terry Martino, Former Executive Director	Adirondack Park Agency
Cindy Dunn, Secretary	PA Department of Conservation and Natural Resources
Bryan Burhans, Executive Director	PA Game Commission
Tim Schaeffer, Executive Director	PA Fish and Boat Commission
Sid Freyermuth, Environmental Group Manager	PA Department of Environmental Protection
Paul Johansen, Chief, Wildlife Resources Section	WV Division of Natural Resources
Harold Ward, Cabinet Secretary	WV Department Environmental Protection
Alyssa Bennett, Small Mammals Biologist	Vermont Agency of Natural Resources, Fish and Wildlife Department

Appendix C. Figures

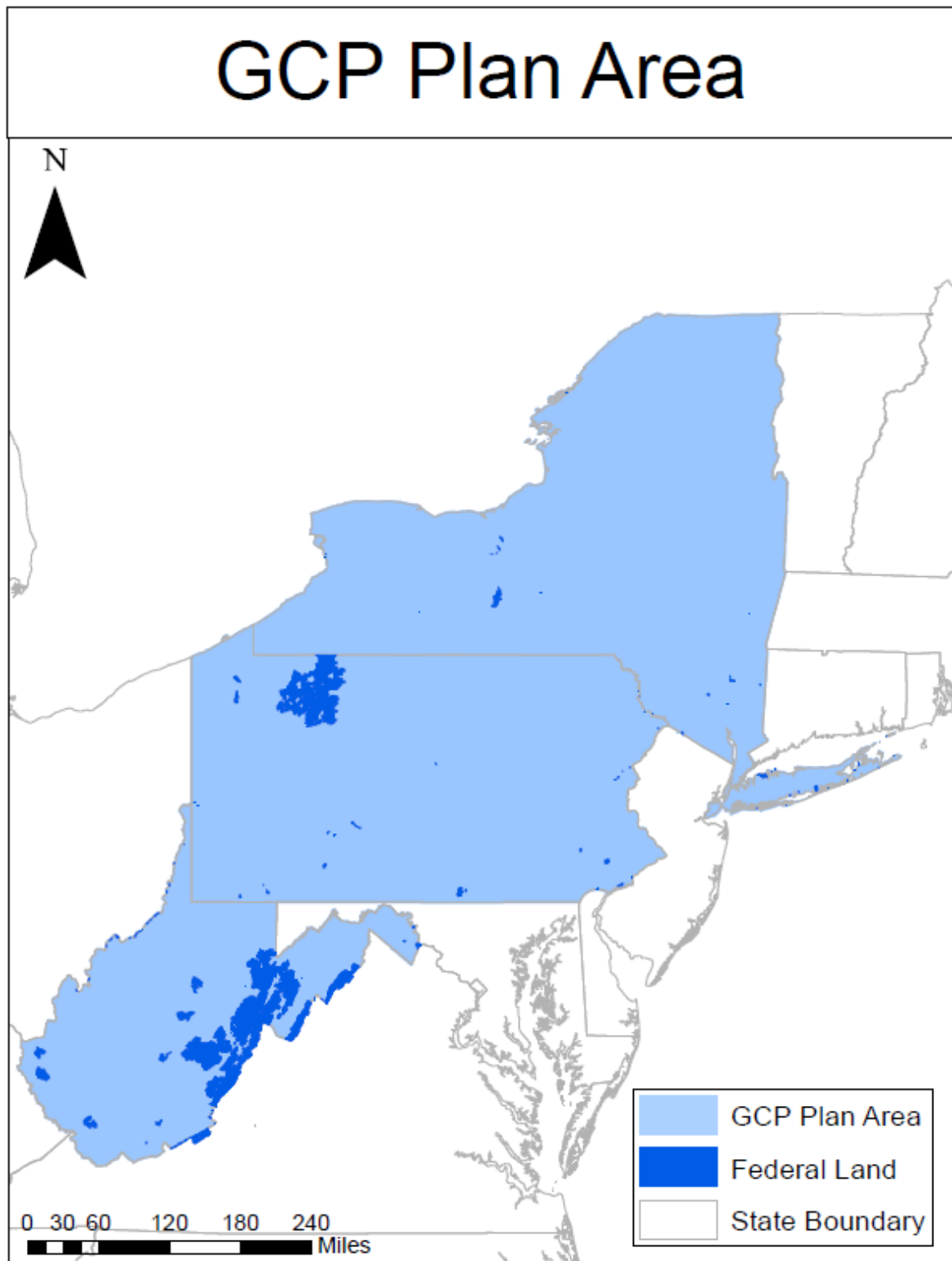


Figure 1. A map of the GCP Plan Area, excluding Federal lands.

Appendix D. Tables

Table 1. Nonattainment Areas within the Plan Area in 2021.¹²⁸

Area Name	Pollutant	Status
New York-N. New Jersey-Long Island, NY-NJ-CT	PM _{2.5}	Nonattainment
New York-N. New Jersey-Long Island, NY-NJ-CT	O ₃	Nonattainment
Jamestown, NY	O ₃	Nonattainment
New York Co, NY	PM ₁₀	Nonattainment
St. Lawrence Co, NY	SO _x	Nonattainment
Pittsburgh-Beaver Valley, PA	O ₃	Nonattainment
Pittsburgh-Beaver Valley, PA	PM _{2.5}	Nonattainment
Liberty-Clairton, PA	PM _{2.5}	Nonattainment
Allegheny, PA	SO _x	Nonattainment
Armstrong County, PA	SO _x	Nonattainment
Indiana, PA	SO _x	Nonattainment
Lower Beaver Valley, PA	Pb	Nonattainment
Beaver, PA	SO _x	Nonattainment
Reading, PA	O ₃	Nonattainment
Lyons, PA	Pb	Nonattainment
North Reading, PA	Pb	Nonattainment
Philadelphia-Wilmington-Atlantic City, PA-NY-MD-DE	O ₃	Nonattainment
Allentown-Bethlehem-Easton, PA	O ₃	Nonattainment
Lancaster, PA	O ₃	Nonattainment
Warren, PA	SO _x	Nonattainment

¹²⁸ EPA 2022

Table 2. Geologic features of Level III ecoregions present within the Plan Area.¹²⁹

Level III Ecoregion	Description
Atlantic Coastal Pine Barrens	Coastal plain with climate moderated by proximity to the Atlantic. Characterized by sandy beaches, grassy dunes, bays, barrier islands, and marshes. Soils are a combination of Entisols and Ultisols in the form of terminal moraines, outwash plains, and coastal deposits with deep deposits of gravel, sand, silt, and clay. Hydrologically, the region hosts numerous perennial streams, lakes, swamps, bogs, and salt and freshwater marshes.
Blue Ridge	Terrain is generally rugged, varying from narrow ridges to hilly plateaus with areas of massive mountains and high peaks. Soils are a combination of Inceptisols and Ultisols overlying primarily metamorphic bedrock in the form of gneiss, schist, and quartzite along with areas of igneous and sedimentary rock. Hydrologically, the region has a high density of cool, clear perennial streams. Natural lakes are largely absent.
Central Appalachians	Rugged terrain with high hills and low mountains. Steep, narrow ridges, narrow winding valleys, and deep coves. Relief varies from 150 meters to 600 meters. Primarily a highly dissected, rugged plateau composed of Pennsylvanian-age sandstone, shale, conglomerate, and coal. High density of perennial moderate- and high-gradient streams with bedrock and boulder substrates. Some waterfalls. Lacks lakes, but a few reservoirs occur. Inceptisols and Ultisols are typical, with mostly mesic soil temperatures and udic soil moisture regimes.
Eastern Great Lakes Lowlands	Topography shaped by glacial lakes and episodic glacial flooding. Valleys and lowlands are underlain with interbedded limestone, shale, and sandstones, while mountainous areas are composed of more resistant rocks. Limestone derived soils are deep, fine-textured, and productive.
Erie Drift Plain	Rolling terrain with deposits from successive ice sheets and glacial lakes cover horizontally bedded sedimentary rock layers forming beach ridges, hummocky stagnation moraines, kettles, and wetlands. Soils are poorly drained. Regional terrain is predominantly a gently to strongly rolling dissected plateau with low rounded hills, scattered end moraines, kettles, and marshy lowlands due to heavy glaciation. Hydrologically, the region has a network of perennial and intermittent streams.
Middle Atlantic Coastal Plain	Low elevation flat plains, low terraces, dunes, barrier islands, and beaches are underlain by unconsolidated sediments. Poorly drained soils are common, and the region has a mix of coarse and finer textured soils. Low gradient streams and rivers, numerous swamps, marshes, and estuaries, a few large lakes.
Northeastern Coastal Zone	Landforms include rolling or irregular plains. Soils formed from glacial till that are relatively nutrient poor soils. Includes concentrations of Pleistocene glacial lakes, some of which are sensitive to acidification.
Northern Allegheny Plateau	Made up of horizontally bedded, erodible shales and siltstones, and moderately resistant sandstones. Consists of glaciated upland plateau with rolling hills, open valleys, and low mountains covered in glacial till. Soils are primarily Inceptisols overlying shales, siltstones, and sandstones. Hydrologically, the region has many perennial streams and small glacial lakes.
Northern Appalachian and	The ecoregion includes the Adirondacks and Catskill Mountains in NY and includes numerous perennial high-gradient streams and some larger rivers. Many large and small glacial lakes. Hills and mountains with narrow valleys. Some

¹²⁹ EPA 1999; Griffith 2010

Level III Ecoregion	Description
Atlantic Maritime Highlands	plains with hills. Most of the region has been glaciated. A variety of metamorphic and igneous rocks occur, along with some areas of sedimentary materials. Soils are generally nutrient-poor, with frigid and some cryic soil temperature regimes and udic and some aquic soil moisture regimes. Spodosols and Inceptisols are typical.
Northern Piedmont	Irregular plains and low hills of sedimentary rock. Includes scattered forested rocky ridges on intrusions of diabase and basalt. Soils vary and are nutrient poor in the well-drained uplands, and more fertile in the lowlands.
North Central Appalachians	Vast elevated plateau of horizontally bedded sandstone, shale, siltstone, conglomerate, and coal. Contains highly dissected hills and low mountains that were mostly unaffected by glaciations. Soils are generally low nutrient Inceptisols overlying horizontally bedded sandstone, shale, siltstone, conglomerate, and coal. Hydrologically, the region has numerous perennial streams and lakes.
Ridge and Valley	Includes a diversity of landscapes with relatively low-lying rolling valleys with ridges and low irregular hills. Soils are a combination of Ultisols and Inceptisols overlying a variety of limestone, dolomite, shale, siltstone, sandstone, chert, mudstone, and marble. Hydrologically, the regional drainage is in a trellised pattern with smaller streams on the slopes draining into meandering streams in the valley, combined with natural springs.
Western Allegheny Plateau	Mostly unglaciated dissected plateau composed of horizontally bedded sedimentary rock. Regional terrain is an unglaciated, dissected plateau with areas of rugged hills. Hydrologically, the region has a high density of perennial streams, and natural lakes are largely absent.

Table 3. NRCS soil suborders within the Plan Area.¹³⁰

Soil Order	Description
Alfisols	Generally, well developed soils resulting from weathering processes that leach clay materials and other constituents out of the surface layer and into the subsoil where they can hold and supply moisture and nutrients to plants. Formed primarily under forest, savanna, or mixed vegetative cover. Found predominantly in temperate humid and subhumid regions and are productive soils typically used for agricultural and silvicultural activities
Inceptisols	Soil occurs in a wide variety of semiarid to humid environments. Generally, exhibits moderate degrees of soil weathering and development. Predominantly found in mountainous areas, steep slopes, young geomorphic surfaces, and on resistant parent materials.
Spodosols	Form from weathering processes that strip organic matter from the surface layer and deposit them with aluminum and iron in the subsoil. Commonly occur in areas of coarse-textured deposits. These soils tend to be acidic and infertile, and often occur under coniferous forest in cool, moist climates.
Ultisols	Form from intense weathering and leaching that result in clay-enriched subsoil dominated by quartz, kaolinite, and iron oxides. Typically, acid soils with narrow near-surface nutrient layers.

¹³⁰ USDA 1999; University of Idaho 2007

Table 4. Sole source aquifers within the Plan Area.¹³¹

Sole Source Aquifer Name	States
Cattaraugus Creek Basin Aquifer	NY
Clinton Street-Ballpark Valley Aquifer	NY
Cortland Homer Preble Aquifer System	NY
Delaware River Streamflow Zone/New Jersey Coastal Plains Aquifer	NY, PA
Highlands Aquifer System Passaic	NY
Kings/Queens Counties (Brooklyn-Queens) Aquifer System	NY
Nassau/Suffolk Counties Long Island	NY
New Jersey Fifteen Basin Aquifers	NY, PA
Northern Tug Hill Glacial Aquifer	NY
Prospect Hill Aquifer, Clark County	WV
Ramapo River Basin Aquifer Systems	NY
Schenectady-Niskayuna	NY
Seven Valleys Aquifer, York County	PA

¹³¹ <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

Table 5. General description of typical vegetation types of the Level III ecoregions within the Plan Area.¹³²

Level III Ecoregion	Typical vegetation
Atlantic Coastal Pine Barrens	Predominantly covered by pine-oak forests, dominated by pitch pine, scarlet oak, black oak, and some areas of shortleaf pine and chestnut oak. Native vegetation in inland areas include mixed oak forests of white oak, black oak, American beech, pignut hickory, mockernut hickory, black walnut, yellow poplar, and red maple, although much of it has been cleared. Areas of Atlantic white cedar swamps occur. Coastal and dune areas are dominated by dune woodlands, low shrub thickets, and areas of dune grass.
Blue Ridge	Predominantly Appalachian oak forests along with oak, hemlock, cove hardwoods, and pine communities. American chestnut, a species of high ecologic and economic importance, once dominated forests in the region but was largely wiped out by Chestnut blight by the 1930's. The chestnut was principally replaced by yellow poplar, chestnut oak, white oak, black locust, red maple, and various species of pine. Higher elevation forests are dominated by northern hardwoods such as American beech, yellow birch, yellow buckeye, and maples.
Central Appalachians	Mostly mixed mesophytic forest, once dominated by American chestnut, now with chestnut oak, red maple, white oak, black oak, beech, yellow-poplar, sugar maple, ash, basswood, buckeye, and hemlock. Some areas of Appalachian oak forest, and others with more northern hardwood forests of maple, beech, birch, and hemlock. Small areas of red spruce and hemlock at highest elevations in the north-central portion of the region.
Eastern Great Lakes Lowlands	The natural vegetation was largely Beech-Maple Forest; shoreline vegetation on the sandy beaches, dunes, and flats includes sea rocket, beach grass, bluestem, and Virginia pine.
Erie Drift Plain	Native vegetation is composed of beech-maple forests, mixed oak forests, and mixed mesophytic forests. Common species include northern red oak, white oak, shagbark hickory, sugar maple, yellow birch, American beech, and eastern hemlock. Elm-ash swamp forests and sphagnum peat bogs are also common in the lowlands.
Middle Atlantic Coastal Plain	Forest cover in the region was once dominated by longleaf pine, with more oak-hickory-pine to the north. It is now mostly loblolly and some shortleaf pine, with patches of oak, gum, and cypress near major streams. Cordgrass, saltgrass, and rushes in coastal marshes; beach grass and sea oats on dunes.
Northeastern Coastal Zone	Soils formed from glacial till support Appalachian oak forests and northeastern oak-pine forests.
Northern Allegheny Plateau	Natural vegetation primarily Appalachian oak forest, with some northern hardwood forest at higher elevations. Typical species include white oak, black oak, hickory, white pine, sugar maple, American beech, and yellow birch.
Northern Appalachian and Atlantic Maritime Highlands	Mostly mixed hardwood and spruce-fir forests. Forest vegetation is somewhat transitional between the boreal regions to the north and the broadleaf deciduous forests to the south. Typical forests include mixed hardwoods of sugar maple, beech, and yellow birch; mixed forests with hardwoods and hemlock and white pine; and spruce-fir forests with balsam fir, red spruce, and birches. In swampy areas, black spruce, red maple, black ash, and tamarack.
Northern Piedmont	Forest vegetation is Appalachian oak-hickory forest on well-drained uplands, with sugar maple and mixed hardwood forests on more fertile soils.

¹³² EPA 1999; Griffith 2010

Level III Ecoregion	Typical vegetation
North Central Appalachians	More forest covered than most adjacent ecoregions. Generally, northern hardwood forests of sugar maple, beech, and yellow birch, and Appalachian oak forests with white oak, red oak, and hickories. Some areas with hemlock, pitch pine, and white pine. Some bogs and marshes.
Ridge and Valley	Native vegetation of valleys, slopes, and hilltops is sugar maple/mixed hardwood. Hemlock grows with hardwoods on cool and moist sites.
Western Allegheny Plateau	Soils support a potential natural vegetation of Appalachian Oak Forest dominated by white oaks and red oaks. Natural vegetation is predominantly mixed mesophytic forest with areas of Appalachian oak forest. Common species include chestnut oak, red maple, white oak, black oak, American beech, yellow poplar, sugar maple, ash, American basswood, buckeye, and eastern hemlock.

Table 6. Plant species ESA-listed as endangered (E), threatened (T), or proposed for delisting (PDL) within the Plan Area.

Species	Listing Status ¹³³	Presence by State
Ferns and Allies		
American hart's-tongue fern (<i>Asplenium scolopendrium</i> var. <i>americanum</i>)	T	NY
Flowering Plants		
Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)	PDL	NY, PA, WV
Small whorled pogonia (<i>Isotria medeoloides</i>)	T	NY, PA, WV
Houghton's goldenrod (<i>Solidago houghtonii</i>)	T	NY
Leedy's roseroot (<i>Rhodiola integrifolia</i> ssp. <i>leedyi</i>)	T	NY
Northern wild monkshood (<i>Aconitum noveboracense</i>)	T	NY
Sandplain gerardia (<i>Agalinus acuta</i>)	E	NY
Seabeach amaranth (<i>Amarantus pumilus</i>)	T	NY
Virginia spiraea (<i>Spiraea virginiana</i>)	T	WV
Shale barren rockcress (<i>Boechera serotina</i>)	E	WV
Harperella (<i>Ptilimnium nodosum</i>)	E	WV

¹³³ No critical habitat has been proposed for the species listed in this table.

Table 7. Fish and wildlife diversity (number of species) by state within the Plan Area.¹³⁴

State	Insects	Fishes	Amphibians	Reptiles	Birds	Mammals
NY	1,070	179	33	40	495	68
PA	1,089	159	40	38	435	66
WV	1,100	179	48	39	354	72

¹³⁴ NYSDEC Herp Atlas Project 1999; Carlson et al. 2016; PA Ornithological Records Committee 2020; NY State Ornithological Association 2021; PA Fish and Boat Commission 2021; WV Bird Record Committee 2021; WV Department of Environmental Protection 2021

Table 8. Common fish and wildlife species by Level III ecoregion in the Plan Area.¹³⁵

Level III Ecoregion	Common Species
Atlantic Coastal Pine Barrens	White-tailed deer, fox, raccoon, cottontail rabbit, gray squirrel, pheasant, bobwhite quail, piping plover, black skimmer, least tern
Blue Ridge	Black bear, white-tail deer, wild boar, bobcat, red squirrel, northern flying squirrel, cottontail rabbit, rock vole, wild turkey, raven, grouse, saw-whet owl, blackburnian warbler, brook trout, red-spotted newt, long-tailed salamander (one of the most diverse salamander populations in the world), many species of reptiles, thousands of species of invertebrates
Central Appalachians	Black bear, white-tailed deer, red fox, gray fox, bobcat, weasel, red squirrel, fox squirrel, big brown bat, wild turkey, ruffed grouse, blue jay, scarlet tanager, hermit thrush, tufted titmouse, box turtle, timber rattlesnake, sculpins, smallmouth bass, minnows, and darters
Eastern Great Lakes Lowlands	White-tailed deer, black bear, moose, coyote, red fox, raccoon, snowshoe hare, red squirrel, gray squirrel, osprey, screech owl, ruffed grouse, pileated woodpecker, cardinal, wood thrush, Canada warbler, canvasback, wood duck
Erie Drift Plain	White-tailed deer, red fox, woodchuck, raccoon, opossum, beaver, striped skunk, eastern chipmunk, fox squirrel, bald eagle, osprey, red-tailed hawk, northern flicker, canvasback, wood duck, Canada warbler, eastern screech owl, snapping turtle, dusky salamander
Middle Atlantic Coastal Plain	Black bear, white-tailed deer, bobcat, gray fox, raccoon, cottontail rabbit, gray squirrel, wild turkey, bobwhite, mourning dove, cormorants, herons, northern cardinal, prothonotary warbler, box turtle
Northeastern Coastal Zone	White-tailed deer, black bear, bobcat, coyote, beaver, gray squirrel, white-footed mouse
Northern Allegheny Plateau	American black bear, gray fox, beaver, striped skunk, gray squirrel, wild turkey, ruffed grouse, American woodcock, wood duck, Cooper's hawk, cerulean warbler, redback salamander, wood turtle
Northern Appalachian and Atlantic Maritime Highlands	Moose, black bear, white-tailed deer, red fox, bobcat, lynx, snowshoe hare, porcupine, fisher, beaver, northern flying squirrel, osprey, red-tailed hawk, wild turkey, ruffed grouse, black-backed woodpecker, gray jay, common loon, red-back salamander.
Northern Piedmont	White-tailed deer, gray fox, red squirrel, raccoon, cottontail rabbit, mink, muskrat, ruffed grouse, meadowlark, field sparrow, blue heron
North Central Appalachians	Black bear, white-tailed deer, bobcat, coyote, beaver, red fox, gray fox, raccoon, gray squirrel, mink, river otter, snowshoe hare, red-shouldered hawk, saw-whet owl, northern goshawk, wild turkey, ruffed grouse, warblers, gray tree frog
Ridge and Valley	White-tailed deer, black bear, bobcat, red fox, gray fox, raccoon, skunk, muskrat, mink, cottontail rabbit, eastern fox squirrel, bald eagle, wild turkey, bobwhite, red-eye vireo, cardinal, box turtle, timber rattlesnake, sculpins, minnows, darters
Western Allegheny Plateau	White-tailed deer, gray fox, woodchuck, gray squirrel, wild turkey, ruffed grouse, barred owl, pileated woodpecker, ovenbird, Kentucky warbler, northern water snake, dusky salamander

¹³⁵ Griffith 2010

Table 9. Fish and wildlife species listed as endangered or threatened under the ESA, proposed for listing or are candidate species present in the Plan Area.

Species	Listing Status	Critical Habitat	Presence by State
Mollusks			
Mussel, Clubshell (<i>Pleurobema clava</i>)	E	-	NY, PA, WV
Mussel, Green floater (<i>Lasmigona subviridis</i>)	PT	P	NY, PA, WV
Mussel, Dwarf wedgemussel (<i>Alasmidonta heterodon</i>)	E	-	NY, PA
Mussel, Northern riffleshell (<i>Epioblasma torulosa rangiana</i>)	E	-	NY, PA, WV
Mussel, Fanshell (<i>Cyprogenia stegaria</i>)	E	-	PA, WV
Mussel, Pink mucket (<i>Lampsilis abrupta</i>)	E	-	WV
Mussel, Rayed bean (<i>Villosa fabalis</i>)	E	-	NY, PA, WV
Mussel, Sheepnose (<i>Plethobasus cyphus</i>)	E	-	PA, WV
Mussel, Snuffbox (<i>Epioblasma triquetra</i>)	E	-	PA, WV
Mussel, Rabbitsfoot (<i>Quadrula cylindrica cylindrica</i>)	T	+	PA
Mussel, James spiny (<i>Pleurobema collina</i>)	E	-	WV
Mussel, Spectaclecase (<i>Cumberlandia monodonta</i>)	E	-	WV
Mussel, Round hickorynut (<i>Obovaria subrotunda</i>)	T	+	PA, WV
Mussel, Longsolid (<i>Fusconaia subrotunda</i>)	T	+	NY, PA, WV
Mussel, Purple cat's paw (<i>Epioblasma obliquata obliquata</i>)	E	-	WV
Mussel, Salamander (<i>Simpsonia ambigua</i>)	PE	P	NY, PA, WV
Mussel, Tan riffleshell (<i>Epioblasma Florentina walker</i>)	E	-	WV
Snail, Flat-spined three-toothed land (<i>Triodopsis platysayoides</i>)	T	-	WV
Snail, Chittenango ovate amber (<i>Novisuccinea chittenangoensis</i>)	T	-	NY
Crustaceans			
Guyandotte River crayfish (<i>Cambarus veteranus</i>)	E	+	WV
Big Sandy crayfish (<i>Cambarus callainus</i>)	T	+	WV
Madison Cave isopod (<i>Antrolana lira</i>)	T	-	WV
Insects			
Rusty-patched bumble bee (<i>Bombus affinis</i>)	E	-	PA, WV
Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)	E	-	NY
Bog buck moth (<i>Hemileuca maia menyanthevora</i>)	E	-	NY
Regal Fritillary Butterfly, Eastern Subspecies (<i>Argynnis idalia</i>)	PE	-	PA
Monarch butterfly (<i>Danaus plexippus</i>)	PT	P	NY, PA, WV
Fishes			
Atlantic sturgeon (<i>Acipenser oxyrinchus</i>)	E	+	NY, PA

Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	E	-	NY, PA
Candy darter (<i>Etheostoma osburni</i>)	E	+	WV
Diamond darter (<i>Crystallaria cincotta</i>)	E	+	WV
Amphibians			
Cheat Mountain salamander (<i>Plethodon nettingi</i>)	T	-	WV
West Virginia spring salamander (<i>Gyrinophilus subterraneus</i>)	PE	+	WV
Eastern Hellbender (<i>Cryptobranchus alleganiensis alleganiensis</i>)	PE	-	NY, PA, WV
Reptiles			
Bog turtle (<i>Glyptemys muhlenbergii</i>)	T	-	NY, PA
Eastern massasauga rattlesnake (<i>Sistrurus catenatus catenatus</i>)	T	-	NY, PA
Birds			
Piping plover (<i>Charadrius melodus</i>) (Great Lakes)	E	+	NY, PA
Piping plover (<i>Charadrius melodus</i>) (Atlantic Coast)	T	-	NY
Rufa red knot (<i>Calidris canutus rufa</i>)	T	P	NY, PA, WV
Eastern black rail (<i>Laterallus jamaicensis jamaicensis</i>)	T	-	NY, PA, WV
Roseate tern (<i>Sterna dougallii dougallii</i>)	E	-	NY
Mammals			
Indiana bat (<i>Myotis sodalis</i>)	E	+	NY, PA, WV
Northern long-eared bat (<i>Myotis septentrionalis</i>)	E	-	NY, PA, WV
Virginia big-eared bat (<i>Corynorhinus townsendii virginianus</i>)	E	+	WV
Gray bat (<i>Myotis grisescens</i>)	E	-	WV
Tricolored bat (<i>Perimyotis subflavus</i>)	PE	-	NY, PA, WV

Listing status: (T) threatened
(E) endangered
(PT) proposed threatened
(PE) proposed endangered
(PDL) proposed for delisting
(C) candidate for listing

Critical habitat: (-) critical habitat has not been designated for this species
(+) critical habitat has been designated for this species
(P) critical habitat has been proposed for this species

Table 10. Typical land uses by Level III ecoregion in the Plan Area.

Level III Ecoregion	Typical Land uses
Atlantic Coastal Pine Barrens	Large areas dominated by urban and suburban development and transportation infrastructure. Some areas of agriculture, with corn, wheat, soybean, vegetable, dairy, and poultry farming. Tourism and recreation uses are important to local economies.
Blue Ridge	Forest-related land uses occur along with some small areas of pasture and hay production, apple orchards, and Christmas tree farms. Recreation, tourism, and hunting are important. Includes large areas of public lands including national forests and national parks.
Central Appalachians	Mostly forest land uses. Includes some small areas of pasture, livestock, or dairy operations. Surface and underground bituminous coal mines are common, reshaping ridges and hollows, and causing the siltation and acidification of many streams.
Eastern Great Lakes Lowlands	Agriculture is the dominant land use. Although orchards, vineyards, and vegetable farming are important locally, a large percentage of the agriculture is associated with dairy operations. Small grains, corn, soybeans, and hay are typical. Some areas of woodland remain. Urban, suburban, and industrial uses are extensive in some areas.
Erie Drift Plain	Much of the Erie Drift Plain is now in farms, many associated with dairy operations. Feed grains and forage crops are typical. Farm woodlots provide sawlogs for construction, firewood, and specialty products. Areas of urban development and industrial activity occur locally.
Middle Atlantic Coastal Plain	Cropland including wheat, corn, soybeans, potatoes, cotton, blueberries, and peanuts. Chicken, turkey, and hog production has a high density in some areas. Recreation and tourism along coastal strips.
Northeastern Coastal Zone	Although attempts were made to farm much of the Northeastern Coastal Zone after the region was settled by Europeans, land use now mainly consists of forests, woodlands, and urban and suburban development, with only some minor areas of pasture and cropland.
Northern Allegheny Plateau	Mostly forested with some logging. Some public national forest lands. Areas of livestock and dairy farming, and some cropland with hay, corn, small grains, and some tobacco. Surface and underground coal mining is extensive and has caused the sedimentation and acidification of many surface waters.
Northern Appalachian and Atlantic Maritime Highlands	Relatively sparsely populated. Recreation, tourism, and forestry are primary land uses. Farm-to-forest conversion began in the 19 th century and continues today. In spite of this trend, alluvial valleys, glacial lake basins, and areas of limestone-derived soils are still farmed for dairy products, forage crops, apples, and potatoes. In addition to the timber industry, recreational homes and associated lodging and services sustain the forested regions economically, but they also create development pressure that threatens to change the pastoral character of the region.
Northern Piedmont	Mostly agriculture and urban, suburban, and industrial uses. Feed and forage crops and soybeans are typical. Nurseries and horticultural products, and Christmas trees occupy some areas. Some woodlots and horse and hobby farms occur.
North Central Appalachians	Land uses are generally tied to forestry and recreation, but some coal, oil, and gas extraction occurs in the west. Some national and state public forest land. Some dairy farming occurs. Vacation and suburban developments are increasing.

Level III Ecoregion	Typical Land uses
Ridge and Valley	A mosaic of woodland, pasture, and cropland. Present-day forests cover about percent of the region. Some areas of pine plantations. Hay, pasture, and grain for beef and dairy cattle are common crops, along with some areas of corn, soybeans, tobacco, and cotton.
Western Allegheny Plateau	Mostly forested with some logging. Some public national forest lands. Areas of livestock and dairy farming, and some cropland with hay, corn, small grains, and some tobacco. Surface and underground coal mining is extensive and has caused the sedimentation and acidification of many surface waters.

Table 11. Approximate acreage and change in non-Federal land uses in the Plan Area, 1982 to 2017 (in thousands of acres).¹³⁶

State	Cropland	Pastureland	Forest Land	Other Rural Uses	Total Rural Uses
1982					
NY	5,848.0	3,860.6	16,573.4	655.8	26,937.8
PA	5,891.7	2,641.7	15,598.4	934.3	25,066.1
WV	1,078.1	1,881.3	10,374.4	238.6	13,572.4
2017					
NY	4,960.1	2,550.9	17,545.0	802.3	25,874.2
PA	4,936.7	1,891.2	15,674.4	809.6	23,322.1
WV	642.1	1,438.6	10,533.9	277.8	12,892.9
		Change	in Acreage		
NY	-887.9 (-15.2%)	-1,309.7 (-33.9%)	971.6 (+5.9%)	146.5 (+22.3%)	-1,063.6 (-3.9%)
PA	-955 (-16.2%)	-750.5 (-28.4%)	76 (+0.5%)	-124.7 (-13.3%)	-1,744 (-7.0%)
WV	-436 (-40.4%)	-442.7 (-23.5%)	159.5 (+1.5%)	39.2 (+16.4%)	-679.5 (-5.0%)

¹³⁶ USDA 2020

Table 12. Approximate acreage and change by NLCD land cover class in the Plan Area (in thousands of acres).¹³⁷

State	Wetland	Upland	Conifer Forest	Deciduous Forest	Mixed Forest	Woody Wetland	Develop Land	Other
2006								
NY	275.79	465.11	2,553.71	11,416.00	3,359.38	2,298.73	3,038.80	7,661.57
PA	65.06	398.99	526.05	13,091.46	3,706.71	419.16	3,424.93	6,813.62
WV	17.81	388.77	206.91	10,132.14	1,167.67	14.46	886.79	1,523.65
2016								
NY	261.10	493.21	2,549.20	11,383.48	3,380.91	2,345.73	3,110.17	7,545.28
PA	65.85	512.86	519.69	12,956.08	3,712.58	426.21	3,523.03	6,729.69
WV	16.96	461.71	212.95	10,022.27	1,190.94	15.61	917.74	1,500.03
Change in Acreage								
NY	-14.69 (-5.32%)	28.09 (6.04%)	-4.50 (-0.18%)	-32.53 (-0.28 %)	21.53 (0.64 %)	47.01 (2.04%)	71.37 (2.34%)	-116.29 (-1.50%)
PA	0.79 (1.21%)	113.86 (28.54%)	-6.36 (-1.21%)	-135.38 (-1.03%)	5.87 (0.15%)	7.05 (1.68%)	98.09 (2.86%)	-83.92 (-1.23%)
WV	-0.85 (-4.76)	72.94 (18.76%)	6.03 (2.91%)	-109.87 (-1.08%)	23.27 (1.99%)	1.14 (7.90%)	30.94 (3.48%)	-23.62 (-1.55)

¹³⁷ <https://www.sciencebase.gov/catalog/item/5d4c6a1de4b01d82ce8dfd2f>

Table 13. National Park Service lands in the Plan Area.¹³⁸

National Park Service Lands	Location
African Burial Ground National Monument	NY
Allegheny Portage Railroad National Historic Site	PA
Appalachian National Scenic Trail	NY, PA, WV
Captain John Smith Chesapeake National Historic Trail	NY, PA
Castle Clinton National Monument	NY
Chesapeake and Ohio Canal National Historic Park	WV
Chesapeake Bay	NY, PA, WV
Delaware Water Gap National Recreation Area	PA
Edgar Allan Poe National Historic Site	PA
Eisenhower National Historic Site	PA
Eleanor Roosevelt National Historic Site	NY
First State National Historical Park	PA
Federal Hall National Memorial	NY
Fire Island National Seashore	NY
Flight 93 National Memorial	PA
Fort Necessity National Battlefield	PA
Fort Stanwix National Monument	NY
Friendship Hill National Historic Site	PA
Gateway National Recreation Area	NY
Gauley River National Recreation Area	WV
General Grant National Memorial	NY
Gettysburg National Military Park	PA
Gloria Dei Church National Historic Site	PA
Governors Island National Monument	NY
Hamilton Grange National Memorial	NY
Harpers Ferry National Historic Park	WV
Harriet Tubman National Historical Park	NY
Home of Franklin D Roosevelt National Historic Site	NY
Hopewell Furnace National Historic Site	PA
Independence National Historic Park	PA
Johnstown Flood National Memorial	PA

¹³⁸ NPS 2020a, 2020b, 2020c

National Park Service Lands	Location
Lewis and Clark National Historic Trail	PA, WV
Lower East Side Tenement Museum National Historic Site	NY
Martin Van Buren National Historic Site	NY
National Parks of New York Harbor	NY
New River Gorge National Park and Preserve	WV
North Country National Scenic Trail	NY, PA
Potomac Heritage National Scenic Trail	PA
Sagamore Hill National Historic Site	NY
Saint Paul's Church National Historic Site	NY
Saratoga National Historic Park	NY
Statue of Liberty National Monument	NY
Steamtown National Historic Site	PA
Stonewall National Monument	NY
Thaddeus Kosciuszko National Memorial	PA
Theodore Roosevelt Birthplace National Historic Site	NY
Theodore Roosevelt Inaugural National Historic Site	NY
Thomas Cole National Historic Site	NY
Valley Forge National Historic Park	PA
Vanderbilt Mansion National Historic Site	NY
Washington-Rochambeau Revolutionary Route National Historic Trail	NY, PA
Women's Rights National Historic Park	NY

Table 14. National Forests within the Plan Area.

U.S. Forest Service Lands	Location by State	Approximate Acreage
Allegheny National Forest	PA	517,000
Finger Lakes National Forest	NY	16,250
George Washington and Jefferson National Forests	WV	123,630
Monongahela National Forest	WV	919,000

Table 15. Designated Wild and Scenic Rivers in the Plan Area.

Wild and Scenic Rivers	Classification (miles)	Lead Agency	Location by State
Allegheny Wild and Scenic River	Recreational (86.6 miles)	USFS	PA
Bluestone National Scenic River	Scenic (10 miles)	NPS	WV
Clarion Wild and Scenic River	Scenic (17.1 miles)	USFS	PA
	Recreational (34.6 miles)		
Lower Delaware National Wild and Scenic River	Scenic (25.4 miles)	NPS	PA
	Recreational (41.9 miles)		
Middle Delaware Wild and Scenic River	Scenic (35.0 miles)	NPS	PA
	Recreational (5.0 miles)		
Upper Delaware Scenic and Recreational River	Scenic (23.1 miles)	NPS	NY, PA
	Recreational (50.3 miles)		
White Clay Wild and Scenic River*	Scenic (25.6 miles)	NPS	PA
	Recreational (173.4 miles)		

* Some of the data reported for the White Clay Wild and Scenic River fall outside of the Plan Area in adjacent portions of New Jersey.

Table 16. National Wildlife Refuges and Management Areas within the Plan Area.

National Wildlife Refuges	Description	Location and Acreage
Amagansett NWR	Supports native fish and wildlife by managing fragile Atlantic coast shoreline habitats.	NY (36 acres)
Canaan Valley NWR	Manages unique wetlands and cool, moist, high elevation wildlife habitats.	WV (16,550 acres)
Cherry Valley NWR	Supports migratory birds and other wildlife by managing habitat in a mosaic of wetland and upland habitats.	PA (5,471 acres)
Conscience Point NWR	Manages woodlands, saltmarsh, and maritime grassland wildlife habitats.	NY (60 acres)
Elizabeth A. Morton NWR	Supports fish and wildlife by managing diverse habitats including upland forest, fields, ponds, salt marsh, sandy and rocky beaches, and a lagoon.	NY (187 acres)
Erie NWR	Manages habitat for a diverse array of fish and wildlife species including resident and migratory birds and waterfowl.	PA (5,206 acres)
Iroquois NWR	Benefits resident and migratory birds and other wildlife by managing wetlands, bottomland hardwoods, grasslands and shrubland habitats.	NY (10.828 acres)
John Heinz NWR at Tinicum	Manages a variety of fish and wildlife habitat including freshwater tidal marsh, open waters, mudflats, and woodlands along the Delaware Estuary.	PA (1,000 acres)
Lido Beach WMA	Supports native fish and wildlife by managing tidal wetlands with saltmarsh and scrub thicket habitats.	NY (22 acres)
Montezuma NWR	Manages resting, feeding, and nesting habitat for waterfowl, migratory birds, And other wildlife.	NY (9,809 acres)
Ohio River Islands NWR	Protects, conserves, and restores river floodplain habitat for the native wildlife, migratory birds, and freshwater mussels.	WV (3,440 acres)
Oyster Bay NWR	Manages important subtidal, saltmarsh, and freshwater fish and wildlife habitats.	NY (3,209 acres)
Sayville NWR	Supports a diversity of migratory songbirds and raptors on a mixture of oak-pitch pine forests and grasslands.	NY (127 acres)
Seatuck NWR	Manages diverse upland and wetland wildlife habitats.	NY (209 acres)
Shawangunk Grasslands NWR	Supports grassland-dependent migratory birds and wintering raptors.	NY (597 acres)
Target Rock NWR	Manages fish and wildlife habitat including mature oak-hickory forest, rocky beaches, a brackish pond, and several vernal pools.	NY (80 acres)

National Wildlife Refuges	Description	Location and Acreage
Wertheim NWR	Manages a variety of fish and wildlife habitats including oak-pine woodlands, grasslands, freshwater, brackish, and saltwater wetlands.	NY (2,500 acres)

Table 17. National and State Scenic Byways in the Plan Area.

Scenic Byways	Designation	Location
Brandywine Valley Scenic Byway	PennDOT	PA
Bucktail Trail	PennDOT	PA
Coal Heritage Trail	NSB	WV
Cheat River Byway	WVDOT	WV
Farm Heritage Road	WVDOT	WV
Great Lakes Seaway Trail	NSB	PA
High Plateau Scenic Byway	PennDOT	PA
Highland Scenic Highway	NSB	WV
Historic National Road - PA	AAR	PA
Historic National Road - WV	AAR	WV
Journey Through Hallowed Ground	NSB	PA
Kinzua Bridge Byway	PennDOT	PA
Lakes to Locks Passage	AAR	NY
Laurel Highlands Scenic Byway	PennDOT	PA
Little Kanawha Parkway	WVDOT	WV
Midland Trail	NSB	WV
Mohawk Towpath Scenic Byway	NSB	NY
Northwestern Turnpike	WVDOT	WV
Ohio Lincoln Highway Historic Byway	WVDOT	WV
Old Route 7 Byway	WVDOT	WV
Palisades Scenic Byway	NSB	NY
Rich Mountain Backway	WVDOT	WV
Staunton-Parkersburg Turnpike	NSB	WV
Upper Delaware Scenic Byway	NYDOT	NY
Washington Heritage Trail	NSB	WV

Table 18. U.S. Census Bureau population trend data for the Plan Area.

U.S. Census Bureau Statistic¹³⁹	NY	PA	WV	United States
Population estimates, July 1, 2019	19,453,561	12,801,989	1,792,147	328,239,523
Population estimates base, April 1, 2010	19,378,144	12,702,868	1,853,018	308,758,105
Population, percent change - April 1, 2010 (estimates base) to July 1, 2019	0.40%	0.80%	-3.30%	6.30%

¹³⁹ U.S. Census Bureau 2019

Appendix E. Public Comments

On October 29, 2024, the draft GCP and draft EA were released for public review, with the publication of a notice of availability (NOA) in the Federal Register (89 FR 85981), under docket identification (ID) number FWS-R5-ES-2024-0039.

The Service received comment letters from nine different organizations on the Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia and its associated Environmental Assessment. All comments received during the public review and comment period were considered by the Service. All substantive issues raised have been addressed. Other comments determined to not be substantive or require response have been noted as such.

Comment letters were submitted by the following entities, each identified by the corresponding document ID number:

- American Clean Power (FWS-R5-ES-2024-0039-0006)
- Center for Biological Diversity (FWS-R5-ES-2024-0039-0009)
- Delaware Riverkeeper Network (FWS-R5-ES-2024-0039-0010)
- Energy and Wildlife Action Coalition (FWS-R5-ES-2024-0039-0012)
- Environmental Energy Alliance of New York (comments received outside of Federal Register)
- Marcellus Shale Coalition (FWS-R5-ES-2024-0039-0013)
- New York State Department of Environmental Conservation (FWS-R5-ES-2024-0039-0007)
- Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and Pennsylvania Fish and Boat Commission (FWS-R5-ES-2024-0039-0008)
- Resource Environmental Solutions (FWS-R5-ES-2024-0039-0011)

A copy of each of the comment letters is included below accompanied by a detailed response matrix, which summarizes the unedited comments received and the Service's response to all substantive comments. A summary of acronyms and a glossary of key terms can be found in this EA.



November 26, 2024

Sharon Marino
Assistant Regional Director – Ecological Services, Northeast Region
US Fish and Wildlife Service
300 Westgate Center Dr
Hadley, MA 01035

Submitted via <https://www.regulations.gov>

Dear Ms. Marino,

The American Clean Power Association ¹ (ACP) appreciates the opportunity to comment on the proposed general conservation plan (GCP) recently released by US Fish and Wildlife Service (USFWS, Service) for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat, northern long-eared bat, and/or tricolored bat (the covered species). Recognizing that the GCP will provide a straightforward permitting option for eligible projects that opt to participate, ACP wishes to highlight two substantial issues with the GCP in the context of other USFWS guidance for the covered species and Section 10 of the Endangered Species Act (ESA):

1. **The GCP's evaluation of effects and the likelihood of take, as well as the conservation measures, are inconsistent with the USFWS's Consultation Guidance for Development Projects for Northern Long-eared Bat and Tricolored Bat and the Rangewide Northern Long-eared Bat and Tricolored Bat Determination Key (DKey).** The GCP estimates take amounts and provides incidental take authorization for certain activities that would be eligible to receive a determination of "no effect" or "may affect-not likely to adversely affect" under the DKey. This contradiction creates a

¹ ACP is the national trade association representing the renewable energy industry in the United States, bringing together hundreds of member companies and a national workforce located across all 50 states with a common interest in encouraging the deployment and expansion of renewable energy resources in the United States. By uniting the power of wind (both land-based and offshore), solar, storage, and transmission companies and their allied industries, we are enabling the transformation of the U.S. power grid to a low-cost, reliable, and renewable power system. The American Wind Energy Association (AWEA) merged into ACP on January 1, 2021. Additional information is available at <http://www.cleanpower.org>.



confusing and potentially unnavigable regulatory environment for projects located in the GCP's plan area. It also introduces doubts over the Service's use of best available science as it is unclear how these conflicting resources could all be based on best available science. Further, the GCP's avoidance, minimization, and mitigation measures are inconsistent with the Minimum Conservation Measures provided in Table 1 of the Consultation Guidance. The GCP's assertion that its avoidance, minimization, and mitigation measures "help ensure consistent species recovery-focused conservation outcomes" cannot be reconciled with the Consultation Guidance's rangewide applicability. Indeed, the GCP is directly in conflict with the Consultation Guidance's stated goal of developing Minimum Conservation Measures "to provide regulatory predictability and consistency across both species' wide ranges and the many Field Offices that will be consulting with federal agencies and project proponents." The Consultation Guidance even goes on to explain that "(f)or section 7 formal consultation for NLEB and/or TCB, if the federal agency includes the recommended MCMs in the project, and the Service determines in its biological opinion the proposed action is not likely to jeopardize either species, the Service does not anticipate the need to specify any additional reasonable and prudent measures" (emphasis added). And, "(f)or non-federal actions under ESA section 10, we also recommend these measures be included in Habitat Conservation Plans, which require non-federal project proponents to minimize and mitigate the impacts of the take of either NLEB and/or TCB to the maximum extent practicable in order to attain an incidental take permit" (emphasis added). Thus, according to the Consultation Guidance, the Minimum Conservation Measures are applicable, without the need for additional measures, to all projects seeking incidental take authorization under Section 7 and Section 10 throughout the northern long-eared bat and tricolored bat ranges, including New York, Pennsylvania, and West Virginia. As such, the GCP should be revised and made consistent with the DKey and the Consultation Guidance. To do otherwise undermines the Service's own goals for those rangewide tools.

2. **The GCP's recommendation that ineligible projects or projects opting to develop separate Habitat Conservation Plans (HCPs) for the covered bat species adhere to the GCP's conservation measures runs afoul of Section 10 of the ESA, which provides that USFWS "shall" issue an incidental take permit to an otherwise lawful project, provided that the project's HCP meets permit issuance criteria.** Section 10 does not prescribe the way



by which projects achieve issuance criteria nor, importantly, does it require that projects adopt the conservation measures developed for other HCPs. Guidance, such as the Consultation Guidance, is the appropriate action through which USFWS may establish consistent conservation measures for a listed species, although Section 10 nevertheless allows for project-specific HCPs to deviate from guidance so long as the issuance criteria are met. Therefore, it is inappropriate for the GCP to recommend that ineligible projects or those opting to pursue project-specific HCPs adopt the GCP's avoidance, minimization, and mitigation measures, particularly given the GCP's inconsistency with the Consultation Guidance as described above. The options available to ineligible projects or projects opting not to participate in the GCP are established by the ESA and are not constrained by the GCP or any recommendations contained within it. Thus, this section goes beyond the appropriate content for the GCP and must be removed.

ACP urges USFWS to correct these issues before finalizing the GCP. Specifically, the GCP should acknowledge the Consultation Guidance and the DKey and provide a clear explanation of how the GCP relates to those rangewide tools. The GCP's avoidance, minimization, and mitigation measures should be revised to be consistent with the Consultation Guidance's Minimum Conservation Measures. Lastly, Section 3.3.1 Options for Projects Not Eligible to Participate and all other text recommending incorporation of the GCP's measures into project-specific HCPs should be removed from the GCP.

Thank you for considering these comments as you finalize the GCP. We appreciate the USFWS's efforts to provide industry with resources to support the consultation process for these species, and through our recommendations seek to make these resources as useful as possible. We would be happy to further elaborate, answer questions, or provide any other information of value to you. Please contact Quintana Hayden at qhayden@cleanpower.org or (202) 615-3141 with any requests.

Sincerely

A handwritten signature in black ink, appearing to read "Tom Vinson", written over a light gray rectangular background.

Tom Vinson
VP, Policy & Reg Affairs
American Clean Power Association

A handwritten signature in black ink, appearing to read "Quintana Hayden", written in a cursive style.

Quintana Hayden
Senior Director, Wildlife & Federal Lands
American Clean Power Association

American Clean Power Association		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	The American Clean Power Association 1 (ACP) appreciates the opportunity to comment on the proposed general conservation plan (GCP) recently released by US Fish and Wildlife Service (USFWS, Service) for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat, northern long-eared bat, and/or tricolored bat (the covered species). Recognizing that the GCP will provide a straightforward permitting option for eligible projects that opt to participate, ACP wishes to highlight two substantial issues with the GCP in the context of other USFWS guidance for the covered species and Section 10 of the Endangered Species Act (ESA):	Comment determined not to be substantive or otherwise require a response.
General Comment	The GCP's evaluation of effects and the likelihood of take, as well as the conservation measures, are inconsistent with the USFWS's Consultation Guidance for Development Projects for Northern Long-eared Bat and Tricolored Bat and the Rangewide Northern Long-eared Bat and Tricolored Bat Determination Key (DKey). The GCP estimates take amounts and provides incidental take authorization for certain activities that would be eligible to receive a determination of "no effect" or "may affect-not likely to adversely affect" under the DKey. This contradiction creates a confusing and potentially unnavigable regulatory environment for projects located in the GCP's plan area. It also introduces doubts over the Service's use of best available science as it is unclear how these conflicting resources could all be based on best available science.	The Service has reviewed the GCP, the Northern Long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects, and the Rangewide Northern Long-eared Bat and Tricolored Bat Determination Key (D-key) for consistency. It has determined that these documents are consistent, provided that a determination of take is made. However, it is important to note that the GCP also covers the IBAT, which is not included in the referenced tools. The GCP advises non-federal project proponents to use the Service's IPaC program for technical guidance as a first step in determining whether their project will result in take of federally listed species. A local Service field office can also assist project proponents in analyzing their activities and provide technical assistance. Once a project proponent determines that take will occur from their project and they choose to comply with the ESA by voluntarily applying for an Incidental Take Permit, one option is to examine if their project is eligible under the streamlined permitting process of the GCP. Use of the GCP is not mandatory, and project proponents can choose to apply for an Incidental Take Permit using the regular HCP application process. An IPaC determination of No Effect or May Effect should be viewed by project proponents without a federal nexus as technical assistance. IPaC recommends that project proponents with May Effect determinations can continue technical assistance with a local Service field office to potentially identify actions or measures to assist non-federal project proponents reach a determination that take of a federally listed species will not occur. Should a project proponent determine with assistance from IPaC or a local Service field office that their project will not result in take, then they will not apply for an Incidental Take Permit and use of the GCP by the project proponent would not be considered. Because the GCP considers landscape-level impacts resulting in take over a 10-year permit term, the application of the best available science must account for both individual and population-level impacts over an extended period. Furthermore, the science must consider threats to the IBAT, a species highly specialized in its habitat requirements and particularly sensitive to habitat disturbances.
General Comment	Further, the GCP's avoidance, minimization, and mitigation measures are inconsistent with the Minimum Conservation Measures provided in Table 1 of the Consultation Guidance. The GCP's assertion that its avoidance, minimization, and mitigation measures "help ensure consistent species recovery-focused conservation outcomes" cannot be reconciled with the Consultation Guidance's rangewide applicability. Indeed, the GCP is directly in conflict with the Consultation Guidance's stated goal of developing Minimum Conservation Measures "to provide regulatory predictability and consistency across both species' wide ranges and the many Field Offices that will be consulting with federal agencies and project proponents." The Consultation Guidance even goes on to explain that "(f)or section 7 formal consultation for NLEB and/or TCB, if the federal agency includes the recommended MCMs in the project, and the Service determines in its biological opinion the proposed action is not likely to jeopardize either species, the Service does not anticipate the need to specify any additional reasonable and prudent measures" (emphasis added). And, "(f)or non-federal actions under ESA section 10, we also recommend these measures be included in Habitat Conservation Plans, which require non-federal project proponents to minimize and mitigate the impacts of the take of either NLEB and/or TCB to the maximum extent practicable in order to attain an incidental take permit" (emphasis added). Thus, according to the Consultation Guidance, the Minimum Conservation Measures are applicable, without the need for additional measures, to all projects seeking incidental take authorization under Section 7 and Section 10 throughout the northern long-eared bat and tricolored bat ranges, including New York, Pennsylvania, and West Virginia. As such, the GCP should be revised and made consistent with the DKey and the Consultation Guidance. To do otherwise undermines the Service's own goals for those rangewide tools.	The guidance referred to by the commentor does state that for non-federal actions under ESA section 10, we (the Service) also recommend these measures (Minimum Conservation Measures or MCMs) be included in HCPs. MCMs 1-9 are intended on their own to avoid jeopardy for only the NLEB and TCB, but they may not meet the HCP issuance criteria of minimize and mitigate to the maximum extent practicable, especially for the IBAT. This is why MCM 10 is included and states, "Offset any remaining impacts of incidental take that were not avoided. For example, offsetting measures could include (but are not limited to) restoring or protecting known habitat for the affected species, locating and protecting new colonies, and treating NLEB and/or TCB for white-nose syndrome (WNS) if treatments are available." The guidance states that for MCM 10, non-federal project proponents should coordinate with the local Service field office for potential offsets, and such offsets would be developed in coordination with project proponents and based on the specific circumstances of their project, and then also coordinate offsetting measures for the IBAT. The guidance document clearly states that it is subject to periodic updates and that we recognize other compliance strategies are possible. Further, the guidance states the Service does not anticipate the need to specify any additional reasonable and prudent measures under ESA section 7 consultations. However, the guidance does identify the potential need for additional offsetting measures such as those presented in the GCP. The GCP is a voluntary tool that will streamline the ESA section 10 Incidental Take Permit process. Project proponents are not required to use the GCP and are able to follow the standard HCP process and develop their own HCP. The GCP was designed and analyzed based on certain types of activities. Mitigation measures were included to fully offset any impact of the taking remaining after the implementation of all practicable avoidance and minimization measures as stated in MCM 10 of the guidance document.

American Clean Power Association		
Comment Type/Section Referenced	Comment	Service Response
General Comment	The GCP's recommendation that ineligible projects or projects opting to develop separate Habitat Conservation Plans (HCPs) for the covered bat species adhere to the GCP's conservation measures runs afoul of Section 10 of the ESA, which provides that USFWS "shall" issue an incidental take permit to an otherwise lawful project, provided that the project's HCP meets permit issuance criteria. Section 10 does not prescribe the way by which projects achieve issuance criteria nor, importantly, does it require that projects adopt the conservation measures developed for other HCPs. Guidance, such as the Consultation Guidance, is the appropriate action through which USFWS may establish consistent conservation measures for a listed species, although Section 10 nevertheless allows for project-specific HCPs to deviate from guidance so long as the issuance criteria are met. Therefore, it is inappropriate for the GCP to recommend that ineligible projects or those opting to pursue project-specific HCPs adopt the GCP's avoidance, minimization, and mitigation measures, particularly given the GCP's inconsistency with the Consultation Guidance as described above. The options available to ineligible projects or projects opting not to participate in the GCP are established by the ESA and are not constrained by the GCP or any recommendations contained within it. Thus, this section goes beyond the appropriate content for the GCP and must be removed.	The GCP does not require or adhere to the use of AMMs (or CMs as described in the GCP) for independently developed HCPs. The GCP does recommend that an applicant whose project is ineligible under the GCP can consider multiple options for achieving ESA compliance (see section 3.3.1) should they want to develop their own HCP, including incorporating GCP CMs. This recommendation is completely voluntary, was intended to assist and/or streamline their development of a project specific HCP and does not in any way prescribe the manner in which a project must meet issuance criteria.
General Comment	ACP urges USFWS to correct these issues before finalizing the GCP. Specifically, the GCP should acknowledge the Consultation Guidance and the DKey and provide a clear explanation of how the GCP relates to those rangewide tools. The GCP's avoidance, minimization, and mitigation measures should be revised to be consistent with the Consultation Guidance's Minimum Conservation Measures. Lastly, Section 3.3.1 Options for Projects Not Eligible to Participate and all other text recommending incorporation of the GCP's measures into project-specific HCPs should be removed from the GCP.	Refer to Service responses on the previous two comments.
Summary Statement	Thank you for considering these comments as you finalize the GCP. We appreciate the USFWS's efforts to provide industry with resources to support the consultation process for these species, and through our recommendations seek to make these resources as useful as possible.	Comment determined not to be substantive or otherwise require a response.
Closing Statement	We would be happy to further elaborate, answer questions, or provide any other information of value to you. Please contact Quintana Hayden at qhayden@cleanpower.org or (202) 615-3141 with any requests.	Comment determined not to be substantive or otherwise require a response.



November 27, 2024

Submitted Electronically via: <https://www.regulations.gov/commenton/FWS-R5-ES-2024-0039-0001>

Public Comments Processing
Attn: FWS-R5-ES-2024-0039
U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 22041-3803

Re: Comments on the General Conservation Plan and Environmental Assessment for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and/or tricolored bat (*Perimyotis subflavus*).

Dear Mesdames and Messrs.:

Please accept these comments from the Center for Biological Diversity on the *General Conservation Plan and Environmental Assessment for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat (Myotis sodalis), northern long-eared bat (Myotis septentrionalis), and/or tricolored bat (Perimyotis subflavus)*.

The Indiana bat, northern long-eared bat, and tricolored bat are native to the eastern half of the United States and Canada, with the tricolored bat's range also extending into parts of Central America. While the three species' lifecycles vary, they generally spend their winters hibernating in caves and mines (hibernacula). The bats emerge in spring to travel to their summer habitat, where they roost in trees. They prefer to roost intact forests as opposed to fragmented forests, and they will avoid open areas. In summer, female bats give birth to their young. In fall, the bats migrate to and swarm around hibernacula, where they mate before going into hibernation.

All three species are insectivorous bats that provide critical ecosystem benefits, including pest control. A 2011 study estimated that the loss of bats in North America could

lead to more than \$3.7 billion/year in agricultural losses.¹ By consuming insect pests, bats benefit not only natural biodiversity but also agricultural crops and timber stands, while reducing the cost and risks associated with pesticides.

Unfortunately, these important species are facing major decline. The most significant threat facing the Indiana bat, northern long-eared bat, and tricolored bat is White Nose Syndrome, a fungal pathogen (*Pseudogymnoascus destructans* (*Pd*)) that invades the skin of bats and causes them to arouse during hibernation, wasting valuable energy stores at a time when food is not available. One recent meta-analysis of data from 27 states and 2 provinces concluded that White Nose Syndrome was estimated to have caused northern long-eared bat population declines of 97–100 percent across 79 percent of the species range. Impacts to Indiana bats are most severe to date in areas with the longest exposure to White Nose Syndrome (e.g., 75-99 percent declines in NY, PA, and WV). Similarly, tricolored bat populations have declined an estimated 90-100 percent across 59 percent of their range. Other threats, most significantly habitat loss, are compounding the loss of these three species. The Indiana bat and northern long-eared bat are federally protected as endangered species, while the tricolored bat is proposed for listing as endangered.

Combatting habitat loss and degradation is critical to giving these bats the best chance of survival against White Nose Syndrome. The Service's General Conservation Plan (GCP) confronts the impacts caused to these imperiled bat species by certain eligible projects, including residential, commercial, and community development, non-federal transportation projects, and utilities projects.

The Center generally supports the GCP as a plan for addressing the harm caused by the eligible projects and the activities that are common to them. *See* pp. 34-35. The Center also generally agrees with the GCP's determination as to projects that are precluded from and ineligible for participation in the GCP. *See* pp. 31-32.

The GCP sets forth four biological goals: (i) protecting and restoring hibernacula, (ii) protecting and enhancing spring staging areas, (iii) protecting and enhancing maternity colonies and summer habitat, and (iv) protecting fall swarming areas. Each of these biological goals will help promote the survival and recovery of the Indiana bat, northern long-eared bat, and tricolored bat, and the Service provides nine Objectives that support these goals. *See* pp. 49-50.

The GCP enumerates both general and project-specific conservation measures that must be implemented to avoid and minimize take of the bats in New York, Pennsylvania, and West Virginia. *See* pp. 51-56. The Center supports the adoption of these conservation measures.

¹ Boyles, J.G., P.M. Cryan, G.F. McCracken, and T.H. Kunz. 2011. Economic Importance of Bats in Agriculture. *Science* 332:41-42 (accessible at https://www.biologicaldiversity.org/campaigns/bat_crisis_white_nose_syndrome/pdfs/Boyles2011EconomicsofBats.pdf).

Certain conservation measures could be improved with slight modifications. General Conservation Measure 2, which requires plans to restore and plant native trees on disturbed sites and temporary construction areas, should apply to all permits instead of being optional. *See* p. 51. A requirement for implementing General Conservation Measure 2 would advance all four biological goals set forth in the GCP. Likewise, Summer Measure 14A should be required because the bats and their entire forest ecosystem depend on the health of streams and wetlands. Stream crossings and wetlands fill undermine the GCP's biological goals and objectives. *See* p. 55. These waterways may lack other regulatory protections.

Conservation measures using the words "Avoid" and "Minimize" should be modified to use clear language that disallows or prohibits the activities described in order to provide permittees and the public with a clear understanding of what the permittee's obligations are.² This will also aid the Service in conducting consistent project review and meaningful enforcement.

The Service should also consider adding a general conservation measure focused on preservation of mature and old-growth forests in the tristate area. Both Indiana bats and northern long-eared bats, for example, prefer mature, interior forest environments. Conservation measures that would benefit the bats include protecting and enhancing mature forest, particularly hardwood/mixedwood stands containing standing snags, dying trees, vertical complexity, midstory/understory flight space, and waterbodies such as streams, ponds, and forested wetlands.

The GCP provides for mitigation of incidental take to reduce impacts that remain after avoidance and minimization measures are implemented. The Center supports the GCP's requirement that permanent impacts, including removal of trees or other permanent adverse effects to habitat, are required to be offset with similarly permanent mitigation. *See* p. 70. Permanent mitigation through the mechanisms described in § 4.6 of the GCP will promote the conservation of the covered bat species in a cumulative and coordinated manner. The GCP correctly observes that lack of data creates obstacles to protecting bats, and we agree that surveying will help address this problem.

The GCP identifies priority mitigation actions as those permanently protecting and enhancing maternity roosts and associated summer habitats (Priority 1), permanently protecting hibernacula as well as fall swarming and spring staging areas (Priority 2), and restoring hibernacula (Priority 3). Each of these priorities and the underlying actions described by the Service (pp. 72-75) are important steps for conserving Indiana bats, northern long-eared bats, and tricolored bats. The Center also agrees with the Service's emphasis on larger blocks of occupied habitat, associated buffer areas, and connecting corridors. *See* p. 72. The Center supports the mitigation ratios set forth §4.6.4 as minimum offset ratios.

² *See e.g.*, HIB CM 1B, FALL/SPRING CM 1, SUMMER CM 6A, SUMMER CM 6B, SUMMER CM 7, SUMMER CM 9, SUMMER CM 14A, SUMMER CM 15B, STRUCTURE CM 1B, and STRUCTURE CM 2 at pp. 51-56.

Finally, the Center agrees that the Monitoring and Adaptive Management procedures identified in the GCP are necessary to ensure the success and consistent application of the GCP over its effective period. In particular, as climate change continues to affect species' life cycles, adaptive management strategies will aid informed conservation efforts.

We generally support the Service's adoption of *General Conservation Plan and Environmental Assessment for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat* (*Myotis sodalis*), *northern long-eared bat* (*Myotis septentrionalis*), and/or *tricolored bat* (*Perimyotis subflavus*), and we hope the Service will consider our suggestions for improving this valuable tool. Thank you for taking our comments into consideration.

/s/ Lindsay E. Reeves

Lindsay E. Reeves

Center for Biological Diversity

3436 Magazine Street, FRNT PMB 539

New Orleans, LA 70115

lreeves@biologicaldiversity.org

Center for Biological Diversity		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	Please accept these comments from the Center for Biological Diversity on the General Conservation Plan and Environmental Assessment for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat (<i>Myotis sodalis</i>), northern long-eared bat (<i>Myotis septentrionalis</i>), and/or tricolored bat (<i>Perimyotis subflavus</i>).	Comment determined not to be substantive or otherwise require a response.
General Comment	The Indiana bat, northern long-eared bat, and tricolored bat are native to the eastern half of the United States and Canada, with the tricolored bat's range also extending into parts of Central America. While the three species' lifecycles vary, they generally spend their winters hibernating in caves and mines (hibernacula). The bats emerge in spring to travel to their summer habitat, where they roost in trees. They prefer to roost intact forests as opposed to fragmented forests, and they will avoid open areas. In summer, female bats give birth to their young. In fall, the bats migrate to and swarm around hibernacula, where they mate before going into hibernation.	Comment determined not to be substantive or otherwise require a response.
General Comment	All three species are insectivorous bats that provide critical ecosystem benefits, including pest control. A 2011 study estimated that the loss of bats in North America could lead to more than \$3.7 billion/year in agricultural losses. ¹ By consuming insect pests, bats benefit not only natural biodiversity but also agricultural crops and timber stands, while reducing the cost and risks associated with pesticides.	Comment determined not to be substantive or otherwise require a response.
General Comment	Unfortunately, these important species are facing major decline. The most significant threat facing the Indiana bat, northern long-eared bat, and tricolored bat is White Nose Syndrome, a fungal pathogen (<i>Pseudogymnoascus destructans</i> (Pd)) that invades the skin of bats and causes them to arouse during hibernation, wasting valuable energy stores at a time when food is not available. One recent meta-analysis of data from 27 states and 2 provinces concluded that White Nose Syndrome was estimated to have caused northern long-eared bat population declines of 97–100 percent across 79 percent of the species range. Impacts to Indiana bats are most severe to date in areas with the longest exposure to White Nose Syndrome (e.g., 75-99 percent declines in NY, PA, and WV). Similarly, tricolored bat populations have declined an estimated 90-100 percent across 59 percent of their range. Other threats, most significantly habitat loss, are compounding the loss of these three species. The Indiana bat and northern long-eared bat are federally protected as endangered species, while the tricolored bat is proposed for listing as endangered.	Comment determined not to be substantive or otherwise require a response.
General Comment	Combating habitat loss and degradation is critical to giving these bats the best chance of survival against White Nose Syndrome. The Service's General Conservation Plan (GCP) confronts the impacts caused to these imperiled bat species by certain eligible projects, including residential, commercial, and community development, non-federal transportation projects, and utilities projects.	Comment determined not to be substantive or otherwise require a response.
General Comment	The Center generally supports the GCP as a plan for addressing the harm caused by the eligible projects and the activities that are common to them. See pp. 34-35. The Center also generally agrees with the GCP's determination as to projects that are precluded from and ineligible for participation in the GCP. See pp. 31-32.	Comment determined not to be substantive or otherwise require a response.
General Comment	The GCP sets forth four biological goals: (i) protecting and restoring hibernacula, (ii) protecting and enhancing spring staging areas, (iii) protecting and enhancing maternity colonies and summer habitat, and (iv) protecting fall swarming areas. Each of these biological goals will help promote the survival and recovery of the Indiana bat, northern long-eared bat, and tricolored bat, and the Service provides nine Objectives that support these goals. See pp. 49-50.	Comment determined not to be substantive or otherwise require a response.
General Comment	The GCP enumerates both general and project-specific conservation measures that must be implemented to avoid and minimize take of the bats in New York, Pennsylvania, and West Virginia. See pp. 51-56. The Center supports the adoption of these conservation measures	Comment determined not to be substantive or otherwise require a response.

Center for Biological Diversity		
Comment Type/Section Referenced	Comment	Service Response
Section 4.4	Certain conservation measures could be improved with slight modifications. General Conservation Measure 2, which requires plans to restore and plant native trees on disturbed sites and temporary construction areas, should apply to all permits instead of being optional. See p. 51. A requirement for implementing General Conservation Measure 2 would advance all four biological goals set forth in the GCP.	The Service agrees that this CM would advance all four biological goals identified in the GCP. However, implementation of this CM may not be achievable or practicable for a large portion of project types covered by the GCP that require their project area to remain free of trees. Thus, CM 2 is optional.
Section 4.4	Likewise, Summer Measure 14A should be required because the bats and their entire forest ecosystem depend on the health of streams and wetlands. Stream crossings and wetlands fill undermine the GCP's biological goals and objectives. See p. 55. These waterways may lack other regulatory protections.	The Service agrees that this CM helps promote the health of streams and wetlands used by bats. However, implementation of this CM may not be achievable or practicable for a large portion of project types covered by the GCP. Therefore, the GCP includes a suite of CMs from which each GCP applicant can develop an appropriate strategy that is feasible for their specific project site. Further, other regulatory authorities may influence how this CM can be implemented. Therefore, CM 14A is optional.
Section 4.4	Conservation measures using the words "Avoid" and "Minimize" should be modified to use clear language that disallows or prohibits the activities described in order to provide permittees and the public with a clear understanding of what the permittee's obligations are. ² This will also aid the Service in conducting consistent project review and meaningful enforcement. (Footnote 2 - See e.g., HIB CM 1B, FALL/SPRING CM 1, SUMMER CM 6A, SUMMER CM 6B, SUMMER CM 7, SUMMER CM 9, SUMMER CM 14A, SUMMER CM 15B, STRUCTURE CM 1B, and STRUCTURE CM 2 at pp. 51-56.)	Avoid and Minimize are terms that are used by the Service in ESA consultations. Avoidance gets the project proponent to a place where they do not need incidental take permit coverage. Minimization measures are defined in the HCP Handbook as: Within the context of the HCP, minimization is related to the impacts of the proposed covered activities on the species to be covered. In other words, minimization measures comprise actions that will reduce the impacts of the taking that have been identified during the development of the HCP.
General Comment	The Service should also consider adding a general conservation measure focused on preservation of mature and old-growth forests in the tristate area. Both Indiana bats and northern long-eared bats, for example, prefer mature, interior forest environments. Conservation measures that would benefit the bats include protecting and enhancing mature forest, particularly hardwood/mixedwood stands containing standing snags, dying trees, vertical complexity, midstory/understory flight space, and waterbodies such as streams, ponds, and forested wetlands.	The Service agrees that this habitat type is important. However, the GCP considers habitat protection and enhancement as mitigation, which is addressed in Section 4.6 of the GCP.
Section 4.6	The GCP provides for mitigation of incidental take to reduce impacts that remain after avoidance and minimization measures are implemented. The Center supports the GCP's requirement that permanent impacts, including removal of trees or other permanent adverse effects to habitat, are required to be offset with similarly permanent mitigation. See p. 70. Permanent mitigation through the mechanisms described in § 4.6 of the GCP will promote the conservation of the covered bat species in a cumulative and coordinated manner. The GCP correctly observes that lack of data creates obstacles to protecting bats, and we agree that surveying will help address this problem.	Comment determined not to be substantive or otherwise require a response.
Section 4.6	The GCP identifies priority mitigation actions as those permanently protecting and enhancing maternity roosts and associated summer habitats (Priority 1), permanently protecting hibernacula as well as fall swarming and spring staging areas (Priority 2), and restoring hibernacula (Priority 3). Each of these priorities and the underlying actions described by the Service (pp. 72-75) are important steps for conserving Indiana bats, northern long-eared bats, and tricolored bats. The Center also agrees with the Service's emphasis on larger blocks of occupied habitat, associated buffer areas, and connecting corridors. See p. 72. The Center supports the mitigation ratios set forth §4.6.4 as minimum offset ratios.	Comment determined not to be substantive or otherwise require a response.
Section 4.7	Finally, the Center agrees that the Monitoring and Adaptive Management procedures identified in the GCP are necessary to ensure the success and consistent application of the GCP over its effective period. In particular, as climate change continues to affect species' life cycles, adaptive management strategies will aid informed conservation efforts.	Comment determined not to be substantive or otherwise require a response.

Center for Biological Diversity		
Comment Type/Section Referenced	Comment	Service Response
Closing Statement	We generally support the Service's adoption of General Conservation Plan and Environmental Assessment for routine development projects in New York, Pennsylvania, and West Virginia that may impact Indiana bat (<i>Myotis sodalis</i>), northern long-eared bat (<i>Myotis septentrionalis</i>), and/or tricolored bat (<i>Perimyotis subflavus</i>), and we hope the Service will consider our suggestions for improving this valuable tool. Thank you for taking our comments into consideration.	Comment determined not to be substantive or otherwise require a response.



November 27, 2024

VIA ONLINE COMMENT FORM

U.S. Fish and Wildlife Service Headquarters

MS: PRB/3W

5275 Leesburg Pike

Falls Church, VA 22041-3803

ATTN: Docket No. FWS-R5-ES-2024-0039

Re: Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment

To Whom it May Concern,

The Delaware Riverkeeper Network (DRN) submits the below comments regarding the proposed multi-bat species General Conservation Plan for routine development projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment (Docket No. FWS-R5-ES-2024-0039). DRN is a nonprofit membership organization that advocates for the protection of the Delaware River, its tributary streams, and the habitats and communities of the Delaware River Watershed. The mission of DRN is to champion the rights of communities to a Delaware River and tributary streams that are free flowing, clean, healthy, and abundant with a diversity of life. DRN has more than 28,000 members, the vast majority of whom live, work, and/or recreate within the Delaware River Basin.

DRN generally supports the proposed General Conservation Plan (GCP) because it would provide coordinated and consistent landscape-scale recovery that better accounts for cumulative impacts to bat species as well as the effects of climate change. However, DRN believes that the GCP proposal can be revised and strengthened to ensure that developers are held accountable for the impacts of their projects and that they continue to bear significant responsibility when applying for incidental take permits. First, the proposal contends that a maximum of 2,000 acres of habitat could be impacted per year per state. The maximum amount of forested lands that could be impacted is 60,000 acres over the duration of the proposed GCP, and the U.S. Forest Service estimates that forests cover approximately 47.7 million acres in the Plan Area. The cumulative amount of forested habitat that could be impacted over the duration of the plan amounts to 0.12 percent of the total forested area within the boundaries of the GCP Plan Area.

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However, it should be noted that suitable forested habitat is not equally distributed among the three states, nor is there a uniform distribution of habitat in each county in each state. For example, a project that impacts 300 acres of forest in a large county with large, contiguous tracts of forest is not the same as a project that impacts 300 acres of forest in a small county that may only have 1,000 acres of forest in total in the same state. Therefore, acreage totals should be calculated at the county level in proportion with the amount of available suitable forested habitat within that county. The cumulative amount of forested habitat that could be impacted over the duration of the plan should amount to a small percentage, such as 0.12 percent of the total forested area within the boundaries of a given county. Developers, particularly with warehouse projects, often attempt to obscure the total acreage footprint of their actions by piecemealing them into phases. This approach creates the illusion that the total impact is smaller than it actually is (e.g. Phase 1 may impact 25 acres, but three years later Phase 2 of the project then impacts an additional 50 acres). To avoid this, the same developer should not be permitted to apply for multiple projects or phases of a project in the same county to reduce the potential for too much pressure on the forested habitat in that county.

The proposal states that the GCP is “expected to protect, restore, manage, and conserve habitat that provides equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and in-lieu fee (ILF) programs.” ILF programs collect funds to support conservation efforts, however these efforts rarely benefit the actual animals affected in the project area. ILF programs often serve as a loophole for developers to pay their way out of taking responsibility for the consequences of their actions. Because of this, DRN recommends eliminating ILF programs from the proposal and instead ensure that developers are held accountable for impacts within their own project areas. The proposal further contends that mitigation activities that offset the impact of the taking of Covered Species are not required to occur within an ITP’s designated Permit Area, but must occur within the GCP Plan Area within the state of impact (unless the local Field Office agrees to out-of-State mitigation projects). DRN believes that mitigation activities occurring within the same state is still too broad of an area. For example, restoration of a coniferous forest in western Pennsylvania does not offset the loss of a deciduous forest in eastern Pennsylvania where construction is taking place. When compensatory mitigation is absolutely necessary, it should occur within the project area whenever possible or at least within the same county at the farthest. Mitigation at the project level or the county level would provide greater benefits to the affected animals.

The Delaware Riverkeeper Network also believes that developers’ consultants should be required to conduct both mist net surveys and acoustic monitoring when performing presence/absence surveys for bats. There are instances where only one survey method is utilized, but mist net surveys may capture bats that acoustic monitoring failed to detect and vice versa. Therefore, both survey methods should be performed as a failsafe in the event that the first method was not thorough enough. Furthermore, DRN feels that “mechanized tree felling” should be removed from the definition of the term “ground disturbance.” For example, for the Transco Regional Energy Access Expansion natural gas pipeline project in Pennsylvania, the PADEP in coordination with the FWS proposed seasonal timing restrictions near bat hibernacula and summer roosting habitat. According to those restrictions, trees may only be cleared using non-mechanical equipment between November 16 and March 31; ground disturbance may only occur between April 1 and November 15. However, the term “ground disturbance” included mechanized tree felling in its definition, which defeats the purpose of a seasonal timing restriction, since the entire calendar year is therefore technically open to tree felling. No tree felling, of any type, should be performed when bats are occupying summer roost habitat. In the face of climate change, bats are also emerging from hibernation earlier and entering hibernation later. The FWS states that, “an earlier emergence from hibernation may have no detrimental effect on population

size if sufficient food is available.” However, the FWS does not acknowledge the implications that earlier emergence has with their recommended seasonal timing restrictions. The timeframe can vary, but typically the FWS recommends that no tree felling/removal/clearing should occur between April 1 and November 15 as stated previously regarding Transco. With earlier emergence, bats that are active prior to April 1 may be vulnerable to harm, as are bats still active after November 15 as temperatures remain warm. The implications of climate change are that traditionally relied upon calendar dates are no longer accurate in determining activity levels of animals such as bats. Therefore, seasonal timing restrictions should be based on air temperature instead of a fixed range of dates. Air temperature is a far more reliable predictor of bat activity levels and should be the preferred method utilized by the FWS.

Finally, the GCP proposal recommends a 150-foot buffer for tree felling/removal/clearing. However, the FWS states that, “for IBATs and NLEBs, the next greatest likelihood of removing occupied roosts is within one mile of documented roosts.” The FWS also states that, “...the impacts discussed above may be applicable to tree clearing outside of 150 feet from roosts regardless of whether it is within known or assumed occupied habitat.” Given that the FWS acknowledges that impacts may extend beyond 150 feet and the likelihood of removing occupied roosts is within one mile of documented roosts, DRN believes that the buffer for tree felling/removal/clearing in roost habitat should be extended to one mile. Extending the buffer to one mile would encompass these fringe roost areas that may extend well beyond 150 feet. This larger buffer would prevent accidental incidental take from occurring. By incorporating all of these aforementioned recommendations, DRN believes that the GCP would be strengthened and far more protective of these imperiled bat species. Thank you for your time and consideration of our comments. We look forward to monitoring the progress of this essential proposal. Please keep us apprised of the process by contacting DRN’s Science and Policy Analyst, Matthew McCann, at matthew@delawareriverkeeper.org

Sincerely,



Maya K. van Rossum
the Delaware Riverkeeper
keepermaya@delawareriverkeeper.org

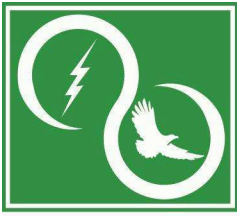


Matthew McCann
Science and Policy Analyst
matthew@delawareriverkeeper.org

Delaware Riverkeeper Network		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	The Delaware Riverkeeper Network (DRN) submits the below comments regarding the proposed multi-bat species General Conservation Plan for routine development projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment (Docket No. FWS-R5-ES-2024 0039). DRN is a nonprofit membership organization that advocates for the protection of the Delaware River, its tributary streams, and the habitats and communities of the Delaware River Watershed. The mission of DRN is to champion the rights of communities to a Delaware River and tributary streams that are free flowing, clean, healthy, and abundant with a diversity of life. DRN has more than 28,000 members, the vast majority of whom live, work, and/or recreate within the Delaware River Basin.	Comment determined not to be substantive or otherwise require a response.
General Comment	DRN generally supports the proposed General Conservation Plan (GCP) because it would provide coordinated and consistent landscape-scale recovery that better accounts for cumulative impacts to bat species as well as the effects of climate change.	Comment determined not to be substantive or otherwise require a response.
General Comment	However, DRN believes that the GCP proposal can be revised and strengthened to ensure that developers are held accountable for the impacts of their projects and that they continue to bear significant responsibility when applying for incidental take permits. First, the proposal contends that a maximum of 2,000 acres of habitat could be impacted per year per state. The maximum amount of forested lands that could be impacted is 60,000 acres over the duration of the proposed GCP, and the U.S. Forest Service estimates that forests cover approximately 47.7 million acres in the Plan Area. The cumulative amount of forested habitat that could be impacted over the duration of the plan amounts to 0.12 percent of the total forested area within the boundaries of the GCP Plan Area.	Comment determined not to be substantive or otherwise require a response.
General Comment	However, it should be noted that suitable forested habitat is not equally distributed among the three states, nor is there a uniform distribution of habitat in each county in each state. For example, a project that impacts 300 acres of forest in a large county with large, contiguous tracts of forest is not the same as a project that impacts 300 acres of forest in a small county that may only have 1,000 acres of forest in total in the same state. Therefore, acreage totals should be calculated at the county level in proportion with the amount of available suitable forested habitat within that county.	We agree that if present bats may respond differently to removal of suitable forest habitat in highly forested areas versus areas with less forest cover. The use of IPaC is recommended as a first step in determining if a project is eligible to use the GCP and may include an evaluation of percent forest cover depending on the species present. Additionally, if a project is eligible for the GCP, we are not expecting disproportional impacts in occupied areas with less forest cover because we have established sideboards to limit forest removal in occupied habitat (200 acres) and assumed occupied habitat (25 acres). Additionally, GCP does take percent forest cover into account into our mitigation ratio by requiring high mitigation ratios for projects that occur in less forested landscapes which is assessed at a county level.
General Comment	The cumulative amount of forested habitat that could be impacted over the duration of the plan should amount to a small percentage, such as 0.12 percent of the total forested area within the boundaries of a given county. Developers, particularly with warehouse projects, often attempt to obscure the total acreage footprint of their actions by piecemealing them into phases. This approach creates the illusion that the total impact is smaller than it actually is (e.g. Phase 1 may impact 25 acres, but three years later Phase 2 of the project then impacts an additional 50 acres). To avoid this, the same developer should not be permitted to apply for multiple projects or phases of a project in the same county to reduce the potential for too much pressure on the forested habitat in that county.	See GCP section 6.2.1. The GCP and EA were analyzed based upon a certain limit of take by certain covered activities. Should a Permittee need to expand the Permit Area for new projects or unanticipated phasing of a permitted project that results in a level of take or a type of Covered Activity not considered by this GCP, the expanded project would not meet the GCP framework of eligibility requirements. The Service would recommend that such Permittees apply for a separate Permit and develop a separate HCP (see GCP Appendix G). However, if the take associated with the phasing would be eligible under the GCP, then the project may be able to apply for an amendment, which will require additional mitigation to offset the additional habitat loss.

Delaware Riverkeeper Network		
Comment Type/Section Referenced	Comment	Service Response
General Comment	The proposal states that the GCP is “expected to protect, restore, manage, and conserve habitat that provides equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and in-lieu fee (ILF) programs.” ILF programs collect funds to support conservation efforts, however these efforts rarely benefit the actual animals affected in the project area. ILF programs often serve as a loophole for developers to pay their way out of taking responsibility for the consequences of their actions. Because of this, DRN recommends eliminating ILF programs from the proposal and instead ensure that developers are held accountable for impacts within their own project areas.	In Lieu Fee (ILF) programs are accepted by the Service as a strategy to mitigate and conserve species. The GCP is expected to cover projects that typically are smaller and would, therefore, require small amounts of habitat for mitigation. The Service generally prefers mitigation mechanisms that consolidate compensatory mitigation on the landscape, such as ILF programs, to small, disjunct compensatory mitigation sites spread across the landscape. Consolidated mitigation sites generally have advantages over multiple, small, isolated mitigation sites, especially given the Covered Species habitat needs.
General Comment	The proposal further contends that mitigation activities that offset the impact of the taking of Covered Species are not required to occur within an ITP’s designated Permit Area, but must occur within the GCP Plan Area within the state of impact (unless the local Field Office agrees to out-of-State mitigation projects). DRN believes that mitigation activities occurring within the same state is still too broad of an area. For example, restoration of a coniferous forest in western Pennsylvania does not offset the loss of a deciduous forest in eastern Pennsylvania where construction is taking place. When compensatory mitigation is absolutely necessary, it should occur within the project area whenever possible or at least within the same county at the farthest. Mitigation at the project level or the county level would provide greater benefits to the affected animals.	The conservation strategy is outlined in GCP section 4.1 and identifies four key conservation needs to improve the rangewide status of the species. This conservation strategy is based on information and concepts described in several key Service documents, including rulemakings; the draft recovery plan for the IBAT; the IBAT 5-year reviews; the Species Status Assessments for the NLEB and TCB; and the Regional IBAT Conservation Strategy that steps-down rangewide guidance to outline a consistent approach to guide conservation actions throughout the Service’s Northeast Region. The Service will give preference to compensatory mitigation that is sited within the boundaries of priority conservation areas identified or described by such landscape scale documents. This GCP offers a variety of options for mitigation, including permittee responsible, ILF, and conservation banks that allows for both local and regional mitigation actions.
General Comment	The Delaware Riverkeeper Network also believes that developers’ consultants should be required to conduct both mist net surveys and acoustic monitoring when performing presence/absence surveys for bats. There are instances where only one survey method is utilized, but mist net surveys may capture bats that acoustic monitoring failed to detect and vice versa. Therefore, both survey methods should be performed as a failsafe in the event that the first method was not thorough enough.	Comment determined not to be substantive or otherwise require a response.
General Comment	Furthermore, DRN feels that “mechanized tree felling” should be removed from the definition of the term “ground disturbance.” For example, for the Transco Regional Energy Access Expansion natural gas pipeline project in Pennsylvania, the PADEP in coordination with the FWS proposed seasonal timing restrictions near bat hibernacula and summer roosting habitat. According to those restrictions, trees may only be cleared using non-mechanical equipment between November 16 and March 31; ground disturbance may only occur between April 1 and November 15. However, the term “ground disturbance” included mechanized tree felling in its definition, which defeats the purpose of a seasonal timing restriction, since the entire calendar year is therefore technically open to tree felling. No tree felling, of any type, should be performed when bats are occupying summer roost habitat.	Comment determined not to be substantive or otherwise require a response.
General Comment	In the face of climate change, bats are also emerging from hibernation earlier and entering hibernation later. The FWS states that, “an earlier emergence from hibernation may have no detrimental effect on population size if sufficient food is available.” However, the FWS does not acknowledge the implications that earlier emergence has with their recommended seasonal timing restrictions. The timeframe can vary, but typically the FWS recommends that no tree felling/removal/clearing should occur between April 1 and November 15 as stated previously regarding Transco. With earlier emergence, bats that are active prior to April 1 may be vulnerable to harm, as are bats still active after November 15 as temperatures remain warm. The implications of climate change are that traditionally relied upon calendar dates are no longer accurate in determining activity levels of animals such as bats. Therefore, seasonal timing restrictions should be based on air temperature instead of a fixed range of dates. Air temperature is a far more reliable predictor of bat activity levels and should be the preferred method utilized by the FWS.	GCP permits are short in duration (i.e., only issued for a 5-year period) therefore, any new information regarding emergence dates can be updated in a future GCP amendment.

Delaware Riverkeeper Network		
Comment Type/Section Referenced	Comment	Service Response
General Comment	Finally, the GCP proposal recommends a 150-foot buffer for tree felling/removal/clearing. However, the FWS states that, “for IBATs and NLEBs, the next greatest likelihood of removing occupied roosts is within one mile of documented roosts.” The FWS also states that, “...the impacts discussed above may be applicable to tree clearing outside of 150 feet from roosts regardless of whether it is within known or assumed occupied habitat.” Given that the FWS acknowledges that impacts may extend beyond 150 feet and the likelihood of removing occupied roosts is within one mile of documented roosts, DRN believes that the buffer for tree felling/removal/clearing in roost habitat should be extended to one mile. Extending the buffer to one mile would encompass these fringe roost areas that may extend well beyond 150 feet. This larger buffer would prevent accidental incidental take from occurring.	The goal of the conservation strategy associated with the GCP is to minimize impacts to the maximum extent practicable at the individual level and avoid loss of populations by avoiding impacts during the most vulnerable time of year for bats. Because of the type and size of covered activities eligible under the GCP, the CMs allows for some take of individuals in certain habitat types (e.g. within 1 mile of documented roosts) but focuses on avoiding the most sensitive habitat types (i.e. 150ft of documented roosts) to achieve this goal.
Closing Statement	By incorporating all of these aforementioned recommendations, DRN believes that the GCP would be strengthened and far more protective of these imperiled bat species. Thank you for your time and consideration of our comments. We look forward to monitoring the progress of this essential proposal. Please keep us apprised of the process by contacting DRN’s Science and Policy Analyst, Matthew McCann, at matthew@delawareriverkeeper.org	Comment determined not to be substantive or otherwise require a response.



EWAC[®]

Energy and Wildlife
Action Coalition

November 27, 2024

Comments regarding:

October 29, 2024 Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia

Submitted by:

Energy and Wildlife Action Coalition

Filed electronically to the attention of:

Public Comments Processing
Attn: FWS-R5-ES-2024-0039
U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 22041-3803

Docket No. FWS-R5-ES-2024-0039

The Energy and Wildlife Action Coalition (“EWAC”)¹ submits these comments in response to the United States Fish and Wildlife Service’s (“Service”) October 29, 2024 Proposed Multi-Bat Species General Conservation Plan (“Proposed GCP”) for Routine Project Development Projects in New York, Pennsylvania, and West Virginia (collectively, “Plan Area”) that covers take of the federally endangered Indiana bat (“INBA”) and northern long-eared bat (“NLEB”) and the proposed endangered tricolored bat (“TCBA”) (collectively, “Covered Species”).² EWAC provides these comments on the Proposed GCP based on the knowledge and experience of its membership.

I. EWAC Generally Supports the Use of Streamlined Solutions to Incidental Take Coverage Where the Solutions Are Developed by Stakeholders or with Their Input.

EWAC appreciates the Service’s efforts to create a streamlined incidental take permitting process to assist project proponents with Endangered Species Act (“ESA”) compliance. However, the Service must be careful to ensure that general conservation plans (“GCP”) are developed in close coordination with affected stakeholders and incorporate the input of those members of the regulated community that will be utilizing those plans. The 2007 Final General Conservation Plan Policy notes that a GCP may not be an appropriate tool where the scope and magnitude of activities exceeds the Service’s expertise and abilities.³ Thus, GCPs designed to cover specific types of development will be most successful when developed collaboratively, with stakeholder input from those who engage in such activities, to ensure that the GCP is workable for those that will be responsible for implementing it and “attractive” enough to garner widespread participation. Without stakeholder engagement during the development of these tools and incorporation of their input, key aspects of the GCPs, such as minimization and mitigation measures, may prove to be infeasible and result in low participation.

II. The Service Should Be Mindful that the Existence of the Proposed GCP Does Not Preclude the Use of Other Approaches to Meet ESA Section 10 Issuance Criteria.

EWAC recommends that the Service remind its local field offices in the Plan Area that the creation of the Proposed GCP does not mandate the use of the plan to obtain authorization under ESA section 10 (“Section 10”). So long as an applicant has met the issuance criteria set forth in Section 10, the applicant should be able to obtain an incidental take permit (“ITP”) even if that

¹ EWAC is a national 501(c)(6) trade association formed in 2014 whose members consist of electric utilities, electric transmission providers, and renewable energy entities operating throughout the United States, and related trade associations. The fundamental goals of EWAC are to evaluate, develop, and promote sound environmental policies for federally protected wildlife and closely related natural resources while ensuring the continued generation and transmission of reliable and affordable electricity. EWAC supports public policies, based on sound science, that protect wildlife and natural resources in a reasonable, consistent, and cost-effective manner. EWAC is a majority-rules organization and therefore specific decisions made by the EWAC Policy Committee may not always reflect the positions of every member.

² 89 Fed. Reg. 85,983 (Oct. 29, 2024); U.S. Fish & Wildlife Service, *Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia* (Oct. 2024) (hereinafter, Proposed GCP), available at <https://downloads.regulations.gov/FWS-R5-ES-2024-0039-0003/content.docx>.

³ U.S. Fish & Wildlife Service, Memorandum from Service Director to Assistant Regional Directors re Final General Conservation Plan Policy (Oct. 5, 2007), available at: [https://www.law.uh.edu/faculty/thester/courses/Environmental-Practicum-2016/1%20-%20Final%20General%20Conservation%20Plan%20Policy%20\(Hall%20Memo\).pdf](https://www.law.uh.edu/faculty/thester/courses/Environmental-Practicum-2016/1%20-%20Final%20General%20Conservation%20Plan%20Policy%20(Hall%20Memo).pdf).

applicant has proposed different measures than those set forth in the Proposed GCP.⁴ Applicants proposing other legally-sufficient approaches in an individual habitat conservation plan (“HCP”) should not be forced to adopt the conservation measures in the Proposed GCP. In some circumstances, the Proposed GCP measures may be unworkable, and an applicant must develop an HCP that is more tailored to the needs of its specific project. In the Proposed GCP, the Service recognizes that “[l]andowners and [p]roject [p]roponents that meet [the Proposed GCP’s] eligibility criteria *may choose* whether they wish to adopt the GCP when applying for an [ITP], or conversely, whether they prefer to develop their own plan using the project-specific HCP process.”⁵ Consistent with this language and to avoid any future confusion, EWAC requests that the Service provide clear written guidance to its field offices, clarifying that the Proposed GCP is just *one* of the ways to satisfy the conservation plan component of an ITP application.

III. The Proposed GCP is Inconsistent with the Latest Tricolored and Northern Long-Eared Bat Guidance.

EWAC is concerned that the Proposed GCP is inconsistent with the Service’s Northern Long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects (“Bat Guidance”) and that these inconsistencies create uncertainty for the regulated community.⁶ The Proposed GCP includes certain activities as “covered activities” based on the assumption that they would cause incidental take, even though under the Bat Guidance they would be considered to have “no effect” or “not likely to effect” the NLEB and/or TCBA.⁷ For example, the Bat Guidance identifies tree removal as an activity that is predetermined to have “no effect” or “not likely to adversely affect,” if the activity is limited in scope and occurs within a defined time;⁸ however, the Proposed GCP broadly identifies “vegetation clearing” and tree removal as an activity covered by the plan.⁹ If the Bat Guidance suggests that certain activities will have no effect or not likely to adversely affect certain species, then the Proposed GCP should not include these as covered activities for those species. The Service’s Habitat Conservation Planning and Incidental Take Permit Processing Handbook is clear that activities for which take is unlikely should not be included in an ITP.¹⁰ Rather, and consistent with the Bat Guidance, if the Bat Guidance indicates that the activity will have “no effect” or is “not likely to adversely affect” then “no further action is needed for those species.”¹¹ In the Bat Guidance, the Service states that the analysis the Determination Key (“DKey”) relies on “is based on the best available scientific and

⁴ See 16 U.S.C. § 1539(a)(2)(A).

⁵ Proposed GCP at 4 (emphasis added).

⁶ U.S. Fish & Wildlife Service, *Northern Long-Eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Project, Version 1.0* (Oct. 15, 2024), (hereinafter, “Bat Guidance”) available at: https://www.endangeredspecieslawandpolicy.com/assets/htmldocuments/NewBlogs/EndangeredSpecies/nleb_tcb_consultation_guidance_version-1.0_final.pdf.

⁷ Of the three Covered Species in the Proposed GCP, the Bat Guidance only covers the NLEB and TCBA, not the INBA; however, this does not change the following points on consistency and predictability.

⁸ Bat Guidance at 22.

⁹ Proposed GCP at 36.

¹⁰ U.S. Fish & Wildlife Service, *Habitat Conservation Planning and Incidental Take Permit Processing Handbook*, at 3-2 (Dec. 21, 2016), available at: https://www.fws.gov/sites/default/files/documents/habitat-conservation-planning-handbook-entire_0.pdf (stating “if incidental take of ESA-listed species is not anticipated from a landowner or project proponent’s activities, an incidental take permit is not needed or appropriate”).

¹¹ Bat Guidance at 8.

commercial information relevant to the species.”¹² Thus, any suggestion from the Proposed GCP that a risk of incidental take exists for activities that the DKey considers to have no risk, is inconsistent with the Service’s best available science.

In addition, the Proposed GCP imposes additional conservation measures that are over and above the “consistent” and “range-wide” standards already set forth in the Bat Guidance. For federal and non-federal actions, the Bat Guidance indicates that implementation of the Minimum Conservation Measures¹³ set forth in the Bat Guidance is sufficient to minimize and mitigate impacts to the NLEB and TCBA without requiring additional measures.¹⁴ Because the Bat Guidance is intended to apply range-wide for the NLEB and TCBA, to impose additional requirements through the Proposed GCP would conflict with the Bat Guidance’s goal of providing “regulatory predictability and consistency across [the NLEB and TCBA’s] wide ranges.”¹⁵ Consistency is important to the regulatory community as it provides certainty and predictability when managing risk under the ESA. The Service should ensure that any requirements imposed by the Proposed GCP be consistent with the Bat Guidance.

IV. The Service Should Consider How Solutions Like the Proposed GCP Could Be Replicated in Other Geographic Areas and Cover Additional Activities.

Should the Proposed GCP be finalized and result in significant participation and use, EWAC encourages the Service to consider how it can replicate solutions like the Proposed GCP in other parts of the Covered Species’ range and for other potential sources of impact, again through consultation with relevant stakeholders. In doing so, the Service should consider inclusion of conservation measures not centered on hibernacula protection, such as surveying and gathering data where limited data is available regarding bat activity around the project area and locating and protecting previously unknown colonies, may help with replication of the Proposed GCP in geographic areas where bats are more active in winter. EWAC further recognizes that the Service would need to consider adapting any future GCPs based on the Covered Species’ ecological setting and region-specific needs in those areas.

V. Conclusion.

EWAC appreciates the Service’s consideration of these comments. The incorporation of EWAC’s comments will result in a final GCP that is consistent with the Services’ existing guidance for the Covered Species and will encourage regulatory certainty for those managing risk under the ESA. EWAC would welcome the opportunity to discuss the comments in greater detail with the Service.

¹² *Id.* at 8.

¹³ See the Minimum Conservation Measures set forth on pages 9-10 of the Guidance.

¹⁴ *See id.* at 9.

¹⁵ *Id.*

Please feel free to contact the following EWAC representatives:

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Energy and Wildlife Action Coalition		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	The Energy and Wildlife Action Coalition (“EWAC”)1 submits these comments in response to the United States Fish and Wildlife Service’s (“Service”) October 29, 2024 Proposed Multi-Bat Species General Conservation Plan (“Proposed GCP”) for Routine Project Development Projects in New York, Pennsylvania, and West Virginia (collectively, “Plan Area”) that covers take of the federally endangered Indiana bat (“INBA”) and northern long-eared bat (“NLEB”) and the proposed endangered tricolored bat (“TCBA”) (collectively, “Covered Species”).2 EWAC provides these comments on the Proposed GCP based on the knowledge and experience of its membership.	Comment determined not to be substantive or otherwise require a response.
General Comment	I. EWAC Generally Supports the Use of Streamlined Solutions to Incidental Take Coverage Where the Solutions Are Developed by Stakeholders or with Their Input. EWAC appreciates the Service’s efforts to create a streamlined incidental take permitting process to assist project proponents with Endangered Species Act (“ESA”) compliance.	Comment determined not to be substantive or otherwise require a response.
General Comment	However, the Service must be careful to ensure that general conservation plans (“GCP”) are developed in close coordination with affected stakeholders and incorporate the input of those members of the regulated community that will be utilizing those plans. The 2007 Final General Conservation Plan Policy notes that a GCP may not be an appropriate tool where the scope and magnitude of activities exceeds the Service’s expertise and abilities.3 Thus, GCPs designed to cover specific types of development will be most successful when developed collaboratively, with stakeholder input from those who engage in such activities, to ensure that the GCP is workable for those that will be responsible for implementing it and “attractive” enough to garner widespread participation. Without stakeholder engagement during the development of these tools and incorporation of their input, key aspects of the GCPs, such as minimization and mitigation measures, may prove to be infeasible and result in low participation.	The 2007 Final GCP Policy states, “It is also important to note that the GCP is not a substitute for a regional multiple action HCP. The use of the GCP will be limited to activities that the Service has the expertise and ability to analyze. Because of the complexities of fully analyzing all activities for which a county or other jurisdiction may require coverage under a 10(a)(1)(B) permit, the GCP would probably be ill-suited to needs of this scope and magnitude. Such a large-scale effort would be better developed using the traditional HCP approach.” A primary goal of a GCP is that the time and workload associated with the development of this type of plan should be much less than the traditional HCP, since the GCP is formulated by Service personnel without the need for the typical negotiation process of the traditional HCP. Rather than a GCP, certain industries would likely be better served through an Industry Conservation Plan (ICP). ICPs are a form of an umbrella or template HCP that is specific to a particular industry, and could be drafted by an industry proponent group, and/or negotiated directly between the Service and representatives of that industry. Such an ICP can work very much like a GCP and would significantly benefit from industry stakeholder input.
General Comment	II. The Service Should Be Mindful that the Existence of the Proposed GCP Does Not Preclude the Use of Other Approaches to Meet ESA Section 10 Issuance Criteria. EWAC recommends that the Service remind its local field offices in the Plan Area that the creation of the Proposed GCP does not mandate the use of the plan to obtain authorization under ESA section 10 (“Section 10”). So long as an applicant has met the issuance criteria set forth in Section 10, the applicant should be able to obtain an incidental take permit (“ITP”) even if that applicant has proposed different measures than those set forth in the Proposed GCP.4 (footnote 4 - See 16 U.S.C. § 1539(a)(2)(A)). Applicants proposing other legally-sufficient approaches in an individual habitat conservation plan (“HCP”) should not be forced to adopt the conservation measures in the Proposed GCP. In some circumstances, the Proposed GCP measures may be unworkable, and an applicant must develop an HCP that is more tailored to the needs of its specific project. In the Proposed GCP, the Service recognizes that “[l]andowners and [p]roject [p]roponents that meet [the Proposed GCP’s] eligibility criteria may choose whether they wish to adopt the GCP when applying for an [ITP], or conversely, whether they prefer to develop their own plan using the project-specific HCP process.”5 (footnote 5 - Proposed GCP at 4 (emphasis added)). Consistent with this language and to avoid any future confusion, EWAC requests that the Service provide clear written guidance to its field offices, clarifying that the Proposed GCP is just one of the ways to satisfy the conservation plan component of an ITP application.	If the project proponent chooses to use the GCP, they will need to implement the conservation program in its entirety, as outlined in the GCP document. However, the decision to use the GCP is voluntary. The GCP is just one Section 10 tool available to PA, NY and WV.

Energy and Wildlife Action Coalition		
Comment Type/Section Referenced	Comment	Service Response
General Comment	III. The Proposed GCP is Inconsistent with the Latest Tricolored and Northern Long-Eared Bat Guidance. EWAC is concerned that the Proposed GCP is inconsistent with the Service's Northern Long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects ("Bat Guidance") and that these inconsistencies create uncertainty for the regulated community.⁶ (footnote 6 - 6 U.S. Fish & Wildlife Service, Northern Long-Eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Project, Version 1.0 (Oct. 15, 2024), (hereinafter, "Bat Guidance") available at: https://www.endangeredspecieslawandpolicy.com/assets/htmldocuments/NewBlogs/EndangeredSpecies/nleeb_tcb_consultation_guidance_version-1.0_final.pdf). The Proposed GCP includes certain activities as "covered activities" based on the assumption that they would cause incidental take, even though under the Bat Guidance they would be considered to have "no effect" or "not likely to effect" the NLEB and/or TCBA.⁷ For example, the Bat Guidance identifies tree removal as an activity that is predetermined to have "no effect" or "not likely to adversely affect," if the activity is limited in scope and occurs within a defined time;⁸ however, the Proposed GCP broadly identifies "vegetation clearing" and tree removal as an activity covered by the plan.⁹ If the Bat Guidance suggests that certain activities will have no effect or not likely to adversely affect certain species, then the Proposed GCP should not include these as covered activities for those species. The Service's Habitat Conservation Planning and Incidental Take Permit Processing Handbook is clear that activities for which take is unlikely should not be included in an Incidental Take Permit.¹⁰ Rather, and consistent with the Bat Guidance, if the Bat Guidance indicates that the activity will have "no effect" or is "not likely to adversely affect" then "no further action is needed for those species."¹¹ In the Bat Guidance, the Service states that the analysis the Determination Key ("DKey") relies on "is based on the best available scientific and commercial information relevant to the species."¹² Thus, any suggestion from the Proposed GCP that a risk of incidental take exists for activities that the DKey considers to have no risk, is inconsistent with the Service's best available science.	The GCP is a voluntary tool, the use of which is determined by the project proponent. We encourage the use of the Service's online Information for Planning and Consultation program first, using the Northern Long-Eared Bat and Tricolored Bat Rangewide Determination Key or the Northeast Endangered Species Determination Key (for IBAT) to help the project proponent determine if their project will result in take of federally listed species. The GCP is a streamlining tool designed to help eligible applicants voluntarily comply with the ESA.
General Comment and Section 4.4.1	In addition, the Proposed GCP imposes additional conservation measures that are over and above the "consistent" and "range-wide" standards already set forth in the Bat Guidance. For federal and non-federal actions, the Bat Guidance indicates that implementation of the Minimum Conservation Measures¹³ set forth in the Bat Guidance is sufficient to minimize and mitigate impacts to the NLEB and TCBA without requiring additional measures.¹⁴ Because the Bat Guidance is intended to apply range-wide for the NLEB and TCBA, to impose additional requirements through the Proposed GCP would conflict with the Bat Guidance's goal of providing "regulatory predictability and consistency across [the NLEB and TCBA's] wide ranges."¹⁵ Consistency is important to the regulatory community as it provides certainty and predictability when managing risk under the ESA. The Service should ensure that any requirements imposed by the Proposed GCP be consistent with the Bat Guidance.	The guidance referred to by the commentor does state that for non-federal actions under ESA section 10, we (the Service) also recommend these measures (Minimum Conservation Measures or MCMs) be included in HCPs. MCMs 1-9 are intended on their own to avoid jeopardy for only the NLEB and TCB, but they may not meet the HCP issuance criteria of minimize and mitigate to the maximum extent practicable, especially for the IBAT. This is why MCM 10 is included and states, "Offset any remaining impacts of incidental take that were not avoided. For example, offsetting measures could include (but are not limited to) restoring or protecting known habitat for the affected species, locating and protecting new colonies, and treating NLEB and/or TCB for white-nose syndrome (WNS) if treatments are available." The guidance states that for MCM 10, non-federal project proponents should coordinate with the local Service field office for potential offsets, and such offsets would be developed in coordination with project proponents and based on the specific circumstances of their project, and then also coordinate offsetting measures for the IBAT. The guidance document clearly states that it is subject to periodic updates and that we recognize other compliance strategies are possible. Further, the guidance states the Service does not anticipate the need to specify any additional reasonable and prudent measures under ESA section 7 consultations. However, the guidance does identify the potential need for additional offsetting measures such as those presented in the GCP. The GCP is a voluntary tool that will streamline the ESA section 10 Incidental Take Permit process. Project proponents are not required to use the GCP and are able to follow the standard HCP process and develop their own HCP. The GCP was designed and analyzed based on certain types of activities. Mitigation measures were included to fully offset any impact of the taking remaining after the implementation of all practicable avoidance and minimization measures as stated in MCM 10 of the guidance document.
Section 1.3 and 3.4	IV. The Service Should Consider How Solutions Like the Proposed GCP Could Be Replicated in Other Geographic Areas and Cover Additional Activities. Should the Proposed GCP be finalized and result in significant participation and use, EWAC encourages the Service to consider how it can replicate solutions like the Proposed GCP in other parts of the Covered Species' range and for other potential sources of impact, again through consultation with relevant stakeholders.	This GCP is considered a pilot project and limited to 3 states. However, we may consider amending the GCP and associated NEPA documents in the future to include additional project types and geographic areas in the future.

Energy and Wildlife Action Coalition		
Comment Type/Section Referenced	Comment	Service Response
Section 4.4.1.2	In doing so, the Service should consider inclusion of conservation measures not centered on hibernacula protection, such as surveying and gathering data where limited data is available regarding bat activity around the project area and locating and protecting previously unknown colonies, may help with replication of the Proposed GCP in geographic areas where bats are more active in winter. EWAC further recognizes that the Service would need to consider adapting any future GCPs based on the Covered Species' ecological setting and region-specific needs in those areas.	Surveying and gathering data on where post-WNS survivors are is an important recovery goal of the Service and is incorporated into the mitigation strategy of the GCP. This is discussed in section 4.6.3 of the GCP Priority 3 actions.
Closing Statement	V. Conclusion. EWAC appreciates the Service's consideration of these comments. The incorporation of EWAC's comments will result in a final GCP that is consistent with the Services' existing guidance for the Covered Species and will encourage regulatory certainty for those managing risk under the ESA. EWAC would welcome the opportunity to discuss the comments in greater detail with the Service.	Comment determined not to be substantive or otherwise require a response.

ENVIRONMENTAL ENERGY ALLIANCE OF NEW YORK
2 Robinwood Lane
LaGrangeville, New York 12540



December 3, 2024

SUBMITTED to Docket ID: FWS-R5-ES-2024-0039

Re: Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia

On behalf of the Environmental Energy Alliance of New York, LLC (the “Alliance”), please accept for your consideration our comments on the Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia. See 89 Fed. Reg. 85981 (Oct. 29, 2024). Alliance members own and operate electric and gas transmission and distribution lines and stations, and electric generating facilities throughout New York State and, in some instances, across the nation and the globe. The operations of Alliance members contribute to the reliability of the electric grid and to the economic well-being of New York State and beyond.

Environmental protection, particularly for rare, threatened and endangered species is a priority for Alliance member companies. However, the companies must also comply with strict obligations under federal and state law (FERC/NERC requirements) to ensure the reliability of the essential energy services they provide, the safety of their infrastructure and operations, and the reasonableness of the costs they pass along to their rate-paying customers.

The operation, maintenance, repair, and upgrades necessary to enhance reliability and resilience of this critically important public infrastructure often requires trimming tree and shrub limbs or removing trees and shrubs to maintain safe and reliable utility Right of Ways (“ROWS”). Alliance members are aware that several bat species have suffered declines in recent years due to White Nose Syndrome (“WNS”). Some of our members have already developed Habitat Conservation Plans (“HCP”) for these bat species and others are developing them now. Members are also undertaking other conservation efforts, such as the development of meadow spaces for foraging purposes, and the inclusion of artificial bat roosts. These efforts and others demonstrate our members’ commitment to the protection of bats and willingness to engage in meaningful efforts to further the conservation of these bat species.

We understand this draft General Conservation Plan (“GCP”) was created to assist individual applicants with satisfying the statutory and regulatory requirements of a habitat conservation plan for issuance of an incidental take permit under Endangered Species Act (“ESA”) Section 10(a)(1)(B). Project proponents seeking to comply with the requirements of the ESA who verify that their project meets the requirements described in the plan, and who agree to implement the conservation measures that apply to their project can adopt this GCP to satisfy the conservation plan component of their application when applying for a permit.

EEANY appreciates the USFWS's efforts to streamline the HCP process through establishment of a general permit, since general permits typically provide a streamlined method for regulated entities to comply with the law that simultaneously protects the environment. In this instance, however, EEANY is concerned that the GCP as drafted would likely be of limited use to electric utilities for several overarching reasons. First, the GCP appears to exclude ongoing/recurring activities that could result in take, such as O&M and routine vegetation management activities, which are critical to ensuring safe and reliable operation of electric transmission and distribution lines. Second, the application process/materials required for obtaining an ITP, as well as compliance requirements, may be overly burdensome and costly, especially in comparison to those associated with existing HCPs that some members already have in place or are pursuing.

Third, the GCP appears to *preclude* certain areas from utilizing this GCP regardless of the activity type (i.e., projects that result in "effects" to documented covered species' summer travel/commuting habitat, around known or assumed occupied hibernacula during fall swarming or spring staging periods, or within documented or assumed occupied suitable habitat during the maternity period) and explicitly states that the GCP does *not cover* any "impacts" to bats within 0.5 miles of hibernacula. "Effects" and "impacts" are not clearly defined in the GCP. Therefore, EEANY assumes that "effects" and "impacts" are considered "incidental take", as described at Section 4.5 of the GCP. Specifically, "incidental take" is anticipated to be associated with tree removal (including trimming, topping, pruning, and/or limbing). Given the linear and wide-ranging extent of ROW corridors across the landscape, EEANY is concerned that the *precluded* and *not covered* areas noted above will result in significantly segmenting the areas of ROWs where this GCP can be utilized for routine vegetation management activities such as tree trimming. We suggest that O&M and routine vegetation management activities be eligible under the GCP regardless of their location in relation to the *precluded* and *not covered* areas noted above, and that the GCP be reoriented to have greater focus on only those electric utility activities that are truly expected to have a negative impact on the covered bat species. As written, the GCP will be of limited value and may jeopardize the ability of utilities to ensure safe reliable electric service while achieving New York State's climate change objectives under the Climate Leadership and Community Protection Act.

Comments on specific elements of the GCP:

Project Duration: Within Section 1.4 in the second paragraph, the draft GCP states that permittees have up to five years to complete the project. This brings up the question of what constitutes a "project". Projects are typically larger new construction, rebuilds, reconductoring, etc. For utilities, some of our work consists of routine on-going vegetation management, so this timeframe may not be consistent with normal vegetation management or the typical cycles that are used to accomplish that work. If a company's vegetation management cycle is longer than this, the company would potentially need to split up its cycle to ensure coverage.

Other Listed Wildlife: In Section 3.2 there are examples of projects precluded from participation through the GCP process. The first bullet indicates “Other federally listed wildlife or adverse effects to federally listed plants”. Later in the GCP, in Appendix B’s Eligibility Key, when you answer “no” to item 1.2, it indicates that the GCP cannot be used. It says that “this GCP only provides incidental take coverage for the covered species. Proposed projects that will result in take of other species federally listed as threatened or endangered will require additional authorization under the ESA”. EEANY requests that USFWS clarify whether it intends that this GCP be used only when no other ESA threatened or endangered species are present. If that is USFWS’s position, EEANY requests that USFWS reconsider that position. Other listed species would of course require additional ESA authorization, but it is unclear why this GCP could not still be utilized for bats in that situation?

Excluded/Ineligible Activities: EEANY has concerns with certain activities excluded from the draft GCP, mostly found in Sections 3.2 and 3.3, which we think may substantially narrow the circumstances in which electric utilities could use the GCP as drafted:

- **New electric transmission line construction or expansion** – The GCP allows coverage of new construction of distribution lines under certain circumstances, but not new transmission lines. In footnote 167, USFWS appears to justify this disparate treatment by describing the different voltages of transmission versus distribution lines, but that is not relevant here. We suggest applying this to electric lines in general, whether distribution or transmission.
 - It is understandable to not include **new** transmission lines which may involve substantial clearing above acreage thresholds established elsewhere, but there are many new transmission lines that require minimal tree clearing, and as such we would expect they could meet the requirements of the GCP. At the very least, new overhead transmission lines and rebuilds constructed in existing ROWs should be covered, as the footprint of those new lines will be very similar to that of existing lines.
 - Similarly, expansion of transmission lines may not require any substantial clearing, so to exclude those universally does not seem to make sense. We note that in section 3.4 expansion of existing roadways/railways are covered. Powerline corridors are considered critical infrastructure the same way that highways are considered critical infrastructure. We suggest that expansion of existing transmission lines should be eligible as well, including electric lines requiring O&M (reconductoring, ACR, etc. If USFWS maintains some sort of exclusion for expansion of transmission lines in the final GCP, it should define the term “expansion” and explain which particular expansions are excluded.
- **Emergency situations such as spills and spill responses** – in such emergency response situations, restoration of power and clean up of any spills must happen quickly. It would make sense to allow such emergency activities to be included in the GCP. We suggest that emergencies should not be included and that they are exempt activities from the HCP.
- **Aerial application or other large-scale application of pesticides** – it is not clear what is included in “other large-scale application of pesticides.”
- **Airplane and helicopter surveys** – does this mean all aerial patrols are not covered and need a separate HCP? Language in Section 3.4.1 further suggests that annual patrols,

vegetation inventory and such that may be conducted with airplane and helicopter patrols are not covered. We ask that they be considered eligible activities since they are a routine maintenance activity that must be conducted to ensure safety and reliability.

It appears that USFWS wants to categorically exclude projects which result in effects to trees within 150 feet of documented roosts at any time of year from the GCP, which seems overbroad. This is mentioned in Section 3.2, and also in Section 4.5.1.1 on tree removal: "Impacts to bats from tree removal is anticipated to vary depending on the location, extent, and timing of removal. The location with greatest likelihood of cutting a roost with bats present is a known maternity colony roost or suitable trees in close proximity to known maternity colony roosts. Permits issued under this GCP will not result in the removal of any known, documented roosts (that remain suitable for roosting) or trees within 150 feet of those roosts at any time. Therefore, projects will avoid the potential for this particular impact."

This broad exclusion is troubling because, as indicated previously, utilities are obligated to provide a safe and reliable electric system, and therefore, this paragraph is in direct conflict with the ability to do that. Avoidance is simply not always possible. There needs to be another mechanism to provide for mitigation when avoidance is not possible. This may happen during emergency work, and in other situations where perhaps not an emergency response, but for which the critical infrastructure work must be done promptly and there is not time to obtain an ITP. The GCP should perhaps provide an option for such circumstances, where the utilities take all prudent measures to avoid/mitigate take, but only after the fact notification to USFWS is required. Further, it is our understanding that at least one particular species (NLEB), typically does not roost on edges, but rather prefers interior forest areas. This would suggest that routine vegetation maintenance is for the most part, quite unlikely to impact this species, and therefore should eliminate the concern for NLEB along the tree edge on linear projects. There is language that seems to acknowledge this for existing roadways/railways, but no consideration of it for utility lines.

Ongoing Activities: The GCP contains inconsistent language about whether ongoing/recurring activities will be covered. USFWS should clarify this point, and should do so with the understanding that electric utilities are significantly less likely to utilize the GCP if ongoing activities such as vegetation maintenance are not eligible. As an example of the inconsistent language in the draft GCP on this issue, the last paragraph of section 3.4 under eligible activities states that "operations activities that result in ongoing or recurring take are not covered by this GCP." However, in describing "Operations and Maintenance" of utilities in Section 3.4.3, USFWS notes, "Utility line ROWs are generally kept clear of trees to provide for line maintenance and prevent roots from impacting pipes or branches from hitting lines." And, in section 3.4.1 there is discussion of "Vegetation Clearing", which may include removal of trees (including tree topping), limbing and trimming of trees, shrubs, or herbaceous vegetation. Methods may include hand tools (e.g., chainsaw) or heavy equipment (e.g., excavators and bulldozers).

So, does this mean long range vegetation maintenance of distribution and/or transmission systems are excluded? Or does it mean certain recurring vegetation management is eligible under the GCP and others are not? EEANY recommends that this critical on-going maintenance that is required to ensure safety and reliability should be explicitly included in eligible activities.

Linear Project Survey Requirements: Section 4.1 of the GCP provides an example for a survey requirement for non-linear projects with greater than 25 acres of tree removal, which is defined broadly to also include trimming and pruning. Is there a similar survey requirement for linear projects? Additionally, provided that recurring vegetation management is eligible for the GCP as described above, EEANY recommends that USFWS consider allowing reuse of surveys for areas like ROWs. This approach would make sense in instances where the vegetation management will only be occurring over a subset of the ROW at any given time and the characteristics of the ROW are fairly consistent over a broad area.

In Section 4.2, biological goal 3 indicates that maternity colonies and summer habitat will be identified, protected, restored (as needed), and maintained to ensure that essential breeding, feeding, and sheltering areas are available for the Covered Species in the Plan Area. What is anticipated in terms of how one might restore maternal colonies and summer habitat? Will there be compliance requirements, monitoring, or conditions to be met for restored areas? For example, will an annual monitoring event be required to determine survivability of vegetation?

Near the end of section 4.5 there is a discussion about tree-clearing during the inactive season and that it may result in effects that rise to the level of take when the bats return to the area in subsequent active seasons. While we understand the conceptual nature of take in this scenario, it must be noted that in order to maintain safe and reliable electric systems, appropriate vegetation management (removal of vegetation that could jeopardize the facility), must be conducted, and it should be recognized that other natural events (eg. storms, wind, ice, fire, etc) could remove those roost trees as well.

In Section 4.5.1 the second bullet regarding noise/vibration is unclear. Specifically what types of noise / vibration would cause take?

In 4.5.1.2 regarding “Noise/Vibration Associated with Active Season Habitat Modification”, USFWS cites to a study mentioning an IBAT abandoning a primary roost, but also cites to multiple other studies which implied the opposite conclusion, of IBATs not being affected by noise. In the relocation example, was this a temporary or permanent relocation by the IBAT? USFWS should consider whether these limited studies provide sufficient justification for entirely excluding projects that only result in take from noise/vibration from the GCP. If USFWS does exclude such projects from the GCP, EEANY recommends that USFWS provide greater guidance about what constitutes “noise/vibration” (i.e., a noise level threshold) so that different field offices do not apply this exclusion inconsistently.

Mitigation: There is considerable discussion in Section 4.6.1.1 regarding conservation banks and 4.6.1.2 regarding In Lieu Fee Programs. We believe this approach has potential merit; however, as is acknowledged in the section, there are currently no approved conservation banks within the GCP plan area that provide mitigation credits. The Permittee-Responsible Mitigation (“PRM”) approach in section 4.6.1.3 may be potentially viable for specific projects and is worth consideration; however, it is unclear how the mitigation ratios were determined, and it is unclear

what the basis is for them or whether they are appropriate. Some of them seem quite extensive and perhaps more than is practical or warranted. Several of the utilities have engaged with the Candidate Conservation Agreement with Assurances ("CCAA") for the Monarch butterfly. Is it possible that this arrangement would be similar to the adopted acres approach for the CCAA? Lastly, the section goes on to indicate consultation with the regional field office should occur to implement these options, but again, on-going routine maintenance and operations are not conducive to such an approach as much of the routine maintenance work utilities do to ensure safe and reliable operations of the system must be done promptly (and in some instances under emergency situations) and there often may not be time for such consultation.

In Section 4.6.4, Table 4.1 seems to address mitigation ratios for linear facilities, but it is seemingly specific to roads/rails. Given that linear electric facilities are included in the GCP, could the USFWS consider explicitly referencing linear electric facilities in this table? Or perhaps an in lieu fee approach is probably more reasonable, however, we think the specific location of the activity should be the ultimate factor in determining a ratio.

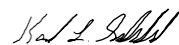
In the Individual Project Plan Checklist, Item 10 requires that you submit color digital images. It is unclear how this would be practical for a utility to do if the GCP were being utilized for long term vegetation management on a transmission line where a company would be conducting vegetation management over the course of several years.

Lastly, the draft GCP does not seem to provide a timeframe for USFWS to respond to applications for use of the GCP. Given that the GCP is supposed to provide a streamlined permitting approach, inclusion of a specific, reasonable timeframe in the GCP for USFWS's response seems important.

* * *

We appreciate the opportunity to provide input at this time on the Proposed Multi-Bat Species General Conservation Plan and we thank you for your consideration of these comments. You may contact me at (845) 453-5297 or via email at karl.schoeberl@eeanyweb.org if you have any questions about our comments.

Sincerely,



Karl L. Schoeberl
Director

Environmental Energy Alliance of New York, LLC		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	On behalf of the Environmental Energy Alliance of New York, LLC (the “Alliance”), please accept for your consideration our comments on the Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia. See 89 Fed. Reg. 85981 (Oct. 29, 2024). Alliance members own and operate electric and gas transmission and distribution lines and stations, and electric generating facilities throughout New York State and, in some instances, across the nation and the globe. The operations of Alliance members contribute to the reliability of the electric grid and to the economic well-being of New York State and beyond.	Comment determined not to be substantive or otherwise require a response.
General Comment	Environmental protection, particularly for rare, threatened and endangered species is a priority for Alliance member companies. However, the companies must also comply with strict obligations under federal and state law (FERC/NERC requirements) to ensure the reliability of the essential energy services they provide, the safety of their infrastructure and operations, and the reasonableness of the costs they pass along to their rate-paying customers.	Comment determined not to be substantive or otherwise require a response.
General Comment	The operation, maintenance, repair, and upgrades necessary to enhance reliability and resilience of this critically important public infrastructure often requires trimming tree and shrub limbs or removing trees and shrubs to maintain safe and reliable utility Right of Ways (“ROWs”). Alliance members are aware that several bat species have suffered declines in recent years due to White Nose Syndrome (“WNS”). Some of our members have already developed Habitat Conservation Plans (“HCP”) for these bat species and others are developing them now. Members are also undertaking other conservation efforts, such as the development of meadow spaces for foraging purposes, and the inclusion of artificial bat roosts. These efforts and others demonstrate our members’ commitment to the protection of bats and willingness to engage in meaningful efforts to further the conservation of these bat species.	Comment determined not to be substantive or otherwise require a response.
General Comment	We understand this draft General Conservation Plan (“GCP”) was created to assist individual applicants with satisfying the statutory and regulatory requirements of a habitat conservation plan for issuance of an incidental take permit under Endangered Species Act (“ESA”) Section 10(a)(1)(B). Project proponents seeking to comply with the requirements of the ESA who verify that their project meets the requirements described in the plan, and who agree to implement the conservation measures that apply to their project can adopt this GCP to satisfy the conservation plan component of their application when applying for a permit.	Comment determined not to be substantive or otherwise require a response.
General Comment	EEANY appreciates the USFWS’s efforts to streamline the HCP process through establishment of a general permit, since general permits typically provide a streamlined method for regulated entities to comply with the law that simultaneously protects the environment.	Comment determined not to be substantive or otherwise require a response.
General Comment	In this instance, however, EEANY is concerned that the GCP as drafted would likely be of limited use to electric utilities for several overarching reasons. First, the GCP appears to exclude ongoing/recurring activities that could result in take, such as O&M and routine vegetation management activities, which are critical to ensuring safe and reliable operation of electric transmission and distribution lines.	The GCP <u>does</u> cover operation and maintenance or modification of existing electrical transmission lines within existing footprints. However, the GCP does not cover new electric transmission line construction or expansion. Take associated with operations and maintenance of new and existing electrical distribution lines is however covered under this GCP. Clarified text in GCP to address ongoing/reoccurring take associated with post-construction operations.
General Comment	Second, the application process/materials required for obtaining an ITP, as well as compliance requirements, may be overly burdensome and costly, especially in comparison to those associated with existing HCPs that some members already have in place or are pursuing.	The GCP is a voluntary tool, the use of which is determined by the project proponent. Since most of the required documents and analysis are completed up front (i.e. HCP, NEPA, etc.), the GCP process is considerably streamlined and has been specifically designed to provide significant time and cost savings for those project proponents who decide to utilize this tool.
General Comment	Third, the GCP appears to preclude certain areas from utilizing this GCP regardless of the activity type (i.e., projects that result in “effects” to documented covered species’ summer travel/commuting habitat, around known or assumed occupied hibernacula during fall swarming or spring staging periods, or within documented or assumed occupied suitable habitat during the maternity period) and explicitly states that the GCP does not cover any “impacts” to bats within 0.5 miles of hibernacula.	The goal of the GCP conservation strategy is to protect WNS survivors in all facets of their life including all habitat areas that are needed to fully support their life cycle. The conservation strategy associated with the GCP is also designed to minimize impacts at the individual level and avoid loss of populations by avoiding impacts to the most vulnerable life stages. Therefore, proposed projects within these sensitive areas will need a separate review outside of this GCP.

Environmental Energy Alliance of New York, LLC		
Comment Type/Section Referenced	Comment	Service Response
General Comment	“Effects” and “impacts” are not clearly defined in the GCP. Therefore, EEANY assumes that “effects” and “impacts” are considered “incidental take”, as described at Section 4.5 of the GCP.	This assumption is correct as Section 4.5 discusses the anticipated type and amount of take of the Covered Species. As a reminder, the Service can only issue Incidental Take Permits for projects that result in take.
General Comment	Specifically, “incidental take” is anticipated to be associated with tree removal (including trimming, topping, pruning, and/or limbing). Given the linear and wide-ranging extent of ROW corridors across the landscape, EEANY is concerned that the precluded and not covered areas noted above will result in significantly segmenting the areas of ROWs where this GCP can be utilized for routine vegetation management activities such as tree trimming. We suggest that O&M and routine vegetation management activities be eligible under the GCP regardless of their location in relation to the precluded and not covered areas noted above, and that the GCP be reoriented to have greater focus on only those electric utility activities that are truly expected to have a negative impact on the covered bat species.	The GCP is a voluntary tool, the use of which is determined by the project proponent. The Service also has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area.
General Comment	As written, the GCP will be of limited value and may jeopardize the ability of utilities to ensure safe reliable electric service while achieving New York State’s climate change objectives under the Climate Leadership and Community Protection Act.	The GCP has been developed as a streamlined permitting approach to some of the most common activities seen by the Service. The GCP is a voluntary tool, the use of which is determined by the project proponent. All other ESA compliance options remain in effect. The Service, in response to workload or other factors, also has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area. Also, the Service would be available to work with a specific utility company or perhaps a group of utility companies to develop a company-wide HCP or Industry Conservation Plan (ICP), that is based on the strategy and analysis of the GCP, to address consultation needs beyond the scope of the proposed GCP.
Section 1.4	<u>Project Duration</u> : Within Section 1.4 in the second paragraph, the draft GCP states that permittees have up to five years to complete the project. This brings up the question of what constitutes a “project”. Projects are typically larger new construction, rebuilds, reconductoring, etc. For utilities, some of our work consists of routine on-going vegetation management, so this timeframe may not be consistent with normal vegetation management or the typical cycles that are used to accomplish that work. If a company’s vegetation management cycle is longer than this, the company would potentially need to split up its cycle to ensure coverage.	Permits issued through the streamlined GCP process may be authorized for up to 5 years. Therefore, project proponents will have up to 5 years to complete their projects, even if the Permit is issued in the final year (i.e., year 10) of the GCP. If a project proponent is unable to complete their Covered Activities during the duration of their Permit, they can request a Permit renewal (for up to 5 additional years) from the Service as long as the GCP remains in effect. See section 6.4 in the GCP for more details on permit renewal.
Section 3.2	<u>Other Listed Wildlife</u> : In Section 3.2 there are examples of projects precluded from participation through the GCP process. The first bullet indicates “Other federally listed wildlife or adverse effects to federally listed plants”. Later in the GCP, in Appendix B’s Eligibility Key, when you answer “no” to item 1.2, it indicates that the GCP cannot be used. It says that “this GCP only provides incidental take coverage for the covered species. Proposed projects that will result in take of other species federally listed as threatened or endangered will require additional authorization under the ESA”. EEANY requests that USFWS clarify whether it intends that this GCP be used only when no other ESA threatened or endangered species are present. If that is USFWS’s position, EEANY requests that USFWS reconsider that position. Other listed species would of course require additional ESA authorization, but it is unclear why this GCP could not still be utilized for bats in that situation?	The GCP was designed to be used by projects that require take coverage of the Covered Species. All analysis completed in the GCP, and other related documents only addressed certain scenarios and issues related to the Covered Species. Therefore, if a project also requires ESA take coverage for other noncovered federally listed species, the GCP alone would be insufficient and would require additional analysis and compliance with federal regulations to be considered for permitting under the ESA. The GCP was designed to be a simplified pilot project to relatively quickly address certain common scenarios. If EEANY projects require permitting beyond what the GCP is currently offering, then we recommend reaching out to the Service to either develop a permitting strategy specifically for EEANY that can expand on the GCP strategy or combine it with other ESA authorization tools. The Service has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area.

Environmental Energy Alliance of New York, LLC		
Comment Type/Section Referenced	Comment	Service Response
Sections 3.2 and 3.3	<u>Excluded/Ineligible Activities:</u> EEANY has concerns with certain activities excluded from the draft GCP, mostly found in Sections 3.2 and 3.3, which we think may substantially narrow the circumstances in which electric utilities could use the GCP as drafted: New electric transmission line construction or expansion – The GCP allows coverage of new construction of distribution lines under certain circumstances, but not new transmission lines. In footnote 167, USFWS appears to justify this disparate treatment by describing the different voltages of transmission versus distribution lines, but that is not relevant here. We suggest applying this to electric lines in general, whether distribution or transmission. It is understandable to not include new transmission lines which may involve substantial clearing above acreage thresholds established elsewhere, but there are many new transmission lines that require minimal tree clearing, and as such we would expect they could meet the requirements of the GCP. At the very least, new overhead transmission lines and rebuilds constructed in existing ROWs should be covered, as the footprint of those new lines will be very similar to that of existing lines. Similarly, expansion of transmission lines may not require any substantial clearing, so to exclude those universally does not seem to make sense. We note that in section 3.4 expansion of existing roadways/railways are covered. Powerline corridors are considered critical infrastructure the same way that highways are considered critical infrastructure. We suggest that expansion of existing transmission lines should be eligible as well, including electric lines requiring O&M (reconductor, ACR, etc. If USFWS maintains some sort of exclusion for expansion of transmission lines in the final GCP, it should define the term “expansion” and explain which particular expansions are excluded.	The GCP has been developed as a streamlined permitting approach to some of the most common activities seen by the Service. The GCP is a voluntary tool, the use of which is determined by the project proponent. All other ESA compliance options remain in effect. The Service, in response to workload or other factors, also has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area. Also, the Service would be available to work with a specific utility company or perhaps a group of utility companies to develop a company-wide HCP or Industry Conservation Plan (ICP), that is based on the strategy and analysis of the GCP, to address consultation needs beyond the scope of the proposed GCP.
Sections 3.2 and 3.3	Emergency situations such as spills and spill responses – in such emergency response situations, restoration of power and clean up of any spills must happen quickly. It would make sense to allow such emergency activities to be included in the GCP. We suggest that emergencies should not be included and that they are exempt activities from the HCP.	Emergency situations under 50 CFR 402.05 would require emergency consultations and that would not fit under the GCP.
Sections 3.2 and 3.3	Aerial application or other large-scale application of pesticides – it is not clear what is included in “other large-scale application of pesticides.”	The GCP is not intended to cover take associated with “Aerial application or other large-scale application of pesticides”. Coordination with the local field office should occur prior to submitting an IPP that includes broad-scale application of pesticides for assistance in determining potential impacts to the Covered Species, and whether the activity was analyzed in the GCP and Environmental Assessment.
Sections 3.2 and 3.3	Airplane and helicopter surveys – does this mean all aerial patrols are not covered and need a separate HCP? Language in Section 3.4.1 further suggests that annual patrols, vegetation inventory and such that may be conducted with airplane and helicopter patrols are not covered. We ask that they be considered eligible activities since they are a routine maintenance activity that must be conducted to ensure safety and reliability.	The GCP is a voluntary tool, the use of which is determined by the project proponent. Airplane and helicopter surveys are not covered activities, but this does not mean there will be take of bats from these activities. If there is take, a separate HCP Incidental Take Permit or programmatic approach under section 7 would be needed to comply with the ESA.
Section 3.2 and 4.5.1.1	It appears that USFWS wants to categorically exclude projects which result in effects to trees within 150 feet of documented roosts at any time of year from the GCP, which seems overbroad. This is mentioned in Section 3.2, and also in Section 4.5.1.1 on tree removal: “Impacts to bats from tree removal is anticipated to vary depending on the location, extent, and timing of removal. The location with greatest likelihood of cutting a roost with bats present is a known maternity colony roost or suitable trees in close proximity to known maternity colony roosts. Permits issued under this GCP will not result in the removal of any known, documented roosts (that remain suitable for roosting) or trees within 150 feet of those roosts at any time. Therefore, projects will avoid the potential for this particular impact.” This broad exclusion is troubling because, as indicated previously, utilities are obligated to provide a safe and reliable electric system, and therefore, this paragraph is in direct conflict with the ability to do that. Avoidance is simply not always possible. There needs to be another mechanism to provide for mitigation when avoidance is not possible. This may happen during emergency work, and in other situations where perhaps not an emergency response, but for which the critical infrastructure work must be done promptly and there is not time to obtain an ITP. The GCP should perhaps provide an option for such circumstances, where the utilities take all prudent measures to avoid/mitigate take, but only after the fact notification to USFWS is required.	The goal of the GCP conservation strategy is to protect WNS survivors in all facets of their life including all habitat areas that are needed to fully support their life cycle (e.g., areas around roost trees and hibernacula). The conservation strategy associated with the GCP is also designed to minimize impacts at the individual level and avoid loss of populations by avoiding impacts to the most vulnerable life stages. The GCP is a voluntary tool and if it does not meet the long-term needs of EEANY they can pursue other options.

Environmental Energy Alliance of New York, LLC		
Comment Type/Section Referenced	Comment	Service Response
General Comment	Further, it is our understanding that at least one particular species (NLEB), typically does not roost on edges, but rather prefers interior forest areas. This would suggest that routine vegetation maintenance is for the most part, quite unlikely to impact this species, and therefore should eliminate the concern for NLEB along the tree edge on linear projects. There is language that seems to acknowledge this for existing roadways/railways, but no consideration of it for utility lines.	We encourage the use of the Service's online Information for Planning and Consultation program first, using the Northern Long-Eared Bat and Tricolored Bat Rangewide Determination Key or the Northeast Endangered Species Determination Key (for Indiana bat) to help project proponents determine if their project activities will result in adverse effects to these species, and if voluntary use of the GCP is appropriate. Coordination with the local Service field office for technical assistance is also available. Coordination with state resource agencies is also strongly encouraged to obtain the most recent occupancy data for project planning purposes.
Section 3.4	<u>Ongoing Activities:</u> The GCP contains inconsistent language about whether ongoing/recurring activities will be covered. USFWS should clarify this point, and should do so with the understanding that electric utilities are significantly less likely to utilize the GCP if ongoing activities such as vegetation maintenance are not eligible. As an example of the inconsistent language in the draft GCP on this issue, the last paragraph of section 3.4 under eligible activities states that “operations activities that result in ongoing or recurring take are not covered by this GCP.” However, in describing “Operations and Maintenance” of utilities in Section 3.4.3, USFWS notes, “Utility line ROWs are generally kept clear of trees to provide for line maintenance and prevent roots from impacting pipes or branches from hitting lines.” And, in section 3.4.1 there is discussion of “Vegetation Clearing”, which may include removal of trees (including tree topping), limbing and trimming of trees, shrubs, or herbaceous vegetation. Methods may include hand tools (e.g., chainsaw) or heavy equipment (e.g., excavators and bulldozers). So, does this mean long range vegetation maintenance of distribution and/or transmission systems are excluded? Or does it mean certain recurring vegetation management is eligible under the GCP and others are not? EEANY recommends that this critical on-going maintenance that is required to ensure safety and reliability should be explicitly included in eligible activities.	The Service has added clarification in all relevant sections of the GCP.
Section 4.1	<u>Linear Project Survey Requirements:</u> Section 4.1 of the GCP provides an example for a survey requirement for non-linear projects with greater than 25 acres of tree removal, which is defined broadly to also include trimming and pruning. Is there a similar survey requirement for linear projects?	The survey requirement for projects with greater than 25 acre of tree removal does not apply to linear projects. Therefore, project proponents can assume presence for linear projects with greater than 25 acres of tree removal. Please see sections 4.1, 4.5.1.1, and 4.5.2 where this is stated.
Section 4.1	Additionally, provided that recurring vegetation management is eligible for the GCP as described above, EEANY recommends that USFWS consider allowing reuse of surveys for areas like ROWs. This approach would make sense in instances where the vegetation management will only be occurring over a subset of the ROW at any given time and the characteristics of the ROW are fairly consistent over a broad area.	Presence/probable absence surveys would only need to be repeated after 5 years if the reoccurring vegetation maintenance activities were performed in areas that still contain suitable habitat for the Covered Species. If suitable habitat is no longer present, then follow up surveys would not be needed.
Section 4.2	In Section 4.2, biological goal 3 indicates that maternity colonies and summer habitat will be identified, protected, restored (as needed), and maintained to ensure that essential breeding, feeding, and sheltering areas are available for the Covered Species in the Plan Area. What is anticipated in terms of how one might restore maternal colonies and summer habitat? Will there be compliance requirements, monitoring, or conditions to be met for restored areas? For example, will an annual monitoring event be required to determine survivability of vegetation?	All of this information will be coordinated with the local field office and required in the IPP.
Section 4.5	Near the end of section 4.5 there is a discussion about tree-clearing during the inactive season and that it may result in effects that rise to the level of take when the bats return to the area in subsequent active seasons. While we understand the conceptual nature of take in this scenario, it must be noted that in order to maintain safe and reliable electric systems, appropriate vegetation management (removal of vegetation that could jeopardize the facility), must be conducted, and it should be recognized that other natural events (eg. storms, wind, ice, fire, etc) could remove those roost trees as well.	It is the project proponent’s responsibility to determine if their project will result in take and if so, to voluntarily apply for an Incidental Take Permit. If take is expected to occur as a result of vegetation management, then that take can be covered by the GCP. Please refer to Appendix B to determine GCP eligibility. The Service has also added text to clarify natural events.
Section 4.5.1	In Section 4.5.1 the second bullet regarding noise/vibration is unclear. Specifically what types of noise / vibration would cause take?	See section 4.5.1.2 which discusses potential take associated with noise/vibration.

Environmental Energy Alliance of New York, LLC		
Comment Type/Section Referenced	Comment	Service Response
Section 4.5.1.2	In 4.5.1.2 regarding “Noise/Vibration Associated with Active Season Habitat Modification”, USFWS cites to a study mentioning an IBAT abandoning a primary roost, but also cites to multiple other studies which implied the opposite conclusion, of IBATs not being affected by noise. In the relocation example, was this a temporary or permanent relocation by the IBAT? USFWS should consider whether these limited studies provide sufficient justification for entirely excluding projects that only result in take from noise/vibration from the GCP. If USFWS does exclude such projects from the GCP, EEANY recommends that USFWS provide greater guidance about what constitutes “noise/vibration” (i.e., a noise level threshold) so that different field offices do not apply this exclusion inconsistently.	Section 4.5.1.2 summarizes the best available information related to noise impacts to bats. It is the project proponent's responsibility to evaluate activities that raise noise and vibration above ambient levels and determine if take is expected to occur. The Service can offer technical assistance to assist the project proponent in making their determination.
Section 4.6	<u>Mitigation:</u> There is considerable discussion in Section 4.6.1.1 regarding conservation banks and 4.6.1.2 regarding In Lieu Fee Programs. We believe this approach has potential merit; however, as is acknowledged in the section, there are currently no approved conservation banks within the GCP plan area that provide mitigation credits.	There are several Service-approved bat conservation banks available for use in PA. Additional conservation banks or In Lieu Fee accounts may be proposed by private entities in response to Incidental Take Permits issued under the GCP.
Section 4.6	The Permittee-Responsible Mitigation (“PRM”) approach in section 4.6.1.3 may be potentially viable for specific projects and is worth consideration; however, it is unclear how the mitigation ratios were determined, and it is unclear what the basis is for them or whether they are appropriate. Some of them seem quite extensive and perhaps more than is practical or warranted. Several of the utilities have engaged with the Candidate Conservation Agreement with Assurances (“CCAA”) for the Monarch butterfly.	The Service has added language to clarify the rationale for Table 4.1.
Section 4.6	Lastly, the section goes on to indicate consultation with the regional field office should occur to implement these options, but again, on-going routine maintenance and operations are not conducive to such an approach as much of the routine maintenance work utilities do to ensure safe and reliable operations of the system must be done promptly (and in some instances under emergency situations) and there often may not be time for such consultation.	The GCP is a voluntary tool and if it does not meet the long-term needs of EEANY they can pursue other options and/or borrow components of the GCP to fulfill their project needs. Emergency situations under 50 CFR 402.05 would require emergency consultations and that would not fit under the GCP.
Section 4.6.4	In Section 4.6.4, Table 4.1 seems to address mitigation ratios for linear facilities, but it is seemingly specific to roads/rails. Given that linear electric facilities are included in the GCP, could the USFWS consider explicitly referencing linear electric facilities in this table? Or perhaps an in lieu fee approach is probably more reasonable, however, we think the specific location of the activity should be the ultimate factor in determining a ratio.	The Service chose to base mitigation using distance from active road/rail edges as the majority of routine development projects covered by this GCP will be in close proximity to these transportation features and is consistent with other programmatic mitigation approaches. The Service has added language to clarify the rationale for Table 4.1.
Appendix C: IPP	In the Individual Project Plan Checklist, Item 10 requires that you submit color digital images. It is unclear how this would be practical for a utility to do if the GCP were being utilized for long term vegetation management on a transmission line where a company would be conducting vegetation management over the course of several years.	Representative photos may be sufficient depending on the specific project, see excerpt for line 10 of the IPP "applicants can include photos that are historical and/or depict current conditions onsite, representative photos of vegetation onsite and habitat for Covered Species, etc"
Appendix C: IPP	Lastly, the draft GCP does not seem to provide a timeframe for USFWS to respond to applications for use of the GCP. Given that the GCP is supposed to provide a streamlined permitting approach, inclusion of a specific, reasonable timeframe in the GCP for USFWS's response seems important.	The Service does not have a specified timeframe for responding to application requests, however, the intent of this GCP is to streamline consultation and issue permits as soon as possible.
Closing Statement	We appreciate the opportunity to provide input at this time on the Proposed Multi-Bat Species General Conservation Plan and we thank you for your consideration of these comments. You may contact me at (845) 453-5297 or via email at karl.schoeberl@eeanyweb.org if you have any questions about our comments.	Comment determined not to be substantive or otherwise require a response.



November 27, 2024

U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 22041-3803

Re: Docket No. FWS-R5-ES-2024-0039

To Whom It May Concern:

The Marcellus Shale Coalition (MSC), a regional trade association with a national membership, appreciates the opportunity to submit comments for consideration by the U.S Fish and Wildlife Service (FWS) regarding the FWS's proposed General Conservation Plan (GCP or Plan) related to the Indiana bat, northern long-eared bat, and the tricolored bat.

The MSC was formed in 2008 and is currently comprised of approximately 140 members who are fully committed to working with local, county, state, and federal government officials and regulators to facilitate the development of the natural gas resources in the Marcellus, Utica and related geological formations. Our members represent many of the largest and most active companies in natural gas production, gathering, processing, transmission, and utilization in the country, as well as the supply chain companies, contractors, professional service firms, and trade unions who work with the industry. Please find our comments below.

General Comments

Generally, the MSC supports the FWS efforts to protect bat species and acknowledges that White Nose Syndrome (WNS) has been responsible for a decline in certain species of bats. The MSC supports protecting bat species that demonstrate significant vulnerability and have undergone substantive declines due to WNS and hope that a cure can be developed to protect current populations. MSC members have been engaged with efforts to promote conservation of the species and limit the spread of WNS through the development of industry best practices during energy development in the Appalachian Basin.

The GCP only covers three bat species, the Indiana bat, northern long-eared bat, and the tricolored bat. MSC points out that the GCP does not cover the little brown bat, which may be proposed for listing, and that the GCP is limited to New York, Pennsylvania, and West Virginia. The MSC recommends that the GCP include the little brown bat, because this bat species is also being affected by WNS. MSC also recommends that the GCP be expanded to include neighboring states in the Appalachian Basin, including Ohio and Virginia.

The MSC is troubled that use of the GCP is not available for those engaged in oil and gas development activities and other activities like injection wells, road construction, forestry, emergency response, airplane or helicopter survey, and transmission line projects, among others. Industry activities are typically authorized through state and federal General Permits, meaning that the impacts are temporary and minimal. Those employing temporary and minimal impacts during construction and installation activities should qualify to use the GCP.

Moreover, the FWS states that for activities to be covered under the proposed GCP, the project proponent must survey and implement Best Management Practices (BMPs) to minimize sedimentation into the species' foraging habitat. The GCP also may impose additional avoidance measures for projects within specific ranges of habitat features, such as projects up to 20 miles from known/occupied hibernacula. The industry already employs state-of-the-art best practices during development, and operators are required by state regulations and permit conditions to design and install state-of-the-art erosion and sedimentation control best practices. In addition, as a requirement of state conservation agencies, oil and gas operators are required to develop additional avoidance measures for known/occupied hibernacula. Therefore, the MSC strongly urges the FWS to include oil and gas development activities be included in the GCP. There is no rational reason for excluding oil and gas development activities.

The GCP also does not cover operational activities that may result in an ongoing or recurring take. Since the industry already employs BMPs during development and operation, the MSC recommends that the FWS include maintenance and operational activities in the GCP.

Overall, the GCP does not change the Endangered Species Act (ESA) requirements for oil and gas activities and does not provide MSC members with a streamlined approval process. To this end, the GCP does not meet its objective. As such, the GCP is largely unusable. Rather than forge ahead with a proposal of such limited use so late in the current presidential administration, MSC urges FWS to revisit this proposal, provide for greater industry involvement in its development, and cover oil and gas and related activities so that the covered bats and industry activities may all benefit from this effort.

Conclusion

The MSC appreciates this opportunity to submit comments regarding the FWS's proposed General Conservation Plan. The MSC welcomes the opportunity to meet with FWS staff to explain further or illustrate and discuss any of these issues and to discuss these concerns with the incoming agency leadership. Thank you very much for your consideration of these comments.

Sincerely,



Jim Welty
Vice President, Government Affairs



Marcellus Shale Coalition		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	The Marcellus Shale Coalition (MSC), a regional trade association with a national membership, appreciates the opportunity to submit comments for consideration by the U.S Fish and Wildlife Service (FWS) regarding the FWS's proposed General Conservation Plan (GCP or Plan) related to the Indiana bat, northern long-eared bat, and the tricolored bat.	Comment determined not to be substantive or otherwise require a response.
General Comment	The MSC was formed in 2008 and is currently comprised of approximately 140 members who are fully committed to working with local, county, state, and federal government officials and regulators to facilitate the development of the natural gas resources in the Marcellus, Utica and related geological formations. Our members represent many of the largest and most active companies in natural gas production, gathering, processing, transmission, and utilization in the country, as well as the supply chain companies, contractors, professional service firms, and trade unions who work with the industry. Please find our comments below.	Comment determined not to be substantive or otherwise require a response.
General Comment	Generally, the MSC supports the FWS efforts to protect bat species and acknowledges that White Nose Syndrome (WNS) has been responsible for a decline in certain species of bats. The MSC supports protecting bat species that demonstrate significant vulnerability and have undergone substantive declines due to WNS and hope that a cure can be developed to protect current populations. MSC members have been engaged with efforts to promote conservation of the species and limit the spread of WNS through the development of industry best practices during energy development in the Appalachian Basin.	Comment determined not to be substantive or otherwise require a response.
General Comment	The GCP only covers three bat species, the Indiana bat, northern long-eared bat, and the tricolored bat. MSC points out that the GCP does not cover the little brown bat, which may be proposed for listing, and that the GCP is limited to New York, Pennsylvania, and West Virginia. The MSC recommends that the GCP include the little brown bat, because this bat species is also being affected by WNS.	The Service has the ability to amend the GCP in the future to include additional Covered Species.
General Comment	MSC also recommends that the GCP be expanded to include neighboring states in the Appalachian Basin, including Ohio and Virginia.	The Service has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area.
Section 3.4	The MSC is troubled that use of the GCP is not available for those engaged in oil and gas development activities and other activities like injection wells, road construction, forestry, emergency response, airplane or helicopter survey, and transmission line projects, among others. Industry activities are typically authorized through state and federal General Permits, meaning that the impacts are temporary and minimal. Those employing temporary and minimal impacts during construction and installation activities should qualify to use the GCP.	These activities could be covered in the future under this, or another Section 10 permit.
General Comment	Moreover, the FWS states that for activities to be covered under the proposed GCP, the project proponent must survey and implement Best Management Practices (BMPs) to minimize sedimentation into the species' foraging habitat. The GCP also may impose additional avoidance measures for projects within specific ranges of habitat features, such as projects up to 20 miles from known/occupied hibernacula. The industry already employs state-of-the-art best practices during development, and operators are required by state regulations and permit conditions to design and install state-of-the-art erosion and sedimentation control best practices. In addition, as a requirement of state conservation agencies, oil and gas operators are required to develop additional avoidance measures for known/occupied hibernacula. Therefore, the MSC strongly urges the FWS to include oil and gas development activities be included in the GCP. There is no rational reason for excluding oil and gas development activities.	These activities could be covered in the future under this, or another Section 10 permit.
Section 3.4	The GCP also does not cover operational activities that may result in an ongoing or recurring take. Since the industry already employs BMPs during development and operation, the MSC recommends that the FWS include maintenance and operational activities in the GCP.	These activities could be covered in the future under this, or another Section 10 permit.

Marcellus Shale Coalition		
Comment Type/Section Referenced	Comment	Service Response
General Comment	Overall, the GCP does not change the Endangered Species Act (ESA) requirements for oil and gas activities and does not provide MSC members with a streamlined approval process. To this end, the GCP does not meet its objective. As such, the GCP is largely unusable. Rather than forge ahead with a proposal of such limited use so late in the current presidential administration, MSC urges FWS to revisit this proposal, provide for greater industry involvement in its development, and cover oil and gas and related activities so that the covered bats and industry activities may all benefit from this effort.	The GCP has been developed as a streamlined permitting approach for some of the most common activities seen by the Service. The GCP is a voluntary tool, the use of which is determined by the project proponent. All other ESA compliance options remain in effect. The Service, in response to workload or other factors, also has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area. Also, the Service would be available to work with a specific oil & gas company or a group of oil and gas companies, perhaps with leadership from the MSC or another industry organization, to develop a company-wide HCP or Industry Conservation Plan (ICP). That ICP could be based to a large degree on the strategy and analysis provided in this GCP.
Closing Statement	The MSC appreciates this opportunity to submit comments regarding the FWS's proposed General Conservation Plan. The MSC welcomes the opportunity to meet with FWS staff to explain further or illustrate and discuss any of these issues and to discuss these concerns with the incoming agency leadership. Thank you very much for your consideration of these comments.	Comment determined not to be substantive or otherwise require a response.

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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MS: PRB/3W
5275 Leesburg Pike
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Re: Comments on Docket No. FWS-RS-ES-2024-0039, Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment.

To Whom it May Concern:

In the proposed *Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia* (GCP) and associated assessment, the USFWS seeks comments from the public and local, State, Tribal, and Federal agencies. The New York State Department of Environmental Conservation (DEC) appreciates the opportunity to comment on the proposed documents and offers the following for your consideration.

The basic premise of the GCP is that if any of the covered bat species are documented on or near a project location, every acre of trees removed must be mitigated for. However, the eligibility requirements for the GCP require all such tree removal to occur while the species are not expected to be present or directly harmed by the habitat alteration. The definition of take includes not only killing animals, but also harm and harassment. Both DEC and the FWS consider habitat loss a potential source of harm to listed species, with DEC requiring take permits if the habitat loss is expected to result in the disruption of an essential behavior (e.g. breeding, hibernating, feeding). Habitat loss has the greatest adverse impacts when it occurs while the species are present and engaging in those behaviors. However, if the species is not present at the time of habitat loss, adverse impacts that impair the ability of the species to successfully complete essential behaviors may still occur if the habitat lost is limiting for the species. These indirect effects can include the inability of a species to find suitable hibernation sites, roost trees or food resources for example. Because forest habitat is not a limiting factor for the target bat species in New York and tree cutting is occurring when bats are not present, cutting is unlikely to adversely impact these species under most conditions. Only tree removal at a large scale or projects in the most sensitive areas would be likely

to harm bats if conducted when the bats were not present, and those types of projects are excluded from eligibility for this GCP.

Permits for take should only be required when take is a likely outcome of project implementation. DEC appreciates the intent of the FWS but cannot agree with the approach being taken in the GCP. While DEC shares FWS concern over being able to identify the number of individual animals that may potentially be taken by a project in suitable habitat, the FWS relies solely on a habitat surrogate for assessing take and providing mitigation but provides no minimum size or means of establishing that take is likely to occur. This is despite the assessment in the accompanying Environmental Assessment that concludes that forest habitat throughout the geographical area covered by the plan has not been reduced over the past few decades and is considered stable. Forest habitat is the dominant landcover type in all three states covered by the plan. In addition, all three species covered under the GCP have experienced population declines of between 75-99% over the past 15 years. There are many fewer bats using the same amount of forested habitat on the covered landscape. As a result, it is unclear how the FWS arrives at the conclusion that take is likely to occur to covered species in the scenarios they seek to cover under the GCP. DEC can agree that there are certain landscapes and certain projects that are large enough to result in adverse impacts to the covered species even if habitat removal is restricted to the winter season when bats are not active. For example, a project that would reduce the amount of forest cover below 30% at the local landscape scale (e.g., 25 km²) could potentially impact essential behaviors such as roosting and feeding. The lack of any NY Indiana bat roosts on landscapes with less than 30% forest cover supports this. However, it is unclear what bat conservation purpose is being met by being more protective in landscapes that already lack the habitat requirements for the species to be successful (forest cover below 30%).

The GCP explicitly excludes coverage of any activity that the FWS identifies as likely to result in take of the covered species (e.g., clearing of habitat within 150 ft of roosts, 0.5 miles of hibernacula). In effect, the GCP is seeking to authorize activities that would not be likely to result in a take of the covered species; it only covers low probability events and does not authorize any activities if take is likely to occur. If tree removal was allowed when the animals were present, there would be a significant chance of direct harm, with that chance increasing in direct relation to the amount of suitable habitat being taken. There would be utility in a GCP that allows project proponents more flexibility to engage in habitat conversion in exchange for mitigation. However, by requiring the habitat removal to occur while the species are hibernating, there is an extremely low chance that a covered animal may be injured as a result of the habitat loss. Instead, the FWS assumes that any habitat taken while the bats are absent would result in meaningful yet unquantifiable impact to bats that may have used that habitat. They present no data to support detrimental impacts on productivity or other indirect measures of take.

There is no demonstration by the FWS that any of the eligible projects they seek to provide coverage for would be likely to result in a take at all. The only attempt at

quantifying an adverse impact can be found in the Environmental Assessment (EA). It states that if all habitat authorized under the GCP is taken, there will be a net loss of 0.12% of available habitat. At a minimum, the FWS should provide an assessment that shows how such a loss is likely to adversely affect the covered species. Instead, in the EA the Service concludes this level of forest loss will have a negligible impact on *other* wildlife species and the environment in general. Meanwhile, in the GCP the FWS appears to suggest that the removal of even a single tree out of the 47 million acres of available habitat should seek coverage under the permit. This is despite the EA describing the forest habitat in all three covered states as stable over the past 40-60 years.

The potential for this GCP to be used in New York is low. In addition, DEC is concerned over the unsupported regulatory burden that the FWS would be placing upon potential applicants. The FWS can say their permits are optional and are a voluntary tool available to landowners to cover them if a covered species is taken by their project; however, New York's State Endangered Species Act prohibits all take without a permit. Adoption of this tool by FWS may lead to confusion as to how these species are being protected in New York State, with the FWS tool setting a lower bar for take than DEC can support, without sufficient justification for doing so. At the same time, the public may view the FWS GCP as the minimum level of habitat protection necessary for forested habitat throughout New York State, placing DEC in an uncomfortable position of having to constantly explain that our laws protect the covered bats, but not individual trees.

While the effects of White-nose Syndrome (WNS) have been devastating to New York's hibernating bat populations, as well as those in Pennsylvania and West Virginia, habitat has not been shown to be a limiting factor in the populations' recovery from WNS. New York has abundant forest habitat for each of the covered species, and as explained in the EA for this plan, the amount of forest acreage removal allowed for by this permit would amount to significantly less than one percent of the forest cover available across the covered area. Considering that the covered species have experienced population declines as great as 99%, there is no credible argument made to substantiate that the removal of habitat when bats are not present would prevent these species from carrying out their essential behaviors on the landscape. If project activities involving removal of active-season habitat can be carried out during the inactive season, there does not seem to be reasonable justification that this level of habitat removal or modification would significantly impact the covered species.

Given that WNS is the primary threat to the covered species, DEC recommends putting greater emphasis on this threat throughout the documents and giving higher priority to mitigation activities that address this threat directly. Activities such as hibernacula protection and restoration would likely provide the greatest benefit to the covered species, as well as any WNS treatments that may become available through research in the coming years.

DEC also has concerns about the guidelines used by FWS to determine presence or absence of bats. The use of the range-wide Indiana Bat and Northern

Long-Eared Bat Survey Guidelines (Guidelines) for covered species can determine whether these species are present but is not adequate to prove their absence in a given area. In the definitions of occupied and documented habitat in the GCP, the FWS states that the habitat must have been surveyed using the most recent version of the Guidelines. Since the FWS updates the guidelines on an annual basis, this implies that documented habitat must be successfully resurveyed every year to maintain that designation. Would the FWS conclude that an applicant's project no longer needs a permit if the applicant conducted a negative survey the next field season after successfully detecting the species? This is contrary to the language in the Guidelines themselves, which states the survey results are good for 5 years.

Regardless, DEC recommends against using these surveys to rule out presence of the covered species within previously documented habitat because the guidelines call for 10 mist net nights per 123 acres of habitat. In New York, mist netting at that level of effort is unlikely to result in captures of NLEB even if present. The widespread availability of suitable habitat means that there are dozens of travel routes and foraging opportunities within any 123 acres of suitable habitat. The placement of 10 mist nets cannot possibly cover the potential travel routes through a typical 123 acre project site. In addition, studies of home ranges of breeding females estimate their home ranges to be roughly equal to an area the size of a 3-mile diameter circle (4524 acres - or the 1.5 mile buffer placed around known roosts by both FWS and DEC to map occupied habitat). Therefore, a 123 acre area is less than 3% of the area potentially used by a NLEB in a single night. With so few NLEB on the landscape and so many places for them to be, the odds of an NLEB flying through any 800sq ft of air space covered by a typical mist net is low. DEC recommends that any detections/captures of the covered species since the introduction of WNS should satisfy the definition of documented habitat as defined in the GCP.

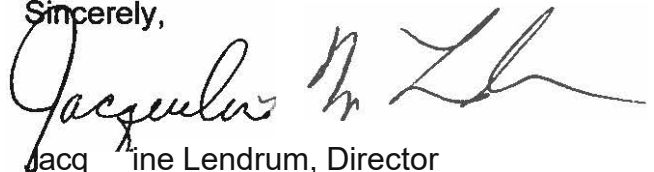
DEC is confused by the requirement for properties that are larger than 25 acres to conduct surveys to be eligible to use the GCP. It is unclear why the FWS explicitly excludes larger projects (26-200 acres in size) from the GCP, even if they assume all habitat is occupied. This is ostensibly done to ensure that only occupied habitat is regulated, but the Service states the surveys are necessary "because the specific nature of the species' presence (e.g., number of individuals and life stages present) is crucial to the analysis and must still be determined using the best available information." However, the Guidelines do not require mist netting and telemetry. They allow applicants to utilize acoustic surveys only, a much less expensive survey methodology and the one most frequently selected by the applicants themselves. Acoustic detections cannot provide any data on roost location or population demography, with the data only being useful for determining if certain species are present within the range of the acoustic receiver. In addition, there is nothing in the GCP or accompanying EA that indicates the Service has any methodology for using population data to assess impacts or otherwise modify the GCP based on the data from site specific surveys. The FWS should either clarify exactly what type of surveys applicants must do to be eligible for the GCP, along with an explanation of how the FWS would use the results, or strike the language quoted above.

For the above reasons, DEC does not view the draft GCP as a useful tool to aid state agencies and the regulated community in avoiding and minimizing impacts to the covered species. If the eligibility requirements were amended to cover those situations where take through habitat conversion was likely to occur, the document would be improved and potentially utilized. DEC recommends that the FWS reassess the types of projects eligible to use this GCP. There could be true utility in the GCP if it could be applied to situations where projects are likely to adversely affect the species. That way, the GCP would get use in situations where there is known conservation value for the species instead of being restricted for use in situations where take is not likely to occur.

Please see the attached documents for more detailed comments regarding specific language within the proposed plan and environmental assessment.

Thank you for the opportunity to comment on the draft documents.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacqueline Lendrum". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jacqueline Lendrum, Director
Division of Fish and Wildlife

**Environmental Assessment
for the
Multi-Bat Species General Conservation Plan for Routine
Development Projects
in
New York, Pennsylvania, and West Virginia**

U.S. Fish and Wildlife Service
October 2024



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Abbreviations and Acronyms

°F – Degrees Fahrenheit	NRCS – Natural Resources Conservation Service
AAR – All-American Roads	NRI – Natural Resources Inventory
ACHP – Advisory Council on Historic Preservation	NSB – National Scenic Byways
BGEPA – Bald and Golden Eagle Protection Act	NWI – National Wetlands Inventory
CEC – North American Commission for Environmental Cooperation	NWR – National Wildlife Refuge
CEQ – Council on Environmental Quality	NYCRR – New York Codes, Rules and Regulations
CFR — Code of Federal Regulations	NYDOT – New York Department of Transportation
CM – Conservation Measure	NYECL – New York Environmental Conservation Law
CWA – Clean Water Act	NYSDEC – New York State Department of Environmental Conservation
dB – Decibels	O ₃ – Ozone
dbh – Diameter at Breast Height	OSHA – Occupational Safety and Health Administration
DOI – Department of the Interior	PennDOT – Pennsylvania Department of Transportation
EA – Environmental Assessment	Pb - Lead
EIS – Environmental Impact Statement	PDCNR – Pennsylvania Department of Conservation and Natural Resources
EJSCREEN – Environmental Justice Screening and Mapping Tool	Pub.L. – Public Law
EO – Executive Order	PM ₁₀ and PM _{2.5} – Particulate Matter smaller than 10 and 2.5 microns, respectively
EPA – U.S. Environmental Protection Agency	PNDI – Pennsylvania Natural Diversity Inventory
ESA – Endangered Species Act	PNHP – Pennsylvania Natural Heritage Program
FEMA – Federal Emergency Management Agency	RHA – Rivers and Harbors Act
FIRM – Flood Insurance Rate Map	SDWA – Safe Drinking Water Act
FPPA – Farmland Protection Policy Act	Service – U.S. Fish and Wildlife Service
FR – <i>Federal Register</i>	SGCN – Species of Greatest Conservation Need
GCP – General Conservation Plan	SHPO – State Historic Preservation Officer
GHG – Greenhouse Gas	SO _x – Sulfur Oxide
HAP – Hazardous Air Pollutant	SWAP – State Wildlife Action Plan
HCP – Habitat Conservation Plan	THPO – Tribal Historic Preservation Officer
ILF – In-Lieu Fee	USC – U.S. Code
ITP – Incidental Take Permit	USACE – U.S. Army Corps of Engineers
L _{dn} – Average Day Night Sound Level	USDA – U.S. Department of Agriculture
MBTA – Migratory Bird Treaty Act	USFS – U.S. Forest Service
NAAQS – National Ambient Air Quality Standards	USGS – U.S. Geological Survey
NEPA – National Environmental Policy Act	VOC – Volatile Organic Compound
NFIP – National Flood Insurance Program	WMA – Wildlife Management Area
NHPA – National Historic Preservation Act	WNS – White-Nose Syndrome
NLCD – National Land Cover Database	WOTUS – Waters of the U.S.
NLEB – Northern Long-Eared Bat	WVDNR – West Virginia Division of Natural Resources
NPS – National Park Service	WVDOT – West Virginia Department of Transportation

Glossary of Terms

active season – The annual period from spring staging and migration through fall migration and swarming. This includes all key stages in the Covered Species annual cycle except hibernation. The timing and duration of the active season varies with weather and latitude. Local Ecological Services Field Offices can provide the dates and timing that apply to specific project locations.

Applicant – Refers to any person, as defined in the Endangered Species Act (ESA) Section 3(13), who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action (50 CFR¹ 402.02). Under the GCP, a Project Proponent is a potential Applicant, and becomes an Applicant at the time they submit a complete application as determined by the Service.

candidate species – Candidate species are plants and animals for which the Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

conservation measures (CMs) – CMs describe the specific actions that the Permittee will implement to achieve the project objectives in support of the HCP's goals (or GCP, as related to this document). There may be multiple CMs associated with each objective. Conservation measures can be any of the avoidance, minimization, or mitigation actions taken to meet the goals and objectives of an HCP/GCP. CMs can take many forms, but in all cases must be based on the biological needs of covered species. HCPs/GCPs often combine these measures to meet the needs of species (HCP and ITP Processing Handbook chapter 9, section 9.3).

conservation plan – The plan required by ESA Section 10(a)(2)(B) that an Applicant must submit when applying for an ITP. Conservation plans also are known as “habitat conservation plans” or “HCPs.” Incidental take is authorized through a Section 10(a)(1)(B) permit (HCP and ITP Processing Handbook, 50 CFR 17.3). *See also* “general conservation plan” (“GCP”).

Covered Activities – Activities that a permittee would conduct for which take is authorized in an ESA Section 10(a)(1)(B) permit (HCP and ITP Processing Handbook)./

Covered Species – Species for which incidental take is authorized in an ITP and is adequately covered in an HCP or GCP. Covered Species also include species that are not federally listed as threatened or endangered that have been adequately addressed in an HCP or GCP as though they were listed and are; therefore, included in an ITP (HCP and ITP Processing Handbook). Covered Species included in this EA and GCP are the IBAT, NLEB, and TCB.

ecoregions – Areas where ecosystems (and the type, quality, and quantity of environmental resources) are generally similar. Ecoregions are identified by analyzing the patterns and composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem

¹ CFR stands for Code of Federal Regulations.

quality and integrity. These phenomena include geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology.

endangered species – Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of the ESA would present an overwhelming and overriding risk to man (ESA section 3; 50 CFR 424.10(e)).

Environmental Assessment (EA) – A concise public document, prepared in compliance with NEPA, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI) (40 CFR 1508.9).

Environmental Impact Statement (EIS) – A detailed written statement required by NEPA Section 102(2)(C) containing, among other things, an analysis of environmental impacts of a proposed action and an alternative considered, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources (NEPA Section 102(2)(C); 40 CFR 1508.11 and 40 CFR 1502).

Endangered Species Act (ESA) – Federal statute that provides for listing and conservation of species (16 USC 1531-1543; 87 Stat 884).

extirpation – Loss of a local population of a species. Compared to extinction, in which no populations survive.

fall swarming area – Fall swarming zones are found in forested/wooded areas where the Covered Species roost, forage, and travel, around a hibernaculum during the fall swarming period, from mid-August to mid-November for IBATs and NLEBs, and mid-August to mid-October for TCBs. Bats also use these areas for mating and to build up fat reserves before hibernation. These areas include forested patches, as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

general conservation plan (GCP) – A completed landscape level conservation plan and NEPA compliance document produced either by the Service, or by another entity in cooperation with the Service; however, no Permit is issued at the time the conservation plan is approved. This approach is recommended in situations where it is anticipated that numerous individual HCPs would be needed to cover many similar but unrelated proposed actions, but where no Applicant is appropriate to serve as a master Permittee. In this type of HCP, the Service defines the geographic scope of the GCP, the conservation plan and associated mitigation requirements. In this process, the Service completes a single Findings document, a single Section 7 Biological Opinion, and a single NEPA document for all actions covered under the GCP. The GCP is made available for adoption and use by numerous Applicants who become eligible to receive individual Permits when they can demonstrate compliance with the conservation plan and

mitigation requirements of the GCP (Service Policy Memo October 5, 2007; HCP and ITP Processing Handbook).

harm – “...an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering” (50 CFR 17.3, 1981 Final Rule, 46 FR 54750).

historic property – Under the National Historic Preservation Act (NHPA), any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register, including artifacts, records, and material remains relating to the district, site, building, structure, or object (NHPA section 106; 36 CFR 800.16(l)(1)).

inactive season – The annual period when the Covered Species hibernate. The timing and duration of the inactive season for each species varies with weather and latitude. Local Service field offices can provide the dates and timing that apply to specific project locations.

incidental take – Take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or Applicant (50 CFR 402.02, HCP and ITP Processing Handbook).

incidental take permit (permit) – A permit issued under ESA Section 10(a)(1)(B) to a non-Federal party undertaking an otherwise lawful project that might result in the take of an endangered or threatened species. Application for a permit is subject to certain requirements, including preparation by the permit Applicant of a conservation plan, generally “Conservation Plan” or “HCP” (ESA Section 10(a)(1)(B)).

National Environmental Policy Act (NEPA) – The National Environmental Policy Act of 1969 (NEPA), as amended (42 USC § 4321, *et seq.*), is a Federal statute that requires Federal agencies to evaluate and disclose the effects of their discretionary proposed actions on the human environment.

Non-Federal lands – Non-Federal lands includes privately owned lands, tribal and trust lands, and lands controlled by state and local governments.

Permit Area – The geographic area where an ITP applies (HCP and ITP Processing Handbook). The permit area for ITPs issued in association with the proposed GCP would be defined for each individual project and must be completely within the GCP Plan Area consisting of the States of NY, PA, and WV, excluding Federal lands.

Permittee – Person(s) (“any individual, firm, corporation, association, partnership, club, or private body, any one or all, as the context requires.” 50 CFR §10.12) that holds an active ITP. An Applicant becomes a Permittee upon issuance of an ITP.

Plan Area – The specific geographic area where Covered Activities described in the GCP, including mitigation, may occur (HCP and ITP Processing Handbook). The Plan Area for this GCP includes the states of NY, PA, and WV, excluding Federal lands.

Project Proponent – A potential Applicant. For the purposes of the GCP, a Project Proponent is any person² planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.

spring staging area – Spring staging areas are found in forested areas where the Covered Species roost, forage, and travel, around a hibernaculum, during the spring staging period from mid-March to mid-May for IBATs and NLEBs, and late April to early-May for TCBs. Bats may spend a few hours or days around hibernacula preparing for migration or migrate immediately to summer habitat. These areas include forested patches as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

suitable summer habitat:

Indiana bat (IBAT) – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 5 inches DBH that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested habitat. IBATs have also been observed roosting in human-made structures, such as bridges and bat houses (artificial roost structures); therefore, these structures should also be considered potential summer habitat.

Northern long-eared bat (NLEB) – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 3 inches DBH that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of forested habitat. The NLEB has also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. See the Rangewide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for additional details on suitable habitat.³

Tricolored bat (TCB) – Suitable summer habitat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may include some adjacent and interspersed

² See definition in ESA Section 3(13).

³ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. This includes forests and woodlots containing trees with potential roost substrate (i.e., live and dead leaf clusters of live and recently dead deciduous trees), as well as linear features such as fencerows, riparian forests, and other wooded corridors. TCBs will roost in a variety of tree species, especially oaks (*Quercus* spp.), and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (e.g., 4-inch [10-centimeter]).⁴ Occasional summer roosts also include clusters of dead pine needles of large live pines (*Pinus echinata*), live branches of Norway spruce (*Picea abies*), eastern red cedar (*Juniperus virginiana*), abandoned gray squirrel (*Sciurus carolinensis*) nests, and under exfoliating birch (*Betula* spp.) bark.⁵ TCBs commonly roost in the mid to upper canopy of trees although males will occasionally roost in dead leaves at lower heights (e.g., less than 16 feet [5 meters] from the ground).⁶ TCBs seem to prefer foraging along forested edges of larger forest clearings, along edges of riparian areas, and over water and avoid foraging in dense, unbroken forests, small forest openings, and narrow road cuts through forests.⁷ TCBs also roost in human-made structures, such as bridges and culverts, and occasionally in barns or the underside of open-sided shelters (e.g., porches, pavilions); therefore, these structures should also be considered potential summer habitat. Unsuitable roosting habitat includes trees found in highly developed urban areas (e.g., street trees, downtown areas).⁸

threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (ESA section 3).

take – “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (ESA section 3).

⁴ Leput 2004

⁵ Veilleux et al. 2003; Perry and Thill 2007; WDNR 2016; WDNR 2017a; WDNR 2017b; WDNR 2018; Thames 2020; Hammesfahr et al. 2022

⁶ Perry and Thill 2007

⁷ Davis and Mumford 1962; Kurta 1995; Lacki and Hutchinson 1999; Ford et al. 2005; Menzel et al. 2005; Thames 2020

⁸ Helms 2010

Chapter 1 Purpose and Need for Action

1.1 Introduction

The U.S. Fish and Wildlife Service (Service) prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended⁹; the associated Council on Environmental Quality (CEQ)¹⁰ and Department of the Interior (DOI) implementing regulations¹¹; and Section 10(a)(1)(B) of the Endangered Species Act (ESA), as amended.¹² This EA evaluated the impacts of, and alternatives to, the proposed approval and implementation of the Multi-Bat Species General Conservation Plan for Routine Development Projects in New York (NY), Pennsylvania (PA), and West Virginia (WV) (GCP)¹³ incorporated herein by reference.

The GCP, if approved, would facilitate issuance of ESA Section 10(a)(1)(B) incidental take permits (ITPs) for the federally listed Indiana bat (*Myotis sodalis*; Endangered; IBAT) and northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered, TCB) (collectively called the Covered Species) resulting from tree removal or habitat modification associated with certain residential and commercial development, transportation, and utility infrastructure projects where these species are known or are likely to occur on non-Federal lands in the three-state Plan Area. If approved, individual Project Proponents could apply for ITPs for the Covered Species by adopting and agreeing to comply with the conservation program outlined in the GCP.

This EA compares the potential direct, indirect, and cumulative effects on the human and natural environment resulting from the proposed Federal action of approving the proposed GCP and subsequent issuance of ITPs with a baseline No Action Alternative. The Service prepared this EA rather than an Environmental Impact Statement (EIS) because, after initial assessment, there is no reasonable expectation that the proposed Federal action would result in significant impacts.

1.2 Background

Congress enacted the ESA to establish a program for the conservation of endangered and threatened species and the ecosystems on which they depend. The Secretaries of the Interior and Commerce have the responsibility for administering the ESA and have delegated this responsibility to the Service and the National Marine Fisheries Service (NMFS). The Service has primary responsibility for terrestrial and freshwater organisms, while NMFS is responsible for marine wildlife including whales and anadromous fishes, such as salmon.

⁹ 42 U.S. Code [USC] § 4321 *et seq.*

¹⁰ 40 CFR Parts 1500-1508

¹¹ 43 CFR Part 46

¹² 15 USC § 1532

¹³ Service 2024

ESA section 9 and the Service’s implementing regulations prohibit “take” of fish and wildlife species that are listed as endangered¹⁴ but does not provide these same prohibitions to threatened species. Instead, ESA Section 4(d) requires that the Secretary issue regulations necessary and advisable to provide for the conservation of threatened species; these are referred to as “4(d) rules.” Exceptions to prohibitions against take may be obtained through consultation with the Service under ESA section 7 or through issuance of a Permit under ESA section 10.

If a proposed project that may affect an endangered or threatened species is funded, authorized, or carried out by a Federal agency, the responsible Federal agency must consult with the Service or NMFS pursuant to ESA Section 7(a)(2). Federal agencies are directed to utilize their authorities in furtherance of the purposes of the ESA by developing conservation programs¹⁵ and must ensure that the projects that they fund, authorize, or carry out do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of designated critical habitat.¹⁶ “Jeopardize the continued existence of...” means to “engage in an action that would reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”¹⁷ “Destruction or adverse modification” means a “direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.” Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features. Regulations specifying how Federal agencies fulfill their ESA section 7 consultation requirements are described in Title 50 of the Code of Federal Regulations (CFR) Part 402.

If a proposed project has no Federal nexus (i.e., it is not funded, authorized, or carried out by a Federal agency), the Project Proponent can seek an exception by applying for an ITP under ESA section 10. To receive an ITP, the proponent must develop and submit a “conservation plan” that meets specific statutory¹⁸ and regulatory¹⁹ requirements. The Service issues ITPs upon determining that specific issuance criteria have been met.²⁰

The GCP is a conservation plan developed by the Service that facilitates a streamlined project review and permitting process to address a defined suite of proposed activities within a specified geographic area. Unlike conservation plans that address incidental take permitting on a project-by-project basis (which have come to be known as Habitat Conservation Plans or HCPs), a GCP establishes a framework under which proposed projects are reviewed for compliance with standardized requirements as individual applications are submitted. As with an Applicant-prepared HCP, the Service can issue ITPs under the GCP pursuant to ESA section 10. However, unlike HCPs, qualified Applicants can adopt the Service’s proactively prepared GCP that

¹⁴ 16 USC §§ 1531-1544

¹⁵ ESA § 7(a)(1)

¹⁶ ESA § 7(a)(2)

¹⁷ 50 CFR § 402.2

¹⁸ ESA § 10(a)(2)(A)

¹⁹ 50 CFR §§ 13, 17.22, 17.32

²⁰ ESA § 10(a)(1)(B)

provides for a set of specific covered activities rather than develop project-by-project conservation plans.

The proposed GCP was prepared by the Service's NY, PA, and WV Ecological Services Field Offices (collectively, the Field Offices) in accordance with ESA Section 10(a)(2)(A) to provide an efficient and standardized mechanism for Project Proponents engaged in specific routine development projects on non-Federal lands. The proposed GCP would allow private individuals, local and state agencies, and other non-Federal entities to meet the statutory and regulatory requirements of the ESA by adopting the GCP as the conservation plan required when applying for an ITP, and agreeing to comply with the standardized avoidance, minimization, and mitigation actions that apply to their individual projects.

This EA provides the required NEPA analysis and documentation for the proposed Federal action (i.e., approval of the GCP and subsequent issuance of ITPs), a discussion of impacts to the human and natural environment that may result from approval and implementation of the GCP, and a comparison with a baseline No Action Alternative in which the GCP would not be approved, and associated ITPs would not be issued. Importantly, the scope of this EA is limited to the evaluation of the proposed GCP as a mechanism to standardize ITP issuance for Covered Activities; this EA neither evaluates nor results in approval of individual development projects or activities. Land use approval(s) for individual projects would continue to be the responsibility of the local or state agency(ies) with appropriate jurisdiction(s) over individual projects.

1.3 Purpose and Need of the Proposed Action

The purpose of the proposed GCP is to provide a mechanism by which the Field Offices can increase efficiency, standardize ESA compliance, and promote consistent conservation outcomes for a range of routine development projects on non-Federal lands that have the potential to impact the Covered Species.

The proposed GCP fulfills a need to facilitate more efficient and consistent conservation practices for the Covered Species in NY, PA, and WV. Rather than requiring each Project Proponent to develop their own HCP as part of the ITP application process, the proposed Federal action would allow qualified Applicants to adopt the GCP as part of their ITP application. The Field Offices would then verify that proposed projects meet standardized GCP requirements. The GCP would facilitate greater consistency in application of avoidance, minimization, and mitigation measures and ensure that multiple unrelated projects within the Plan Area all contribute toward consistent conservation goals for the covered species.

1.4 Agency and Public Involvement

The Service identified and invited participation of Tribal, governments throughout the planning and early stages of preparation of this EA.²¹ A list of the Tribal governments and persons contacted is attached as appendix B.

²¹ 43 CFR § 46.235(a)

Also, a Notice of Availability of the draft GCP and the Draft EA will be published in the *Federal Register* (FR) for review by the public, agencies, and other interested parties. Additionally, notification will be sent to interested stakeholders to encourage review of and comment on the Draft EA. All comments received on the Draft EA will be reviewed, considered, and incorporated into the Final EA, as appropriate. Comments received during the public review and comment period will be included as an appendix E.

1.5 Scope of the Environmental Assessment

Per CEQ implementing regulations and DOI guidance, an EA is intended to be focused, relevant, and succinct. Therefore, this EA focuses on describing the expected environmental impacts of the proposed Federal action compared to an alternative in which the proposed action is not selected, and on describing evidence supporting a determination to prepare either a finding of no significant impact (FONSI) or an EIS.²²

Approval and implementation of the proposed action would not directly result in approval of ITPs for any future individual project. In addition, Applicants may require other state or local permits (see section 1.6).

1.6 Other Regulatory Requirements

The GCP was created to satisfy the statutory and regulatory requirements of a conservation plan for issuance of ITPs and incorporates specific measures consistent with the Service's existing recovery plans and regional conservation strategies for the Covered Species. Applicants that choose to adopt the GCP as part of their application must agree to comply with all applicable Federal, State, and local statutes and regulations to ensure that their actions are otherwise lawful and; therefore, eligible to be covered by an ITP. The GCP is not intended to supersede existing Federal, State, or local laws or regulations. A brief survey of State and local requirements regarding project-specific reviews and approvals is provided below. This list is not intended to be comprehensive but to acknowledge the important role of State and local authorities in ensuring protection of elements of the human and natural environment under their respective jurisdictions.

New York State

The NY State Department of Environmental Conservation (NYSDEC) specifies that a state-issued ITP is required for any activity not otherwise exempt that is likely to result in take or taking of any species listed by the state as threatened or endangered, or adverse modification of their occupied habitat.^{23, 24} The subsequent permit application and review processes are subject to adherence to the procedures and timeframes set forth in the Uniform Procedures Act.²⁵

²² NEPA § 102(2)(E)

²³ 6 New York Codes, Rules and Regulations [NYCRR] Part 182

²⁴ New York Environmental Conservation Law [NYECL] § 11-0535

²⁵ 6 NYCRR Part 621

The NY State Environmental Quality Review Act and its implementing regulations require all state and local government agencies to consider environmental impacts equally with social and economic factors during discretionary decision-making.²⁶ Similar to the NEPA process, if through the completion of an Environmental Assessment Form, an action is determined not to have significant adverse environmental impacts, a determination of non-significance (i.e., Negative Declaration) is prepared. If an action is determined to have potentially significant adverse environmental impacts, an EIS is required.

Several NY State agencies administer additional regulations related to environmental protection that could apply to projects eligible to participate in the GCP. For example, the NYSDEC implements the 1975 Freshwater Wetlands Act²⁷ and the Protection of Waters Act,²⁸ and the NY Department of State administers the Waterfront Revitalization and Coastal Resource Act of 1981.²⁹

NY counties, towns, villages, and municipalities can review and process development permit applications in coordination with the NYSDEC and regulate certain resources through zoning and other land use regulation authorities.

Pennsylvania

PA state laws pertaining to take of threatened and endangered species are found under Recreation Code,³⁰ PA Fish and Boat Code,³¹ the Game and Wildlife Code,³² the Wild Resource Conservation Act,³³ and the Conservation of PA Native Wild Plants Act.³⁴ The PA Department of Environmental Protection ensures that permit Applicants utilize the PA Natural Heritage Program's (PNHP) PA Natural Diversity Inventory (PNDI) database and associated PNDI Environmental Review tools³⁵ during permit application.

Multiple state agencies in PA are responsible for implementing environmental statutes and other regulations related to the human and natural environment that may pertain to projects participating under the GCP, including the PA Department of Conservation and Natural Resources (PDCNR), Department of Environmental Protection, the Game Commission, the Fish and Boat Commission, and the Historical and Museum Commission. Some county and local governments regulate certain resources through zoning and other regulatory authorities.

West Virginia

²⁶ 6 NYCRR Part 617

²⁷ NYECL § 24-0107, 24-0301, 24-0701

²⁸ NYECL § 15-0101

²⁹ New York Consolidated Laws, Executive Law Article 42 Parts 910-923

³⁰ 58 Pa. Code § 75, 133, 137, 147

³¹ 30 Pa. C.S. §§ 102, 2502, 2504, 2506

³² 34 Pa. C.S. §§ 102, 925, 2164-67, 2924

³³ 32 P.S. §§ 5301-5314

³⁴ 17 Pa. Code § 45.1-91

³⁵ PNHP 2022

All federally listed species present within WV are designated as such per state code.³⁶ The WV Department of Natural Resources Rare, Threatened, and Endangered Species Program (WVDNR, RTE) implements conservation actions for all federally listed species within the state. The WV Department of Environmental Protection (WVDEP) is responsible for issuing permits for various facilities and activities, ensuring that proposed activities adhere to all relevant state and Federal environmental laws while minimizing potential impacts to the environment.

1.7 National Historic Preservation Act

The National Historical Preservation Act of 1966 (NHPA), as amended,³⁷ is the primary Federal law governing the preservation of cultural and historic resources in the United States. This act established a national preservation program and the basic structure for encouraging the identification and protection of cultural and historic resources of national, state, tribal, and local significance. NHPA Section 106 requires that Federal agencies consider the effects of their undertakings (including permitting the undertakings of other entities) on historic properties and stipulates that affected federally recognized tribes must be consulted. Issuance of ITPs is a federal undertaking requiring review under the NHPA.

Applicants seeking an ITP through the streamlined GCP process agree to follow the prescribed stepwise section 106 process outlined in the GCP to ensure that compliance requirements are satisfied. This may require consultation with the State Historic Preservation Office (SHPO) and appropriate federally recognized tribes. The process describing NHPA section 106 compliance for projects adopting the GCP is described in (GCP chapter 1 and GCP appendix E).

Chapter 2 Alternatives

This EA compares the potential impacts of two alternatives on the human and natural environment: the No Action Alternative and the Proposed Alternative. The No Action Alternative provides a baseline describing the environmental consequences that may occur if the Proposed Alternative is not implemented. The Proposed Alternative is the approval of the GCP and subsequent issuance of individual permits to authorize incidental take of the Covered Species that may result from the Covered Activities.

2.1 The No Action Alternative

Under the No Action Alternative, the proposed GCP would not be approved, and no ITPs would be issued through the streamlined GCP process. Project Proponents engaged in routine residential and commercial, transportation, and utility development projects would be expected to comply with all statutes, regulations, and policies that apply to their projects. Project Proponents could comply with the ESA by avoiding take of listed species. If take could not be avoided and a Federal nexus exists (i.e., if the project is funded, authorized, or carried out by a Federal agency), Project Proponents could receive take coverage through consultation and a biological opinion issued by the Service to the Federal action agency through the ESA section 7

³⁶ WV Code §§ 20-1-18a, 20-1-18c.

³⁷ 16 USC § 470 *et seq.*

process. If no Federal nexus exists, Project Proponents could develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Each application would be evaluated independently in compliance with NEPA and other applicable requirements.

Because approval of the GCP would result in issuance of ITPs covering a specified maximum acreage of forested habitat per year (up to 2,000 acres each state per year in NY, PA, and WV), the No Action Alternative considers effects to equivalent acreages to establish a comparable baseline.

2.2 Proposed Alternative: Implementation of the Proposed GCP

The Proposed Alternative is approval and implementation of the GCP and issuance of ITPs subject to implementation of all avoidance, minimization, and mitigation measures prescribed in the conservation program described in the GCP. The GCP Plan Area is the geographic area where Covered Activities described within the GCP may occur, and includes the states of NY, PA, and WV, excluding Federal lands (appendix C, figure 1). Actions covered by the GCP may result in take of the Covered Species due to activities associated with certain routine development activities including, but not limited to, residential and commercial construction, transportation, and utility infrastructure (summarized below and described in GCP section 3.1.3). The proposed GCP has an anticipated duration of 10 years and resulting ITPs would each be valid for five years upon issuance.

The GCP quantifies incidental take in terms of acres of habitat within the Plan Area impacted by Covered Activities for each of the Covered Species because expressing the amount of take in number of individuals is impractical. There is a clear causal link between the habitat surrogate and take of the Covered Species, and acres of impacted habitat serves as a clear standard for determining level of take.

The ranges of the three Covered Species overlap portions of the Plan Area (see section 2.2.3). The GCP presumes that Covered Activities impact the Covered Species where their ranges co-occur, and participating projects in those areas are provided with ITP coverage for the Covered Species. In such areas, the total authorized acres of annual habitat impact contribute toward the annual state-wide GCP tally for the Covered Species. The GCP specifies that the amount of habitat impact authorized each year cannot exceed the annual total for any Covered Species. The total annual amount of authorized habitat impact cannot exceed the annual total for the three species, a maximum of 2,000 acres of habitat could be impacted per year per state, at a minimum, would be offset by an equivalent amount of conservation actions for the Covered Species.

The GCP has a proposed duration of 10 years and resulting ITPs would each be valid for five years upon issuance. Because Covered Activities may occur up to 5 years per ITP, the temporal analysis boundaries for this EA extend for 15 years from the proposed GCP.

The maximum amount of forested lands that could be impacted is 60,000 acres of the proposed GCP, but the ultimate acreage impacted is dependent on the

NYSDEC Biologist
2025-03-11 16:44:00

Again, this should be 2,000 acres of habitat per species per year per state, or a maximum of 6,000 acres of habitat per year per state.

NYSDEC Biologist
2025-03-11 16:43:22

NYSDEC Biologist
2025-03-11 16:44:20

This should be 180,00 acres as there are 3 covered species across the 3 states, with a maximum of 2,000 acres of habitat impacted per species per year per state for the duration of 10 years. $3 \times 3 \times 2,000 \times 10 = 180,000$

of future permitted projects. Recent U.S. Forest Service (USFS) reports estimate that forests cover approximately 47.7 million acres in the Plan Area.^{38, 39, 40} The cumulative amount of forested habitat that could be impacted over the duration of the plan amounts to 0.12 percent of the total forested area within the boundaries of the GCP Plan Area.

The conservation measures (CMs) prescribed in the GCP are intended to achieve ESA statutory permit issuance criteria requiring that the impacts of the taking are minimized and mitigated to the maximum extent practicable. To fully offset unavoidable impacts that cannot be minimized or mitigated, the GCP is expected to protect, restore, manage, and conserve habitat that provides equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and in-lieu fee (ILF) programs.

2.2.1 GCP Plan Area and ITP Permit Areas

The GCP Plan Area is the geographic area where Covered Activities described within the GCP may occur, and includes the states of NY, PA, and WV, excluding Federal lands (appendix C, figure 1). The Permit Area is the geographic area where an ITP applies. Under the Proposed Alternative, each ITP would define the specific Permit Area within the GCP Plan Area where Covered Activities and associated mitigation activities would occur. Mitigation activities that offset the impact of the taking of Covered Species are not required to occur within an ITP's designated Permit Area, but must occur within the GCP Plan Area within the state of impact (unless the local Field Office agrees to out-of-State mitigation projects).

2.2.2 Covered Project Types

Multiple project types are eligible to participate through the proposed GCP, provided they meet certain qualifying conditions. A complete description of the Covered Activities, associated requirements, and exclusions is found in GCP section 3 and associated appendices. Generally, the following project types within the Plan Area are eligible if they meet the requirements and qualifications specified in the GCP:

- **Residential/Commercial/Other Development.** This includes new construction, modifications, operations and maintenance activities associated with several development types. Examples include, but are not limited to:
 - Single- or multi-family residential construction or subdivisions
 - Commercial facilities
 - Community facilities (e.g., schools, libraries, and churches)
 - Public works projects (e.g., wastewater treatment plants); and
 - Recreational trails and facilities (e.g., campgrounds, fairgrounds, and playgrounds)

³⁸ Widmann 2016

³⁹ Albright 2017

⁴⁰ Morin et al. 2017

- **Transportation.**⁴¹ This includes activities associated with:
 - Operations and maintenance or expansion of existing roadways/railways where there is no Federal funding or oversight by the Federal Highway Administration (FHWA), Federal Transit Authority (FTA), or Federal Railroad Administration (FRA)
 - Operations and maintenance, replacement or removal of associated structures, bridges, or culverts where there is no Federal funding or oversight such as that of the FHWA, FTA, or FRA access road construction, operation and maintenance, and use in conjunction with other project types covered by this GCP
 - Construction, operations and maintenance of internal private roads such as those associated with residential subdivisions

- **Utilities.** This includes activities associated with:
 - New construction, modifications, operations and maintenance activities associated with:
 - Water lines
 - Sewer lines
 - Underground or overhead cable/internet
 - Underground or overhead electrical distribution lines⁴²
 - Electrical substations
 - Photovoltaic solar power projects
 - Operation and maintenance or modification of existing electrical transmission lines within existing footprints. Expansion of existing transmission lines is not covered.

Projects must meet eligibility requirements, and Applicants must agree to implement the CMs that apply to their project to qualify to adopt and submit the GCP as part of their application for a permit. Project types likely to result in effects not analyzed in the GCP or involving complexities requiring additional NEPA analysis are not eligible to participate through the streamlined GCP process.

⁴¹ An existing rangewide consultation is available for FHWA, FRA, and FTA projects (see <http://www.fws.gov/sites/default/files/documents/programmatic-biological-opinion-for-transportation-projects-2018-02-05.pdf>). Applicants with other Federal agency (i.e., U.S. Army Corps of Engineers [USACE] permitting) involvement may use the GCP to demonstrate compliance with the ESA. Please see GCP appendix F for the process for project sponsors with a federal nexus.

⁴² New transmission lines are not included in the GCP. Transmission lines carry electric energy from one point to another in an electric power system. They can carry alternating current or direct current, or a system can be a combination of both. Also, electric current can be carried by either overhead or underground lines. The main characteristics that distinguish transmission lines from distribution lines are that they are operated at relatively high voltages, they transmit large quantities of power, and they transmit the power over large distances. Distribution lines are low voltage lines that carry electricity from the substations to the end users for residential and commercial use. <https://www.osha.gov/etools/electric-power/illustrated-glossary/transmission-lines> (Accessed 7/21/2022).

Anticipated impacts to the human environment resulting from the implementation of the GCP and subsequent issuance of ITPs would vary by project, but are expected to result from activities including:

- Surveys and site preparation activities, such as vegetation clearing and removal, excavation of soils, rock or outcrop removal, vegetation restoration/landscaping, and geotechnical investigation
- Pre-construction actions including debris removal, installation of erosion protection (including construction of stormwater, soil, and sediment control structures, drainage ditches and culverts, and dust abatement activities), and staging area construction
- Lot or site development activities such as installation of septic systems, construction of freshwater wells, grading, stormwater management, and construction of in-ground utilities
- Construction-related actions including installing infrastructure, constructing roads, and building structures

Certain CMs required for GCP participation are expected to reduce or eliminate some impacts to resources and elements of the human and natural environment. For example, GCP time-of-year restrictions for tree clearing prescribed to minimize impacts to maternity colonies and non-volant juvenile bats are likely to also reduce impacts to other wildlife and nesting migratory birds. Required buffer zones around key habitat features such as bat hibernacula sites would also be expected to minimize impacts to the geology, soils, and vegetation within those protective buffers. Avoidance, minimization, and mitigation measures are described in GCP section 3.

2.2.3 Species Covered by the Proposed GCP

The proposed GCP covers the federally listed IBAT, NLEB, and proposed TCB where they occur on non-Federal lands in NY, PA, and WV. Appendix C, figure 2 illustrates the ranges of the three species within the three states present in the GCP Plan Area. GCP section 2 describes the status, distribution, life history, and threats in greater detail.

Project activities that may affect the Covered Species are those that occur in wooded or forested areas where the bats occur, or near caves, mines, or other features used as overwintering hibernacula sites. Impacts reasonably certain to result in take of the Covered Species include tree removal, habitat modification, and project-related noise and disturbance.

A summary providing additional background about the Covered Species and their resource needs most pertinent to the analysis of potential impacts analyzed in this EA is provided in GCP section 2.0.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes existing conditions and those aspects of the human environment that could be affected by the proposed Federal action. Each section includes a brief overview of the

resource within the Plan Area and describes how that resource may be affected. Each section then describes the baseline conditions expected under the No Action Alternative and compares the potential environmental consequences of the Proposed Alternative with the No Action Alternative.

3.2 Plan Area

The Plan Area for this EA covers approximately 70.4 million acres and consists of all lands within the states of NY, PA, and WV, excluding Federal lands. The Plan Area aligns with the GCP Plan Area in order to analyze potential impacts per each resource evaluated within this EA. The Plan Area includes portions of seven major river basins (the Delaware, Hudson, Lake Champlain, Ohio, Potomac, Susquehanna, and James River Basins), portions of two great lake basins (Lake Erie and Lake Ontario) and their tributaries, drainage to Atlantic Ocean/Long Island Sound, and more than 1.4 million acres of wetlands. Land uses vary, including undeveloped land, agricultural land, dense urban development, and public and privately-owned lands. Approximately 35 million people reside in the Plan Area.

The Plan Area encompasses a vast array of habitats, land types, and resources, with varying levels of development throughout. Not all the resources located within the Plan Area would be affected by the Proposed Alternative. This EA briefly describes existing resources within the Plan Area, focusing on those with the potential to be affected by the Proposed Alternative. Some cited references pertain to areas that are subsets of or that extend beyond the boundaries of the Plan Area for this EA. Unless otherwise noted in each section, the spatial extent of the analyses in this EA corresponds to the Plan Area.

3.3 Scope of the Analysis

Federal agencies are required to analyze the degree of the anticipated effects of their proposed actions upon the potentially affected environment.⁴³ Effects are described at a programmatic level to reflect the geographic scope of the Plan Area and the lack of specificity of where and when impacts would occur over the duration of the proposed GCP. Impacts are qualitatively described by identifying mechanisms that may affect considered resources. The discussion focuses on reasonably foreseeable environmental trends and proposed actions pertinent to resources within the Plan Area and on project activities occurring in or that may affect areas that constitute breeding, feeding, or sheltering habitat for the Covered Species (i.e., where individually issued ITPs would apply).

This analysis stratifies the Plan Area by ecoregions in order to accurately analyze potentially impacted resources in relation to a standardized spatial framework. The U.S. Environmental Protection Agency (EPA) defines ecoregions as areas where ecosystems, and the type, quality, and quantity of environmental resources, are generally similar. Ecoregion classifications provide a standard spatial framework for research, assessment, management, and monitoring of ecosystems and their components. Ecoregions are identified by analyzing the patterns and composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem

⁴³ 40 CFR § 1501.3(b)

quality and integrity. These phenomena include geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology.^{44, 45} Ecoregions generally describe naturally occurring physical conditions and the communities they support.

Ecoregions are described in accordance with a hierarchical classification scheme, designated by Roman numerals I through IV, ranging in resolution from general to more detailed. Level I categories provide ecological context at a global or continental scale. North America is divided into 15 broad Level I ecoregions (not including water), and the Plan Area includes portions of two of these ecoregions. Most of the lands in the Plan Area fall within the Eastern Temperate Forests category, with some portions of NY and PA classified as Northern Forests.

Level II ecoregions provide greater detail useful for ecological context within the broader Level I categories. The Plan Area includes portions of 4 of North America's 50 Level II ecoregions (excluding water), including the Atlantic Highlands in portions of NY and PA; the Mixed Wood Plains in NY and northern portions of PA; the Southeastern U.S. Plains of central and southwest PA and all of WV; the Ozark, Ouachita-Appalachian Forests of southeastern PA, and the Mississippi Alluvial and Southeast U.S. Coastal Plains of Long Island, NY, and portions of southeastern PA.

Level III ecoregions identify locally defining biotic and abiotic characteristics and provide information at a resolution that facilitates regional environmental monitoring, assessment, and decision-making. The North American Commission for Environmental Cooperation (CEC) further refines ecoregional descriptions to facilitate comparisons among these categories.⁴⁶ Level III ecoregion data provides helpful context for considering the potential effects of the Proposed Alternative upon the human and natural environment. The Plan Area includes 13 of the 182 Level III ecoregions in North America (excluding water).

Though the 13 Level III ecoregions within the Plan Area are further refined into 60 Level IV ecoregions, for the scope and scale of the analysis considered in this EA, the most relevant decision-making distinctions are described per Level III ecoregions, and several potentially impacted resources are described in relation to the spatial framework provided by this standard approach.

This analysis also considers how land use has changed over time by assessing changing land cover using the U.S. Geological Survey (USGS) National Land Cover Database (NLCD); a large-scale, public domain collection of satellite imagery and supplementary datasets used for a variety of environmental, land management, and modeling applications. The NLCD portrays data in multiple categories useful for different analyses, such as thematic classes (barren land, medium intensity development, woody wetlands, etc.), percentage of impervious cover, and acreage of tree canopy cover by forest type.⁴⁷ The NLCD represents the presence of natural vegetation, as well as human-created cover types including cultivated crops and constructed

⁴⁴ Omernik 1987

⁴⁵ Omernik 1995

⁴⁶ CEC 1997

⁴⁷ USGS 2012

development features on the land surface. Because the NLCD is updated on a five-year interval, this 30-meter resolution data allows consideration of change over time at a scale that provides helpful context for several of the resources described in this EA.

3.4 Resources Considered

This EA analyzes potential effects from the proposed Federal action on air quality; climate change; geology and soils; water quality; waters of the U.S. (WOTUS) and floodplains; vegetation; fish and wildlife (including threatened and endangered wildlife species evaluated under the GCP); land use; aesthetics and noise; cultural resources; socioeconomics; and environmental justice.

3.4.1 Air Quality

The Clean Air Act (CAA) identifies six common air pollutants found in the U.S.⁴⁸ These pollutants can impact human health, harm the environment, and cause property damage. The EPA designated these pollutants as “criteria air pollutants” and established human health criteria-based National Ambient Air Quality Standards (NAAQS) that apply to the concentrations of each pollutant in outdoor air. Geographic areas that meet the NAAQS requirements are described as being ‘in attainment’, and areas that do not meet the standards are designated as ‘nonattainment areas.’⁴⁹ Some pollutants can affect air quality by contributing to regional haze and reduced visibility. The CAA lists other pollutants known as Hazardous Air Pollutants (HAPs). However, EPA has not set NAAQS for visibility or for HAPs.

Existing air quality is characterized in this section by describing the NAAQS, indicating the portions of the Plan Area where air quality is of concern, and identifying locations designated as nonattainment areas where NAAQS requirements and standards are unmet. The analysis area for this resource extends beyond the defined Plan Area given the fluid nature of this resource and potential for impacts originating outside of the Plan Area.

3.4.1.1 Affected Environment

Air quality is characterized by measuring and comparing ground-level ambient (outdoor) pollutant concentrations to the NAAQS. Criteria pollutants are commonly emitted from a variety of sources, and include carbon monoxide (CO), lead (Pb), nitrogen dioxide, ozone (O₃), particulate matter smaller than 10 and 2.5 microns (PM₁₀ and PM_{2.5}, respectively), and sulfur oxides (SO_x). Primary standards are set at levels to protect public health, including sensitive populations (such as asthmatics, children, and the elderly). Secondary standards protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Air quality in the analysis area both meets and exceeds NAAQS. Reported NAAQS exceedances in the analysis area are primarily associated with ozone, particulate matter, and sulfur oxides, and

⁴⁸ 42 USC § 7401 *et seq.*

⁴⁹ <https://www3.epa.gov/pmdesignations/2012standards/index.htm>

are most common near urban centers (appendix D, table 1). Some identified areas extend beyond the geographic bounds of the Plan Area but are included here to account for effects within the Plan Area originating from these areas. Air quality can be influenced by meteorological and climatic factors such as wind direction, weather, and temperature.

3.4.1.2 Environmental Consequences

No Action Alternative

Project Proponents under the No Action Alternative would be expected to comply with the ESA by avoiding take of the Covered Species where practicable for their routine residential and commercial, transportation, and utility development projects within the Plan Area. Project Proponents whose projects are reasonably certain to result in take would develop an HCP and apply for incidental take coverage on a project-by-project basis. Each application would continue to be evaluated independently under NEPA. Each project would be expected to comply with applicable Federal, state, and local air quality requirements.

Impacts of past, present, and planned actions could reasonably be expected to contribute to ongoing air quality trends in the analysis area under the No Action Alternative. The routine residential and commercial development, transportation, and utility and infrastructure projects considered typically involve the use of various vehicles, heavy equipment, and small equipment (e.g., chainsaws) that emit air pollutants. Emissions associated with vehicles and equipment would consist of criteria pollutants, volatile organic compounds (VOCs), and HAPs from engine exhaust and fuel combustion, fugitive particulate matter (dust) from unpaved roads and disturbed earth surfaces, and potential chemical or petroleum spills or releases.

Potential impacts associated with the Covered Activities and associated emissions and spills or releases would be localized, short in duration, and specific to the conditions and equipment in use at each site. Vehicle and equipment use typically would be temporary and of short duration at any one location. Emissions would occur intermittently depending on the work schedule and the specific equipment in use on a particular day.

Post-completion use of existing and planned projects could contribute to regional emissions. Increased population levels and expanded transportation networks could result in an overall increase in exhaust emissions as well as increased prevalence of chemical and/or petroleum spills or releases.

Implementation of the No Action Alternative would not be expected to result in impacts to the air quality resource in relation to baseline conditions and current trends. Current sources and quantities of emission and pollutant discharge would be expected to remain consistent with baseline levels and the No Action Alternative would not be expected to result in significant impacts on long-term air quality in the analysis area or violations of ambient air quality standards.

Proposed Alternative

Air quality impacts under the Proposed Alternative are expected to be similar to those described for the No Action Alternative. Equipment and vehicle usage are expected to be similar or the same under both alternatives. Air quality effects are expected to be limited to small-scale and localized short-term effects associated with development and construction activities capped at 2,000 acres per year per state over the duration of the GCP. During construction activities, ambient concentrations of fugitive dust and emissions are expected to decrease rapidly with increasing distance from the source, and off-property air quality indicators would rarely exceed baseline ambient levels.

The Covered Activities would not create new point sources or increase amounts of emissions, spills, or releases of any NAAQS criteria pollutants, VOCs, or HAPs in relation to baseline levels. Activities associated with the Proposed Alternative are not anticipated to cause violation of ambient air quality standards or have significant impact on long-term air quality in the analysis area. Direct and indirect air quality impacts are expected to be of short duration and intensity and would not be expected to result in significant impacts to the resource.

3.4.2 Climate Change

On January 9, 2023, the CEQ issued its *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*.⁵⁰ This final guidance applies to all types of proposed Federal agency actions, including site-specific actions, permitting decisions, and land and resource management decisions that require analysis under NEPA. This guidance provides agencies with a framework for agency consideration of the effects of greenhouse gas (GHG) emissions and climate change to ensure efficient and transparent agency decision-making.

As directed by the CEQ,⁵¹ when addressing climate change, this EA considers: (1) the potential effects of a Proposed Alternative on climate change as indicated by assessing GHG emissions; and (2) the effects of climate change on a Proposed Alternative and its environmental impacts. As described above, this EA compares alternatives which differ in their processes for issuing ITPs for routine residential and commercial, transportation, and utility development projects. Quantitatively predicting changes in GHG-emitting activities associated with these permits would be highly speculative. Therefore, this EA analyzes potential effects qualitatively, guided by the CEQ.⁵²

3.4.2.1 Affected Environment

GHG emissions for the Proposed Alternative are compared against emissions present under the No Action Alternative. GHG emissions of the No Action Alternative are compared to existing conditions, under which the primary sources of emissions are associated with routine residential

⁵⁰ CEQ 2023

⁵¹ CEQ 2023

⁵² CEQ 2023

and commercial, transportation, and utility development projects. The analysis area for this resource extends beyond the defined Plan Area given the fluid nature of this resource and potential for impacts originating outside of the Plan Area. The proposed GCP has an anticipated duration of 10 years. While this timeframe was used to consider GHG emissions under the No Action Alternative and Proposed Alternative, major GHGs may remain in the atmosphere for tens to hundreds of years after release.⁵³ In turn, indirect and cumulative effects may persist beyond the temporal extent of the proposed GCP.

Greenhouse Gas Emissions

Trends in increasing temperatures of the Earth's surface have been confirmed by multiple independent research groups around the world.⁵⁴ Several factors control the amount of energy from the sun that enters and leaves the atmosphere, including GHGs, aerosols, and the reflectivity (or albedo) of the Earth's surface. Of these factors, increasing GHG levels associated with human activities are the most influential.⁵⁵

Ongoing project activities associated with routine residential and commercial, transportation, and utility development projects within the Plan Area comply with the ESA by avoiding take of the Covered Species where practicable. Project Proponents develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Activities associated with these projects often involve construction, vehicle and mechanical equipment operation, vegetation removal, and the burning of combustible materials, resulting in GHG emissions.

Project activities may also entail tree removal, which left undisturbed, sequester carbon. Carbon sequestration refers to the removal and long-term storage of carbon dioxide from the atmosphere. Carbon sequestration takes place in forests, trees within urban areas, agricultural soils, and coastal wetlands. Changes in land use such as the conversion of forest land to urban use can lead to a net source of carbon dioxide emissions, while others such as additions of forest biomass can lead to a net sink for carbon dioxide.⁵⁶ In general, take of the Covered Species is associated with tree removal, which also results in reductions in carbon sequestration capacity and increased carbon emissions.

Effects of Climate Change

The northeastern United States is experiencing a variety of challenges due to a changing climate. Regionally observed and projected changes to ocean and coastal ecosystems in the northeast include rising temperatures, ocean acidification, increased storm frequency and intensity, and rising sea levels.⁵⁷ These projected changes pose increasing risks to marshes, fisheries, ecosystems, and coastal infrastructure. The northeast is also experiencing increases in rainfall intensity, which exacerbate existing issues associated with the region's aging infrastructure.⁵⁸

⁵³ EPA 2021a

⁵⁴ Dupigny-Giroux et al. 2018

⁵⁵ Hayhoe et al. 2018

⁵⁶ EPA 2021a

⁵⁷ Dupigny-Giroux et al. 2018

⁵⁸ Dupigny-Giroux et al. 2018

Less distinct seasons with mild winters and early spring conditions have been observed regionally, a trend which is projected to continue, affecting terrestrial and aquatic ecosystems, forest productivity, agricultural land use, and other resource-based industries.⁵⁹ By 2035, the northeast is projected to be more than 3.6°F warmer on average than during the preindustrial era.⁶⁰ While shifts to a warmer climate increase the growing season length of northeastern forests, warmer winters would likely also contribute to the expansion of tree pests such as hemlock woolly adelgid, emerald ash borer, and southern pine beetle.⁶¹

Global climate change has been identified as a threat to the IBAT,⁶² NLEB,⁶³ and TCB^{64, 65} that serve as indicators of regional climate change effects.⁶⁶ Climate influences food availability, timing of hibernation, frequency and duration of torpor, rate of energy expenditure, reproduction, and development rates of juvenile bats.⁶⁷ An earlier emergence from hibernation may have no detrimental effect on population size if sufficient food is available.⁶⁸ However, alterations in precipitation, stream flow, and soil moisture could alter flying insect populations and; therefore, food availability for bats. Shifts in IBAT, NLEB and TCB ranges are also a potential impact of climate change, as has been observed in several other bat species⁶⁹ and in the southeastern United States.^{70, 71}

3.4.2.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the proposed GCP would not be implemented, and associated ITPs would not be issued to individual Project Proponents. Project Proponents engaged in routine residential and commercial, transportation, and utility development projects within the Plan Area would continue to comply with the ESA by avoiding take of the Covered Species, where practicable. Activities associated with GHG emissions would continue to occur at levels consistent with current use. Project Proponents would develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Each ITP application would continue to be evaluated independently under NEPA.

Direct and Indirect Effects: Greenhouse Gas Emissions

⁵⁹ Dupigny-Giroux et al. 2018

⁶⁰ Dupigny-Giroux et al. 2018

⁶¹ Dupigny-Giroux et al. 2018

⁶² Service 2019

⁶³ Service 2015

⁶⁴ Service 2021

⁶⁵ Adams and Hayes 2008

⁶⁶ Sherwin et al. 2013

⁶⁷ Jones et al. 2009

⁶⁸ Rodenhouse et al. 2009

⁶⁹ Lundy et al. 2010

⁷⁰ Ancillotto et al. 2016

⁷¹ McCracken et al. 2018

Under the No Action Alternative, current trends in GHG emissions described in the Affected Environment Section would continue due to the continuation of residential and commercial, transportation, and utility development activities occurring within the Plan Area. Activities associated with GHG emissions would continue to occur per each individual project and would be expected to result in GHG emissions consistent with current levels.

Direct and Indirect Effects: Effects of Climate Change

Under the No Action Alternative, regional effects described in the Affected Environment section would be expected to continue, potentially altering the spring and fall bat dispersal and migration periods and causing bat ranges to shift. Reduced food availability associated with climate change and impacts to insect populations could result in impacts to population size when coupled with additional impacts such as earlier emergence from hibernation and shifting ranges.

Proposed Alternative

The Proposed Alternative is the approval and implementation of the proposed GCP and subsequent issuance of ITPs for the Covered Species within the 10-year term of the GCP. Actions covered under the GCP may result in take of Covered Species associated with activities associated with residential and commercial construction, transportation, and utility infrastructure. The proposed GCP has an anticipated duration of 10 years and resulting ITPs would each be valid for five years upon issuance.

Direct and Indirect Effects: Greenhouse Gas Emissions

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, GHG emissions under the Proposed Alternative are expected to remain consistent with the No Action Alternative and associated GHG emissions.

Direct and Indirect Effects: Effects of Climate Change

Under the Proposed Alternative, regional patterns described in the Affected Environment section would be expected to continue, potentially altering the spring and fall bat dispersal and migration periods and causing bat ranges to shift. However, implementing the Proposed Alternative would facilitate a more consistent, landscape-scale conservation strategy, likely indirectly resulting in a permitting process that considers the effects of climate change on the Covered Species more comprehensively than when reviewing projects on a case-by-case basis. The Proposed Alternative would not be expected to result in appreciable impacts to the effects of climate change.

3.4.3 Geology and Soils

Geologic resources consist of surface and subsurface materials and their inherent properties. Geology varies greatly throughout the Plan Area, and a brief description of the primary geologic

features in the Plan Area is provided. Additional detail about the geology and soils characteristics of the 13 ecoregions within the Plan Area provides additional context.

Soils in the Plan Area are highly diverse due to the wide range of parent materials, climate, topography, biological factors, and age of surface materials throughout the Plan Area. The U. S. Department of Agriculture Natural Resources Conservation Service (NRCS) classifies soils into 12 orders based on specific physical and chemical properties, and six of these are common in the Plan Area.⁷² Soil types, including designated prime farmland soils, that may be affected by the Proposed Alternative are briefly described.

3.4.3.1 Affected Environment

Lands within the Plan Area first formed during the Jurassic and Cretaceous periods. The Appalachian orogenic belt is an ancient mountain range that extends along the eastern margin of North America from Mississippi and Alabama north into Newfoundland, Canada. Although the region is characterized by high peaks and mountainous areas, heavy weathering and erosion processes have modified the topography and landscapes throughout the region.

The Appalachian Mountain Range is composed of deformed sedimentary rocks cut through by numerous thrust faults. The Appalachians were formed through several periods of lateral compression and folding of the earth's crust during the Paleozoic period, making interpretation of the region's geologic history difficult.

The Middle Paleozoic (Silurian, Devonian, and Mississippian) sedimentary rocks are the most abundant geologic members occurring within the Plan Area. These include:

- Silurian dolomites, limestones, and shales
- Devonian shales and limestones; and
- Mississippian shales, sandstones, and limestones.

The Upper Paleozoic (Pennsylvanian, Permian) sedimentary rocks are the second most abundant geologic member occurring within the Plan Area. These sedimentary rocks include:

- Pennsylvanian sandstones, shales, and carbonates; and
- Permian shales and limestones.

Topography within the Plan Area varies widely from the sandy beaches of the Atlantic coast to the Mountains of the Appalachian and Blue Ridge ranges. The lowest elevations in the Plan Area are the sea level beaches on NY's Atlantic coastline, and the highest elevations are associated with Appalachian Mountains. The highest point in the Plan Area is NY's Mount Marcy (Mohawk: Tewawé éstha) at 5,344 feet.

⁷² USDA n.d.

The Plan Area includes portions of 13 Level III ecoregions, identified by analyzing the spatial patterns and composition of factors such as geology, physiography, climate, and hydrology. Appendix D, table 2 summarizes geologic features for the Level III ecoregions within the Plan Area.

Karst Features

Karst topography is a landscape shaped by the dissolution of a layer or layers of soluble bedrock such as limestone or dolomite. Surface water such as rivers and lakes may be limited or absent in karst landscapes due to the characteristic drainage through subterranean flow paths and caves. Many karst regions display distinctive surface features including natural depressions and sinkholes. However, distinctive karst surface features may be completely absent where the soluble rock is mantled by glacial debris or confined by non-soluble rock strata.

Each state in the Plan Area contains carbonate (limestone) bedrock with karst topography, as well as sinkhole hotspots. Karst features and associated underground caverns and caves can serve as overwintering hibernacula sites for bats, including the Covered Species.

Landslide Potential

A landslide is a geological phenomenon that includes a variety of ground movement types, such as rock falls, deep failure of slopes, and shallow debris flows. Landslides are caused when the stability of a slope changes from a stable to an unstable condition. The Plan Area includes areas with landslide susceptibility and incidence. Although the action of gravity on an over-steepened slope is the primary reason for a landslide, several factors contribute to the original slope stability.

Landslides may have natural causes due to:

- Groundwater pressure
- Loss or absence of vertical vegetative structure, soil nutrients, and soil structure
- Erosion of the toe of a slope by rivers or ocean waves
- Weakening of a slope through saturation by snowmelt, glaciers melting, or heavy rains
- Earthquakes adding loads to barely stable slopes
- Earthquake-caused liquefaction

Landslides may have human causes due to:

- Vibrations from machinery or traffic
- Blasting
- Earthwork that alters the shape of a slope or imposes new loads on an existing slope
- In shallow soils, the removal of deep-rooted vegetation that binds colluvium to bedrock
- Construction, agricultural, or forestry activities that change the amount of water that infiltrates into the soil

Landslides can impact summer breeding, feeding, and sheltering sites as well as overwintering areas important for the Covered Species.

Soils

The NRCS State Soil Geographic Database describes soils and their specific properties such as erosion potential, compaction, and productivity.⁷³ Soils representing four of the 12 NRCS soil orders are found within the non-Federal lands that make up the Plan Area. The seven dominant soil suborders and associated acreages within the Plan Area per state are displayed in appendix D, table 3.

Soil erosion can be naturally occurring or influenced by humans. The accelerated erosion related to human uses can be as much as 1,000 times more damaging than naturally occurring processes.⁷⁴ Soil erodibility describes how susceptible a soil is to erosion, and considers infiltration capacity, texture, and structural stability. Generalized soil data suggest that most soils in the Plan Area are resistant to the effects of erosion and compaction under normal conditions. However, areas with high erosion and compaction potential can be found throughout the Plan Area, especially on steep slopes and in landscapes highly modified by human activities.

Prime farmland is defined by U.S. Department of Agriculture (USDA) as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, or oilseed and is also available for these uses.⁷⁵ These lands have suitable soil quality, growing season, and moisture supply needed to economically sustain high yields of crops when treated and managed properly. Some soils are considered prime farmland in their native state, while others are considered potential prime farmland or prime farmland if they are drained or irrigated in order to grow the main crops in the area. Prime farmland designation represents the extent of lands capable of, but not necessarily managed for, agricultural production. Though prime farmland designations are generally independent of current land use, it excludes water, built, and urban areas.

The USDA designates 4,152,200 acres (13 percent of all land) in NY, 3,519,800 acres (12 percent of all land) in PA, and 457,400 acres (3 percent of all land) in WV as prime farmland.⁷⁶ Because USDA prime farmland designations are based on physical and chemical characteristics and do not consider land ownership, these totals may include some Federal lands that fall outside of the Plan Area. These totals are provided to support relative comparisons and context for the purposes of this analysis.

⁷³ USDA 2016

⁷⁴ Brady and Weil 2007

⁷⁵ 7 CFR Part 657

⁷⁶ USDA 2018

The Agriculture and Food Act of 1981⁷⁷ created the Farmland Protection Policy Act (FPPA)⁷⁸ to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Projects that may directly or indirectly convert farmland and which are completed with assistance from a Federal agency may be subject to compliance with FPPA. Projects that may irreversibly convert prime farmland to nonagricultural use are required to consult with NRCS to meet the requirements of FPPA and NEPA. While Project Proponents subject to FPPA are not prohibited from developing an HCP and pursuing an ITP to address their ESA compliance needs, it is assumed that projects with such a federal nexus with the NRCS would choose to secure coverage through consultation under ESA section 7 and not be subject to the GCP.

3.4.3.2 Environmental Consequences

No Action Alternative

Routine development and construction projects pursued under the No Action Alternative have the potential to impact geology and soils. Impacts to geology from these project types would occur at the surface or near-surface level. Direct effects would be expected from trenching, excavation of soils, soil compaction, decreased soil permeability, and cut-and-fill instabilities such as those associated with road construction. Indirect effects could result from vegetation clearing and earth disturbance-related erosion; installation of erosion protection measures (including construction of stormwater, soil, and sediment control structures, drainage ditches and culverts, and dust abatement activities); site development activities such as installation of septic systems, construction of freshwater wells, grading, stormwater management, and construction of in-ground utilities; and other construction-related actions such as installing utilities, constructing roads, and building structures.

These activities, when implemented in accordance with required erosion and sediment controls and relevant best management practices (BMPs), generally have limited potential to increase erosion rates over baseline conditions. Due to the geographic breadth of the Plan Area and the lack of information on the precise location and timing of future Covered Activities, impacts on geology and soils are described qualitatively and may include:

- Trenching and digging during construction activities could open sinkholes and contribute to landslide potential
- Tree clearing has potential to increase erosion rates, particularly on steep, unstable slopes. Complete removal of trees in these areas can increase the potential for erosion
- State regulations typically require natural and human-caused soil disturbances to be reestablished with vegetative cover quickly to minimize soil erosion. As a result of this mitigation, erosion risks typically decline rapidly following a disturbance

⁷⁷ Public Law [Pub.L.] 97098

⁷⁸ 7 CFR Part 658

Routine construction and development activities could increase erosion rates in localized areas where soils have high potential for erosion by wind or water. Most soil types in the Plan Area are relatively resistant to the effects of wind erosion under normal conditions.

Increased soil erosion rates from construction and development activities are likely to be temporary in most cases when required erosion-prevention protocols and BMPs are followed. Most erosional impacts from construction activities are likely to diminish rapidly with post-construction revegetation and would; therefore, be expected to be temporary in duration and localized.

Project activities within the Plan Area with the proper implementation of applicable erosion control measures and BMPs are not anticipated to alter surface or near surface geology or change erosion rates or frequency of sinkholes or landslides occurring relative to current conditions within the Plan Area.

Prime farmlands could be impacted under the No Action Alternative. These effects could result from the same construction and development-related activities previously described. Because projects that may irreversibly convert prime farmland to nonagricultural use are required to consult with NRCS, and such projects are likely to choose to secure incidental take coverage through consultation under ESA section 7 and analysis through NEPA, this EA presumes that projects participating in the GCP and the comparable projects under the No Action Alternative would not result in permanent conversion of prime farmland.

Because it is not possible to know where in the Plan Area future projects may occur, the range of possible outcomes would include a result in which all impacted lands were designated prime farmlands. In that scenario, the total amount of prime farmland that could be affected over the studied period totals approximately 0.7 percent of the designated prime farmland in NY, 1.1 percent in PA, and 4.3 percent in WV. Because designated prime farmland only constitutes a limited area in each of the three states, it is more likely that the effects of routine development could impact only a subset of designated prime farmland.

Project-related activities impacting prime farmlands would be subject to all erosion prevention and control measures and BMPs required under Federal, State, and local regulations, and impacts to the lands affected would; therefore, be expected to be localized and temporary in duration and would not be expected to result in significant impacts compared to baseline conditions and current trends.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, effects to geology or soils under the Proposed Alternative are expected to remain consistent with the No Action Alternative.

Issuance of ITPs and implementation of the GCP under the Proposed Alternative would not be anticipated to result in different effects to geology or soils relative to the baseline conditions described for the No Action Alternative. Activities associated with potential impacts to the geology and soil resources within the Plan Area would continue to occur at baseline levels, adhering to all applicable BMPs and erosion prevention and control measures currently implemented per individual projects.

Projects that involve deep excavation or movement of large volumes of geologic materials such as quarrying or mining operations are not eligible to participate in the proposed GCP. Similarly, soil disturbance resulting from Covered Activities would be expected to be limited to the area of construction. Projects eligible to participate in the proposed plan and would not be expected to remove or redistribute extensive volumes of soils.

Additional avoidance and minimization measures required for participation through the GCP prescribe specific setbacks and buffer areas around caves and karst features that serve as hibernacula for the Covered Species. These requirements are intended to reduce noise, vibration, and other effects that could disturb the species or their overwintering habitat sites. The limited potential impacts to prime farmland would be the same under the Proposed Alternative as described for the No Action Alternative.

Overall, impacts resulting from approving and implementing the proposed GCP and associated ITPs are not expected to result in significant impacts to geology and soils, provided that regulatory requirements and BMPs are implemented.

3.4.4 Water Quality

Surface water includes naturally occurring waters found above the ground surface, such as lakes, ponds, rivers, streams, and springs. Semi-permanent, built water features such as reservoirs, retention ponds, ponds, canals, and regularly flooded ditches are also usually included when considering surface waters. Surface waters are relied on for agriculture, drinking water, industrial and recreation uses throughout the Plan Area. Groundwater is an important source for drinking water, agricultural irrigation, mining, and other industrial uses in portions of the Plan Area.⁷⁹ Water quality in the Plan Area is governed under Federal statutes, including section 404 of the Clean Water Act (CWA)⁸⁰ and the Safe Drinking Water Act of 1974 (SDWA),⁸¹ as well as applicable state and local regulatory mechanisms.

3.4.4.1 Affected Environment

Surface Water

The drainage areas or watersheds of the United States are categorized and mapped as a series of Hydrologic Units by USGS. This standardized system describes watershed resource regions and

⁷⁹ Penn State Extension 2016

⁸⁰ 33 USC chapter 23

⁸¹ 42 USC § 300f *et seq.*

drainage basins based on surface hydrologic features, with Hydrologic Unit Codes that define these features at increasingly finer scales. The USGS National Hydrography Dataset and companion Watershed Boundary Datasets delineate the geospatial extent of the nation's surface waters.

The Plan Area includes portions of three watershed resource regions—Mid-Atlantic, Ohio, and Great Lakes. Most of the Plan Area falls within the Mid-Atlantic region. Portions of all three states within the Plan Area drain into the Ohio River. Portions of NY and PA are within the Great Lakes Region that drain into Lake Erie, Lake Ontario, and the St. Lawrence River.

The quality of surface waters in the Mid-Atlantic Region is impacted by pollution from several sources. Key concerns in the region include nutrient enrichment from agricultural runoff that causes low dissolved oxygen levels and associated negative impacts to aquatic organisms, the presence of legacy contaminants from previous industrial practices, runoff from urban and industrial sites, and sewage discharges. In some areas water quality is impacted by acid drainage from abandoned mines.

The Great Lakes Region contains vast areas of surface waters as well as concentrations of both people and industrial manufacturing that can impact water quality. Fish consumption advisories due to chemical contamination are common in portions of the region. Contaminated sediments, air deposition, and leaks or overflows from the area's aging sewage systems introduce pollutants into adjacent waters. Nonnative and invasive species also contribute to water quality concerns in this region, as they have altered regional food-webs and caused significant economic impacts to recreational and commercial industries.

Surface water quality in the Ohio Region is affected primarily by nonpoint source pollution from urban runoff, agricultural activities, and abandoned mines. Key concerns include dioxin contamination in portions of the watershed, sewage overflows especially in areas with combined sanitary and storm water systems, acid mine drainage and contamination from heavy metals, and thermal pollution from industrial discharges.

Many surface waters in the Plan Area are impacted by urbanization and development that increases sedimentation, turbidity, nutrient levels, and urban runoff.

NY includes approximately 87,000 miles of rivers and streams, about 7,900 lakes and ponds totaling about 1,078 square miles (690,000 acres) of surface freshwater, and over 400 miles of Great Lakes coastline. There are approximately 85,146 miles of streams and rivers; and nearly 4,000 lakes, ponds, and reservoirs with a surface area of approximately 563 square miles (168,320 acres) of surface freshwater in PA. WV includes approximately 40,000 miles of streams, and 192 square miles (122,880 acres) of surface freshwater in lakes, ponds, and reservoirs.⁸²

States are required under CWA Section 305(b) to report on the quality of water resources and whether water use, recreation activities, and aquatic life are fully supported. Reports describe

⁸² <https://www.usgs.gov/special-topics/water-science-school/science/how-wet-your-state-water-area-each-state>

each category according to standardized measures and include the percentage of each category assessed, impaired, with minor impacts or threats, with no known impacts, and those that require verification. Section 303(d) requires states to identify waterbodies that do not meet water quality standards and require development of a Total Maximum Daily Load. Reports for these impaired waterbodies are submitted to the EPA on a bi-annual basis.

Several pollutants and stressors contribute to impaired surface water conditions in the Plan Area. Leading pollutants and stressors identified in parts of the Plan Area include nutrients, metals, mercury, sediment/siltation, salinity/chlorides, organic enrichment/low dissolved oxygen, algal growth/chlorophyll A, pesticides, polychlorinated biphenyls, pathogens, flow alteration, suspended solids, and noxious aquatic plants. Likely sources of these threats include agriculture, hydromodification, urban runoff and storm sewers, atmospheric deposition, municipal point source pollution, land disposal, and construction activities.⁸³

Groundwater

An estimated six million residents of NY, about three million residents in PA and two million in WV rely on groundwater as their primary source of drinking water.⁸⁴

A principal aquifer is defined as a regionally extensive aquifer or aquifer system that has the potential to be used as a source of potable (drinkable) water. The USGS Ground Water Atlas of the United States indicates the areal extent of the nation's uppermost principal aquifers. Principal aquifer types underlying the Plan Area include unconsolidated sand and gravels, sandstone, sandstone and carbonate rock, carbonate rock, and crystalline rock aquifers.⁸⁵

Unconsolidated sand and gravel aquifers occur throughout the Plan Area. These systems may be comprised of sand, gravel, clay, or silt; and often produce soft water with relatively low dissolved solid concentrations. Local conditions result in high iron concentrations in some locations.

Sandstone aquifer systems occur throughout the Plan Area. These systems are the result of sedimentary processes, and these formations are often interbedded with siltstone or shale. These aquifer systems typically confine water, and groundwater movement is generally along bedding planes, though some vertical transmission occurs through fractures and joints. These are typically highly productive aquifers, and water quality tends to be minerally enriched, with increasing dissolved solids and chloride concentrations with depth.

Sandstone and carbonate-rock aquifers are common in portions of PA and WV and are present but uncommon in NY. Water in these aquifers may be confined or unconfined, and yields are dependent on localized geologic structure. These systems are primarily composed of calcium and magnesium carbonate, which readily dissolves and affects the chemical composition of associated groundwater. Water from these systems tends to be very hard with a slightly basic pH.

⁸⁴ Penn State Extension 2016

⁸⁵ <https://pubs.usgs.gov/publication/ha730>

Carbonate-rock aquifers are found in NY and PA. These systems are typically composed of limestone, dolomite or marble, and karst topographies are common in these systems. Dissolution of calcium and magnesium carbonate in these systems typically produces water with high degrees of hardness and basic pH.

Some crystalline rock aquifers are present in the Plan Area. These systems are usually composed of fractured schist and gneiss and produce soft water low in dissolved solids. Conditions at some sites produce moderately hard water with high iron concentrations.

All the principal aquifers in the Plan Area are generally described as meeting or exceeding Federal and State standards for drinking water, though local conditions can result in high dissolved solids or concentrations of ions such as iron, manganese, and sulfate that can be objectionable. Groundwater in the Plan Area is generally described as good quality and acceptable for most purposes.⁸⁶

Sole Source Aquifers

Under SDWA Section 1424(e), the EPA defines a sole source aquifer as an aquifer that supplies at least 50-percent of the drinking water for an overlying area and stipulates that no alternate source of drinking water could physically, legally, or economically supply the population dependent upon a designated aquifer.⁸⁷ Appendix D, table 4 lists the 13 sole-source aquifers within or partially within the Plan Area.

3.4.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, Project Proponents would continue to comply with the ESA through the development of individual HCPs and apply for incidental take coverage per each individual project. Permitted projects of similar type, size, and scope would continue to occur throughout the Plan Area and would not be expected to change with the implementation of the No Action Alternative. Project activities could affect water quality through delivery of pollutants to surface and groundwater and by affecting how water moves across the landscape. The greatest potential effects would be expected from ground exposing or disturbing activities that cause erosion and siltation, alteration of vegetation, or accidental spills and leaks.

Routine construction and development projects include ground exposing or disturbing activities such as grading, digging, and contouring that can affect surface runoff volumes and overland flow patterns. Such alterations can increase erosion and sedimentation of surface waters that impact water quality. Vegetation removal can also result in decreased filtration capacity of suspended sediment, pollutants, and other particulates within the water column, affecting water quality downstream. Several factors, including soil type, ground slope, precipitation, and management practices affect the amount of resulting sedimentation. Most soils in the Plan Area

⁸⁶ USGS 2000

⁸⁷ EPA 2010

are generally resistant to erosion under normal conditions; however, areas with high erosion potential are present. Sedimentation into nearby streams and waterbodies can alter aquatic habitat, increase turbidity, decrease light penetration, and increase nutrient and pollution levels; all of which can degrade water quality. Because projects within the Plan Area are expected to adhere to all Federal, State, and local measures intended to protect surface waters and prevent or minimize adverse impacts to water quality, these activities would not be expected to generate significant water quality impacts.

The use of vehicles and other equipment during routine construction and development activities could result in spills or leaks into the land adjacent to surface waters. Accidental spills that reach surface waters may degrade water quality, kill aquatic organisms or vegetation, or limit the use of waters for drinking or recreation. Implementation of CWA-required Spill Pollution Prevention Plans, adherence to BMPs, and required riparian and stream buffer guidelines would be expected to minimize potential impacts from these sources.

Removal of vegetation during project activities could affect surface waters. Trees affect forest surface water budgets through the evaporation of precipitation intercepted by leaves and branches and through direct uptake and transpiration; water that is evaporated or transpired is effectively unavailable to surface waters.⁸⁸ Activities that remove trees and other vegetation within riparian areas may increase streamflow and peak water flows due to reduced woody debris and stabilizing vegetation. Significantly increased water flows may scour of stream banks or channels and increase sedimentation to downstream areas. As vegetation is regenerated, stream flows would be expected to return to baseline conditions.⁸⁹ Potential impacts associated with project activities would be expected to be localized and of short duration. Projects are required to comply with required Federal, State, and local erosion management requirements and riparian and stream protection measures and would not be expected to generate effects threatening or impairing surface waters or water quality within the Plan Area.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, effects to water quality under the Proposed Alternative are expected to remain consistent with the No Action Alternative.

The effects of approving and implementing the proposed GCP and resulting issuance of ITPs are expected to be the same as described for the No Action Alternative. Though project activities in forested areas identified as habitat for the Covered Species have the potential to result in short-term degradation of surface water and groundwater water quality, compliance with required Federal, State, and local erosion, stream and riparian, and water quality regulations would be expected to prevent or minimize potential impacts. The Proposed Alternative would not be expected to introduce new or different contaminants or increase the amounts of pollutants that

⁸⁸ Swank et al. 1989

⁸⁹ Swank et al 1989

could cause violation of water quality standards. Approval of the proposed GCP would; therefore, not be expected to result in significant effects to water quality in the Plan Area.

3.4.5 Waters of the U.S. and Floodplains

RHA Section 10⁹⁰ established permit requirements for certain activities affecting navigable WOTUS, and Executive Order (EO) 11990 directed prevention of adverse impacts associated with destruction or adverse modification of wetlands.⁹¹ CWA section 404 provided regulatory authority to the U.S. Army Corps of Engineers (USACE) for oversight of discharge of dredged or fill material into waters and wetlands of the U.S.⁹² Six USACE Districts have jurisdiction over lands within the Plan Area, including the Baltimore, Buffalo, Huntington, NY, Philadelphia, and Pittsburgh Districts.

On April 21, 2020, the USACE and the EPA redefined WOTUS with the issuance of the Navigable Waters Protection Rule (NWPR).⁹³ The NWPR limited the applicability of WOTUS to territorial seas and navigable waters; tributaries; lakes, ponds, and impoundments of jurisdictional waters; and adjacent wetlands. In response to EO 13990,⁹⁴ signed January 25, 2021, directing Federal agencies to review certain regulations; and an August 30, 2021, federal district court rule vacating the NWPR, the USACE and EPA returned to implementation of the CWA based on pre-2015 interpretations of WOTUS. On December 7, 2021, the USACE and the EPA published a proposed rule in the *FR* that would codify the pre-2015 definitions of WOTUS with updates to reflect consideration of Supreme Court decisions. This EA follows current USACE and EPA practices by considering WOTUS according to the current interpretations.

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater 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.”⁹⁵ The USACE guidelines require one indicator for each of three criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) to designate wetlands subject to regulation under CWA section 404.⁹⁶

Freshwater wetlands are classified as riverine (rivers, streams, and creeks), lacustrine (lakes and reservoirs), and palustrine (forested, scrub-shrub, and emergent wetlands and ponds).⁹⁷ Examples of each of these wetland types are found within the Plan Area. Wetland functions include biological productivity, fish and wildlife habitat, water quality improvement, aesthetics, and floodwater storage.

⁹⁰ 33 USC § 401 *et seq.*

⁹¹ 42 FR 26961, May 24, 1977

⁹² 33 USC § 1344

⁹³ 85 FR 22250, April 21, 2020

⁹⁴ 86 FR 7037, January 25, 2021

⁹⁵ 33 CFR 328.3(c)(1)

⁹⁶ Environmental Laboratory 1987

⁹⁷ Cowardin et al. 1979

Data from the National Wetlands Inventory (NWI)⁹⁸ identifies, describes, and estimates wetland acreages within the Plan Area. The Service created the NWI in 1974 to “conduct a nationwide inventory of U.S. wetlands to provide its biologists and others with information on the distribution of wetlands to aid in wetland conservation efforts.” The NWI classifies wetlands with standardized system and class descriptors. Palustrine wetland systems (open water bodies of less than 20 acres in which water is less than two meters [6.6 feet] deep)⁹⁹ are the most common system in the Plan Area, and emergent, scrub-shrub, forested and unconsolidated bottom are the most common wetland classes within that system.

Floodplains are areas adjacent to rivers and streams that experience flooding during periods of high discharge. Floodplains in the Plan Area were identified from the National Flood Hazard Layer database, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) data,¹⁰⁰ and the USDA NRCS soil data.¹⁰¹ The FIRMs delineate FEMA special flood hazard areas for regulatory purposes under the National Flood Insurance Program (NFIP). Special flood hazard areas are also known as 100-year floodplains, or areas that have a one-percent annual chance of flooding.

3.4.5.1 Affected Environment

Wetlands provide multiple ecosystem functions, including surface and subsurface water storage; nutrient cycling; sediment and shoreline stabilization; removal, retention, and transformation of nutrients; pollutant filtration, and fish and wildlife habitat. As a result of these functions, wetlands can provide measurable benefits described as wetland values. Values can include protection of property from floodwater, aesthetic or visual quality, recreational opportunities, educational or scientific opportunities, and food production. Functions and values vary among wetlands depending on size, landscape position, and wetland type.¹⁰²

Projects that place permanent fill in wetlands affect these functions, causing a loss of wildlife habitat and loss of wetlands’ capacity to filter pollutants and retain stormwater and floodwater flows. For example, adding fill to a wetland or clearing vegetation can interrupt and alter a wetland’s natural hydrological regime and habitat structure. These actions can drain or impound water, affecting vegetation, pollutant filtration, and runoff retention and fragmenting habitat.

Wetland impoundments can decrease water circulation and may alter water quality (e.g., increased water temperature). Tree removal can alter wetland hydrology through a rise in water table due to decreased transpiration, soil compaction from the use of heavy equipment, increased erosion potential, and ditching and draining actions during tree removal activities.

Larger intact, undisturbed forested wetland areas that have not been recently disturbed provide important wildlife habitat. The diversity of vegetation composition and structure in these areas

⁹⁸ <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>

⁹⁹ USGS 1996

¹⁰⁰ <https://www.fema.gov/blog/fema-flood-maps-and-zones-explained>

¹⁰¹ USDA 2016

¹⁰² USACE 2015

provides foraging, sheltering, breeding, and nesting habitat for a variety of fish and wildlife. Clearing activities disturb the structure of the forest and the natural water flow through the floodplain. As cleared areas revegetate, assemblages of vegetation and wildlife species often shift as a result.

The initial clearing of the land during construction removes the vegetative cover and underlying topsoil layer. These activities increase surface runoff and contribute to erosion. Runoff and erosion add soil solids to drainage areas and tributaries and eventually into wetland areas, resulting in increased water turbidity and sedimentation. High turbidity is one of the primary construction site impacts,¹⁰³ as it diminishes the suitability of aquatic habitat for supporting vertebrates, invertebrates, phytoplankton, and rooted vegetation.¹⁰⁴

Reported quantification of NY's palustrine wetlands vary widely and estimates of as many as 2.4 million acres have been reported.¹⁰⁵ The NYSDEC estimated that 88 percent of the state's freshwater wetlands consisted of palustrine forested wetlands, palustrine scrub-shrub wetland, palustrine forested wetland, and palustrine emergent wetlands.¹⁰⁶

PA's 392,000 acres of palustrine wetlands include 178,000 acres of deciduous and evergreen forested wetlands, 62,000 acres of open water, 52,000 acres of emergent wetlands, 49,000 acres of deciduous and evergreen scrub-shrub wetlands, 25,000 acres of mixed deciduous scrub-shrub and emergent wetlands, and 26,000 acres of other types of wetlands.¹⁰⁷

WV's estimated 102,000 acres of wetlands¹⁰⁸ include 42,000 forested wetlands, 24,000 scrub-shrub wetlands, 20,000 acres of emergent wetlands, and 16,000 acres of ponds.¹⁰⁹

3.4.5.2 Environmental Consequences

No Action Alternative

Routine residential and commercial, transportation, and utility development project activities in forested areas identified as habitat for the Covered Species could generate impacts that alter or affect WOTUS, wetlands, and floodplains.

Activities that could impact wetlands are managed under several regulatory requirements, such as the 1899 RHA¹¹⁰; the 1972 CWA¹¹¹; the 1985 Food Security Act¹¹²; the 1990 Food,

¹⁰³ Shuldiner et al. 1979

¹⁰⁴ Darnell et al. 1976

¹⁰⁵ USGS 1996

¹⁰⁶ O'Connor and Cole 1989

¹⁰⁷ Tiner 1990

¹⁰⁸ USGS 1996

¹⁰⁹ Tiner 1987

¹¹⁰ 33 USC § 401 *et seq*

¹¹¹ 33 USC § 1251 *et seq.*

¹¹² Pub.L. 99-198

Agriculture, Conservation, and Trade Act¹¹³; the 1986 Emergency Wetlands Resources Act¹¹⁴; as well as State and local regulatory requirements. Projects that require diking, deepening, filling, excavating, and placing of structures within jurisdictional wetlands beyond the allowances provided in CWA Nationwide Permits,¹¹⁵ for example, require USACE Individual Permits and mandatory compensatory mitigation to offset the loss of wetland functions and values.

Projects that require approvals or permits from Federal agencies, including CWA section 404 permits, create a nexus with the responsible Federal action agency, and ESA compliance may be addressed through the ESA section 7 inter-agency consultation process. While not prohibited from developing an HCP and pursuing an ITP, for the purposes of this EA, projects with a federal nexus are expected to seek coverage for their ESA compliance needs through consultation with the Federal action agency funding, authorizing, or approving their activities. Such projects would be reviewed for compliance with ESA and NEPA on a case-by-case basis. Projects that lack such a federal nexus may develop an HCP and apply for incidental take coverage. Because activities covered under an ITP must be otherwise lawful, adherence to all applicable Federal, state, and local regulations would be expected.

Project activities that result in land exposure or disturbance could affect floodplain extent or function. Resulting effects could include altered floodwater storage and conveyance capacity, erosion and sedimentation, and availability or quality of aquatic habitats. Construction of roads or trails can interfere with the storage and passage of floodwater as well as the infiltration of water into the soil. A decrease in floodwater storage capacity can result in direct, short- and long-term increases in floodwater levels downstream. Road or trail construction can also redirect floodwaters, potentially causing erosion in adjacent areas. Creation of hardened roads and trails impedes infiltration rates on modified surfaces, though gravel roads and trails maintain higher infiltration rates than harder surfaces.

Vegetation removal affects the capacity of floodplains to retain and absorb floodwaters. Dense vegetation generally has a higher capacity to retain floodwaters. Therefore, vegetation removal can increase potential downstream flooding, runoff, and erosion. Vegetation removal also can reduce a floodplain's capacity to filter sediment, pollutants, and nutrients in water, which can affect water quality especially during heavy rainfall events. These short-term effects would be expected to be minor and limited to the duration of construction activities. Regulatory requirements and BMPs typically address water resources by specifying protective measures near waterways, such as requiring that stream bank vegetation be left intact where possible and as appropriate for the project, and by requiring that when vegetation removal cannot be avoided, affected areas should be stabilized immediately following construction activity. These mitigation measures collectively minimize the risk of impacts to the resource.

If forested wetlands are cleared, the resulting increased sunlight could alter wetland species composition by altering the number and/or density of shade-tolerant species, while increasing the number and/or density of species better adapted to full or partial sun. Spread of invasive nonnative species could also result from vegetation clearing.

¹¹³ Pub.L. 101-624

¹¹⁴ Pub.L. 99-645

¹¹⁵ 77 FR 10184-10290, February 12, 2012

Similarly, construction and development activities would not be expected to result in more than minor or negligible impacts to flood channels or to affect flooding. Permanent structures and roads associated with covered activities within 100-year floodplains would be expected to meet standards established by the governing flood-control authorities to prevent the creation of waterflow hazards during flooding. Project activities adhering to applicable Federal, state, and local requirements are expected to result in minimal floodplain impacts.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities, which could occur in the Plan Area. As such, impacts to wetlands, floodplains, or WOTUS under the Proposed Alternative would be expected to be the same as those described for the No Action Alternative. The same project types and impact sources are subject to the same Federal, State, and local guidelines and regulatory mechanisms under both alternatives. Required erosion and sedimentation prevention and management measures would be implemented during project activities to avoid or minimize potential adverse effects.

The anticipated direct and indirect impacts of approving the proposed GCP would be expected to be minimal and not expected to alter the ability of these features to continue to provide ecological service functions. The Proposed Alternative would; therefore, not be expected to result in significant effects to wetlands, WOTUS, and floodplains compared to the baseline expected under the No Action Alternative.

3.4.6 Vegetation

Vegetation within the Plan Area is described following the EPA Ecoregions of North America and CEC resources descriptions.^{116 117} Ecoregions generally describe physical conditions and the ecological communities they support, and this section focuses on the vegetation communities typically associated with ecoregions within the Plan Area. Additional context is provided by briefly describing the distribution and extent of current vegetation land cover types within the Plan Area from recent USFS reports and NLCD information.¹¹⁸ A brief description of nonnative invasive plants and noxious weeds, and plants regulated or granted special status under Federal or State authorities is provided.

3.4.6.1 Affected Environment

The Plan Area includes 13 of the 182 Level III ecoregions in North America. Vegetation across the Plan Area varies widely depending on geology, soils, climate, and topography. The vegetation typical of each ecoregion is summarized in appendix D, table 5.

¹¹⁶ Omernick 1987

¹¹⁷ Griffith 2010

¹¹⁸ Homer et al. 2015

Recent USFS reports show forests to be the dominant land cover throughout the Plan Area, comprising about 18.9 million acres in NY¹¹⁹ 16.8 million acres in PA,¹²⁰ and 12 million acres in WV.¹²¹

NY's forest land occupies approximately 51 percent of the State's land area. Ninety percent of NY's forests are composed of hardwood forest types. The maple/beech/birch group occupies 55 percent of forest land, and the oak/hickory group occupies 17 percent.¹²² A forest cover type change analysis shows a loss of approximately 32,525 acres of deciduous forest and a loss of approximately 4,502 acres of coniferous forests in NY over the 10-year period for which data is available (2006 to 2016). Mixed forest types gained approximately 21,532 acres over the same period.¹²³

PA's forest lands cover approximately 52 percent of the area in the Commonwealth. The USFS recently reported that five hardwood species (red maple, black cherry, northern red oak, sugar maple, and chestnut oak) made up more than half of the volume of live trees on forest land in the state.¹²⁴ An analysis of NLCD information for PA shows losses of approximately 135,385 acres of deciduous and approximately 6,362 acres of coniferous forests, and a gain of approximately 5,873 acres of mixed forests over the same 10-year period.¹²⁵

The USFS reports that forest lands cover approximately 72 percent of WV's land area. Oak/hickory is the dominant forest-type (74 percent), and pitch/Virginia pine is the most abundant softwood forest-type, accounting for about two percent of the forest land.¹²⁶ Forest cover type change analysis shows a loss of approximately 109,875 acres of deciduous forest and gains of approximately 6,039 acres of coniferous and 23,271 acres of mixed forests between 2006 and 2016 in WV.¹²⁷

Agriculture, largely in the form of pastureland, hayfields, and row crops, covers approximately 20 percent of NY, 23 percent of PA, and 16 percent of WV.

Nonnative Invasive Plants and Noxious Weeds

The USDA defines invasive plants as species that are: 1) nonnative to the ecosystem under consideration; and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive plants can be highly destructive, difficult to control, and cause ecological and economic damage. Noxious weeds are nonnative plant species designated

¹¹⁹ Widmann 2016

¹²⁰ Albright 2017

¹²¹ Morin et al 2017

¹²² Widmann 2016

¹²³ <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

¹²⁴ Albright 2017

¹²⁵ <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

¹²⁶ Morin et al 2017

¹²⁷ <https://www.mrlc.gov/national-land-cover-database-nlcd-2016>

as noxious by federal, state, or county authorities. Noxious weeds can reduce crop yields, displace native species, and displace native plant and animal habitats.

The USDA Animal and Plant Health Inspection Service maintains lists of prohibited plants, noxious weeds, and parasitic plants and seeds.¹²⁸ Each state also maintains lists of priority noxious and invasive plants and prohibits propagation, trade, and transport of these plants. State- or federal invasive and/or noxious plant species are typically targeted for suppression, control, or eradication through federal or state funding.

State-Protected Plant Species

The state of NY identifies and regulates four categories of protected plants, including those considered rare, threatened, endangered, or exploitably vulnerable. NY's Natural Heritage Program identifies approximately 150 species of mosses as rare and maintains an Active Inventory List of 638 species of plants considered highly vulnerable to extirpation.^{129, 130} The Active Inventory List includes documented extant taxa (502 taxa), as well as rare and historical taxa with some hope of rediscovery (77 taxa), and those considered extirpated within the state (59 taxa). The Active Inventory List also identifies 85 species on a Watch List considered rare or declining, and two weedy species predicted to increase over time.

PDCNR Bureau of Forestry classifies native plants in accordance with the Wild Resource Conservation Act and the Conservation of PA native Wild Plants regulations.¹³¹ Of the estimated 2,000 native plants in the state, 232 are classified as endangered, 78 as threatened, three as vulnerable, 39 as rare, and 128 as tentatively undetermined. A total of 102 species are classified as extirpated.

WV is the only state within the Plan Area to include plants among the Species of Greatest Conservation Need (SGCN) in the State's Wildlife Action Plan. WV's list of SGCN includes 479 vascular plants, two mosses, and one hornwort. Of those SGCN, 121 are considered Priority 1 and 361 are considered Priority 2.

Plants Listed as Endangered or Threatened

Eleven plant species native to the Plan Area are currently listed as threatened or endangered under the ESA (appendix D, table 6). The Service is responsible for implementing the ESA for species under its jurisdiction, including plants. ESA section 9 prohibits damage or destruction of plants listed as endangered where they occur on Federal property or on non-Federal lands when doing so in knowing violation of any State law or regulation or during any violation of a State criminal trespass law. Because impacts to plants do not fall under the ESA definition of "take" the Service cannot authorize incidental take of plants. However, the Service cannot undertake an action, including issuance of a permit for other listed species, that is likely to jeopardize the

¹²⁸ USDA 2021

¹²⁹ NYSDEC 2008

¹³⁰ NYSDEC 2021

¹³¹ 17 Pa Code § 45.1-91

continued existence of listed plants. Appendix D, table 6 lists plants in the Plan Area that are currently listed as endangered or threatened under the ESA within the Plan Area.

3.4.6.2 Environmental Consequences

No Action Alternative

Routine residential and commercial, transportation, and utility development project activities generate impacts that could alter or affect vegetation in the Plan Area. Project activities could result in changes to existing levels of vegetation, replacement of components of native plant communities with nonnative plants, or establishment or expansion of nonnative plants or noxious weeds. Effects would depend on the types and quantities of vegetation removed, the amount of time needed for vegetation to regenerate, and the type and frequency of ongoing vegetation management implemented after project construction activities are complete.

Direct impacts to vegetation from project activities would be expected from clearing, cutting, trimming, and removal of existing woody vegetation. The construction of permanent facilities including buildings, roadways, and other hardened surfaces would result in land cover conversion and permanent loss of vegetation. Once project activities are complete, areas that are not converted to hardened land cover types (e.g., buildings, roads, parking lots), landscaped (e.g., residential lawns, parks, maintained non-hardened commercial spaces), or maintained in another cover type (e.g., rights-of-way for roadways and utilities) would be expected to be recolonized by herbaceous and woody species. Impacts to native vegetation in areas where invasive plants are present could provide opportunities for these nonnative species to expand or become established.

Maintenance of rights-of-way typically involves mowing or cutting back and trimming vegetation. These activities would be expected to generate fewer impacts than initial clearing and construction because such areas have already been disturbed and most woody vegetation removed. Maintenance of these areas often involves activities such as mowing that limits reestablishment of woody species. As more sunlight reaches the ground in areas that were previously under forested canopy, herbaceous plants and grasses would be expected to become more common in areas that are frequently mowed.

Forbs, shrubs, and small early successional trees would become more common in forested areas that are temporarily disturbed and left unmaintained. Some project activities could occur in areas that consist of pasture or cropland, though such cover types are typically represented by swathes of nonnative vegetation and would not be expected to affect native vegetation compared to baseline levels.

Clearing and construction of linear projects (such as roadways or utility distribution lines) fragments existing vegetation communities. Such fragmentation of continuous blocks of existing vegetation can sever riparian forest corridors, modify hydrologic and nutrient cycling processes, and impact natural communities.

Clearing and removal of vegetation may also indirectly affect vegetation adjacent to the areas disturbed. Indirect effects from construction and development activities can include accumulation of fugitive dust on vegetation adjacent to construction areas which can temporarily reduce primary production, sedimentation of downgradient or downstream vegetation communities from soil erosion, and increased sunlight and wind exposure in newly cleared areas. Vegetation removal could also create opportunities for colonization by nonnative species, which could negatively impact the vegetation resource.

Each Applicant choosing to coordinate with the Service to develop an HCP and apply for an individual ITP under the No Action Alternative would be expected to develop and implement avoidance, minimization, and mitigation measures to conserve the Covered Species. Such measures would likely include identification and avoidance of bat maternity colony and summer roost trees and associated buffers, spring staging and fall swarming zones, and buffers around hibernacula sites. Each of these measures would be expected to conserve vegetation communities in these areas to ensure that they continue to provide for the breeding, feeding, and sheltering needs of the listed bats.

Indirect impacts would be expected to be minimized by adherence to regulations and BMPs addressing runoff and erosion control, fugitive dust suppression, and buffers or setbacks from critical environmental features such as wetlands and riparian areas. Though project activities would be expected to alter vegetative composition and structure, these effects are expected to be localized, and many of these effects would be short-term. Overall impacts to vegetation from these activities in compliance with applicable requirements would be expected to be moderate or minor at the scale of the Plan Area.

Because impacts to plants do not fall under the ESA definition of “take,” incidental take of plants listed as threatened or endangered cannot be authorized. Because the Service cannot issue a permit that would jeopardize the continued existence or adversely modify the designated critical habitat of any listed species, including plants, any project-related impacts that would cause such effects must be avoided. Each state regulates certain plants within their respective jurisdictions and authorities. Because all projects that apply for incidental take coverage must be otherwise lawful, Project Proponents are expected to adhere to all regulations that pertain to plants. The combination of Federal, State, and local requirements would be expected to minimize impacts to protected plant populations.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, impacts under the Proposed Alternative are expected to be similar to or the same as the No Action Alternative. Under both alternatives, loss of existing vegetation and conversion to other land cover and vegetation types is expected. The CMs outlined in the GCP could generate some beneficial effects by ensuring a consistent and coordinated approach for projects throughout the Plan Area over the duration of the plan, rather than the case-by-case review and permitting expected under the No Action

Alternative. The maximum 60,000 acres of forested habitat that could be in the Plan Area over the duration of the proposed plan represents 0.12 percent of 50 million acres of forested lands within NY, PA, and WV.

NYSDEC Biologist

NYSDEC Biologist

2025-03-11 16:45:00

Should be 180,000 acres

Should be 0.38 percent.

Changes to vegetation types and communities may occur due to replanting associated with development activities under both alternatives. These changes to be limited to the vicinity of project disturbance and; therefore, unlikely to cause shifts in native plant community types.

3.4.7 Fish and Wildlife

This section provides a general overview of the diversity of wildlife in the area and briefly describes common species within the Plan Area. Fish and wildlife are managed in accordance with multiple State and Federal statutes, regulations, policies, and guidance, and a brief overview of the regulatory context associated with regulated categories of fish and wildlife in the Plan Area is provided. Species of conservation concern and those subject to Federal statutes and regulations are briefly discussed. The Covered Species of the GCP are described in greater detail.

3.4.7.1 Affected Environment

Fish and wildlife are associated with specific geology, landforms, soils, vegetation, climate, land use, and hydrology that provide the feeding, breeding, and sheltering needs that constitute their respective habitats. The wide range of landforms and conditions throughout the Plan Area host a rich and diverse assemblage of fishes and wildlife.

The distribution and abundance of fish and wildlife species within the Plan Area range from wide-ranging and common to those with extremely limited ranges faced with extinction. Appendix D, table 7 provides an estimate of the numbers of species of insects, fishes, amphibians, reptiles, birds, and mammals currently found in each state within the Plan Area. The table includes common as well as declining and rare species and includes native and introduced species currently found in the wild. The table excludes extirpated species, feral domesticated species, and species (such as marine turtles and marine mammals) not expected to occur within the Plan Area. Data collection and reporting methods are not uniform among the multiple sources for this information, and estimates are intended to provide general context regarding the diversity of fish and wildlife throughout the three states within the Plan Area, rather than definitive accounts of species presence or distribution.

The Plan Area includes portions of 13 Level III ecoregions that represent distinctive climactic, elevational, and vegetational variations that support a wide variety of fish and wildlife species. A short description of common fish and wildlife species in each of the ecoregions is provided in appendix D, table 8.

State-Protected Wildlife Species

States possess broad trustee authorities and primary regulatory responsibility for protection and management of fish, wildlife, and plants and their habitats within their borders, unless preempted

by Federal authorities. Each state can designate fish and wildlife species within their respective jurisdictions as threatened or endangered. Some states regulate those species under their statutes and authorities and may share cooperative management with the Service under the ESA.

State agencies responsible for fish and wildlife management develop status, management, and conservation plans, including State Wildlife Action Plans (SWAPs) within their respective jurisdictions. Each SWAP identifies SGCN, potential threats, and actions intended to conserve species, habitats, and systems. The SWAPs are updated according to review/revision schedules defined in each SWAP. Each of the states within the Plan Area revised their SWAP in 2015. The NY 2015 SWAP¹³² identified 366 SGCN, including 27 freshwater mollusks, 38 dragonflies and damselflies, 7 mayflies, 4 stoneflies, 8 beetles, 6 bees, 26 butterflies and moths, 42 freshwater fishes, 12 amphibians, 24 reptiles, 104 birds, and 11 mammals. The remaining 57 species are aquatic or primarily marine-associated species that do not occur within the Plan Area. The complete list of NY SGCN is available at: <https://www.dec.ny.gov/animals/7179.html>.

The NYSDEC is responsible for maintaining the list of fish and wildlife species designated as endangered, threatened, or of special concern in accordance with State law.¹³³ The complete list is available at: <https://www.dec.ny.gov/animals/7494.html>.

The 2015 PA SWAP¹³⁴ identified 664 SGCN. The plan includes 450 invertebrates, 65 fishes, 18 amphibians, 22 reptiles, 90 birds, and 19 mammals. For information on the entire list of PA SGCN, see: <https://www.pgc.pa.gov/Wildlife/WildlifeActionPlan/Pages/default.aspx>.

In PA, the Fish and Boat Commission is responsible for regulation and management of threatened and endangered fishes, amphibians, and reptiles:

<https://www.fishandboat.com/Resource/SpeciesofSpecialConcern/Pages/ThreatenedEndangeredSpecies.aspx>. The Game Commission is responsible for other threatened and endangered wildlife: <https://www.pgc.pa.gov/Wildlife/EndangeredandThreatened/Pages/default.aspx>.

The WVDNR 2015 SWAP¹³⁵ identified over 600 SGCN, including 53 freshwater mollusks, 108 gastropods, 12 crayfish, 91 cave invertebrates, 14 butterflies, 17 moths, 13 tiger beetles, 69 dragonflies and damselflies, 74 freshwater fishes, 35 amphibians, 28 reptiles, 75 birds, and 29 mammals. The document is available online at: <http://wvdnr.gov/wp-content/uploads/2021/05/2015-West-Virginia-State-Wildlife-Action-Plan-Submittal-1.pdf>.

The list of threatened and endangered species in WV mirrors the Federal list of species listed under the ESA: <https://wvdnr.gov/plants-animals/rare-threatened-endangered-species/>.

Migratory Birds

¹³² NYSDEC 2015

¹³³ 6 NYCRR Part 182

¹³⁴ PA Game Commission and PA Fish and Boat Commission 2015

¹³⁵ WVDNR 2015

The Service ensures compliance with the Migratory Bird Treaty Act of 1918, (MBTA)¹³⁶ which implements several international treaties and their subsequent amendments. The MBTA makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The MBTA protects songbirds, raptors, ducks, waterbirds, and others. More than 300 birds protected under the MBTA occur within the Plan Area. The complete list of birds protected under the MBTA is available at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtintro.html>.

Bald and Golden Eagles

Eagles are protected under the Bald and Golden Eagle Protection Act of 1940 (BGEPA),^{137, 138} which prohibits the taking or disturbance of eagles, their eggs, or their nests. In 2007, the Service developed and published National Bald Eagle Management Guidelines (Eagle Guidelines) to advise landowners, land managers, and others when and under what circumstances the protective provisions of BGEPA may apply to their activities. For more information on the Eagle Guidelines, see:

<http://www.fws.gov/pacific/eagle/NationalBaldEagleManagementGuidelines.pdf>.

After nearly disappearing from the contiguous United States, bald eagle (*Haliaeetus leucocephalus*) populations recovered, and the species was subsequently removed from the federal list of threatened and endangered species.¹³⁹ Populations are now stable or expanding and bald eagles now nest within all three states in the Plan Area. Bald eagle nests are often associated with coastlines, rivers, or large lakes and streams and are typically located in mature trees, snags, cliffs, or rock promontories. Bald eagle nest building, egg-laying, incubation, hatching, rearing, and fledging of young occurs between January and August within the Plan Area.

In the Plan Area, golden eagles (*Aquila chrysaetos*) are known to sometimes migrate along ridges of the Appalachian Mountains and to overwinter on steep forested ridges in PA and WV.

Threatened and Endangered Species

The Service is responsible for implementing the ESA for species under its jurisdiction.¹⁴⁰ A total of 55 species of fish and wildlife are within the Plan Area and are either receiving protection under the ESA, are proposed for listing as threatened or endangered or are candidate species, including 17 freshwater mussels, two snails, three crustaceans, four insects, two amphibian, two reptiles, four fish, five birds, and five mammals. Critical habitat has been designated or is proposed in the Plan Area for 15 of those species. A list of these species with their respective listing status, critical habitat designation, and distribution by state within the Plan Area are found

¹³⁶ 16 USC §§ 703-713

¹³⁷ 16 USC §§ 668-668c

¹³⁸ 50 CFR Part 22

¹³⁹ 72 FR 37345, July 9, 2007

¹⁴⁰ ESA 10(a)(2)(A)

in appendix D, table 9. Additional information about these species is available from the Service's Information, Planning, and Conservation system and on Field Office websites.

Indiana bat, Northern Long-Eared Bat and Tricolored Bat

The three bats proposed for coverage under the GCP are the IBAT, NLEB, and TCB. A summary of the status and distribution, habitat characteristics and use, and threats to these species is provided in GCP chapter 2 and on the Service's Environmental Conservation Online System (<https://ecos.fws.gov/ecp/>).

The IBAT, NLEB, and TCB are temperate, insectivorous, migratory bats that hibernate in mines and caves in the winter and spend summers in wooded areas. The key stages in the annual life cycle for the Covered Species include hibernation, spring staging and migration, pregnancy, lactation, volancy/weaning, fall migration, and swarming. All species display a high degree of site fidelity, and reproductive females return to the same wooded areas each spring, where they form maternity colonies and remain to bear and raise their young throughout the summer. In the Plan Area, females roost in colonies and may stay close to their hibernaculum, though some will migrate to summer habitat. IBAT and NLEB pups are born between late May and early June, while TCBs are born between June and July. Nursing of pups continues until weaning, which is shortly after young become volant (able to fly) about a month later (mid-to late-July for IBATs and NLEBs and mid-July to August for TCBs). Fall migration typically occurs between mid-August and mid-October for the IBAT and NLEB and late July to August for TCBs, though the timing of these events is also influenced by weather and latitude.¹⁴¹ Upon arrival at hibernacula, all three species "swarm," a behavior in which large numbers of bats fly in and out of cave entrances from dusk to dawn. Swarming continues for several weeks, and mating occurs during the latter part of the period. After mating, females enter directly into hibernation, but not necessarily at the same hibernaculum where mating occurred. Most bats of both sexes hibernate by the end of November (by early to mid-October in northern areas, depending on the species).

Throughout their range, the basic resource needs for the bats include safe winter hibernation sites; forested spring staging and fall swarming zones; connected forested summer habitat for roosting, foraging, and commuting; forested migratory stopover habitat; safe migration passage; insects; and clean drinking water (e.g., streams, riparian areas, and wetlands).

The IBAT was placed on the list of endangered species due to threats including loss or degradation of occupied habitat, human disturbance at hibernacula, and pesticides.¹⁴² The Service's initial recovery plan for the species identified additional threats including impacts to summer habitat, environmental contaminants, the effects of climate change, and collisions with man-made objects.¹⁴³ Subsequent 5-year reviews identified threats posed by white-nose syndrome (WNS) and nonnative invasive species.^{144, 145}

¹⁴¹ Service 2007

¹⁴² Service 1983

¹⁴³ Service 2007

¹⁴⁴ Service 2019

¹⁴⁵ Service 2009

Threats to the NLEB include WNS, loss or degradation of habitat, collisions with manufactured objects, and environmental contaminants.¹⁴⁶

On September 13, 2022, the Service published a proposed rule to list the TCB as endangered under the ESA. TCBs faces potential extinction primarily due to the rangewide impacts of WNS.

3.4.7.2 Environmental Consequences

No Action Alternative

Routine residential, commercial, transportation, and infrastructure development and construction projects considered in this EA could continue to occur under the No Action Alternative. Project Proponents would continue to comply with the ESA through the development of individual HCPs and apply for incidental take coverage per each individual project. These projects would subject fish and wildlife to a variety of direct and indirect impacts.

Because the location and site-specific details of individual projects over the study period cannot be predicted, effects are described at a general scale. All projects would be expected to adhere to applicable Federal, State, and local requirements related to fish and wildlife resources and their habitats. Ongoing fish and wildlife management and conservation activities including, but not limited to efforts by State agencies, NRCS conservation programs on working lands, habitat restoration and conservation projects by private individuals and NGOs, and implementation of previously approved HCPs would continue under the No Action Alternative.

This section first describes impacts to common fish and wildlife species from development activities. Additional detail is provided for Federally regulated groups of fish and wildlife, including migratory birds, bald and golden eagles, threatened and endangered species, and IBAT, NLEB, and TCB.

Development Related Impacts to Common Fish and Wildlife

Construction activities such as surveys, site preparation, and ongoing operations and maintenance can generate direct and indirect impacts to fish and wildlife. Effects may include habitat conversion, modification, and fragmentation; introduction of nonnative species and noxious weeds; and consequences of contamination, spills, dust, and erosion.

Project development and construction typically requires vehicular traffic and the use of heavy equipment for activities including, but not limited to: vegetation clearing and removal; ground disturbance such as digging, trenching, and excavation of rock or soils; site preparation, grading and re-contouring; and installation of erosion protection and sediment control structures. Use of such equipment and increased noise and human activity generate disturbances that can disrupt wildlife feeding, nesting, sheltering, and/or nurturing behaviors within and adjacent to development sites.

¹⁴⁶ 87 FR 73488, November 30, 2022

Small and less mobile species including some amphibians, reptiles, nesting birds, and small mammals that cannot escape a development site may experience direct mortality or permanent displacement. Construction activities such as the stockpiling of soils, cleared vegetation, or debris; staging of equipment; and installation of erosion control features can create temporary physical barriers to wildlife movement that can trap some small animals. Soil dwelling invertebrates could be impacted directly through movement of soil from one place to another, resulting in some mortality and displacement. These impacts may cause indirect effects to other species, such as reduced forage potential for insectivores. Fossorial animals (i.e., those that are adapted for digging and live underground such as gophers, moles, and some tortoises and toads) could be impacted by digging or trenching activities and by soil compaction caused by heavy machinery. Other animals can be indirectly affected through the reduction in seed banks, resulting in longer recovery times for vegetation that provides forage, cover, and nesting habitat for wildlife.

Larger and more-mobile species typically attempt to evade sources of disturbance. Displaced wildlife seeking refuge from development-related disturbances could be exposed to predation and increased competition for available resources with resident wildlife. The added competition can alter population birth and mortality rates and impact species composition on adjacent habitats.^{147, 148} These stressors can result in short-term or long-term effects. Some displaced wildlife would be expected to return to newly disturbed areas and adjacent, undisturbed areas after construction activities are complete.

Vegetation clearing for construction can reduce wildlife cover, foraging, breeding, and nesting habitat. Wildlife in the immediate area could experience loss of browse or forage material during and after construction. New development would convert some areas of existing vegetation to impervious cover and constructed environments such as residences, roadways, or utility infrastructure. Native vegetation could be replaced with nonnative landscaping which may alter habitat suitability for resident wildlife.

Operation and maintenance activities within developed sites and roadway and utility rights-of-way would be expected to generate fewer wildlife impacts than new construction or development. Such activities in previously impacted areas would be expected to result in less intense disturbance for shorter durations than new construction activities. Maintenance impacts would generally be expected to be minor and temporary. Maintained landscaping and rights-of-way may provide suitable habitat for smaller species such as amphibians, reptiles, birds, and small mammals and those that prefer edge habitat. As with new construction, more mobile species would likely move to avoid disturbance from operations and maintenance activities, whereas less mobile species would be more susceptible to impacts from activities such as mowing and brush removal. Wildlife impacts from noise, human, and vehicular activity from these disturbances would be expected to be minor, less intense, and of a shorter duration than during clearing and new construction activities. The creation and maintenance of landscaped areas and rights-of-way would be detrimental to wildlife that rely on mid- and late-successional

¹⁴⁷ Dempster 1975

¹⁴⁸ Adams and Geis 1981

vegetation but would benefit wildlife that use early successional habitats. Rights-of-way provide suitable habitats for some birds and small mammals.¹⁴⁹ Less-frequently mowed grassy areas and shrubby or forested areas along the edge of the rights-of-way would provide feeding and nesting areas for some bird species and cover for a variety of wildlife.^{150 151}

Species that use nonforested areas may be impacted for shorter periods because herbaceous lands, riparian vegetation, and vegetated portions of developed lands would be expected to recover more quickly. Forest-dwelling wildlife species are generally expected to be impacted to a greater degree because forested lands take longer to return to preconstruction conditions.

Residential development typically results in the introduction of domestic pets, and livestock often accompany agricultural land uses. Such introductions can increase predation risk for native wildlife as well as the potential for transmission of diseases such as brucellosis, canine distemper, canine parvovirus, and toxoplasmosis from domestic pets and livestock to wildlife populations.

The No Action Alternative could result in minor to moderate adverse impacts to common wildlife in the vicinity of project construction, operation, and maintenance activities. Though normal behavior of many wildlife species would likely be disturbed during construction, some adverse effects would be temporary due to the short-term nature of construction-related noise and human activity impacts. Other impacts, such as conversion of habitat to other uses, would be expected to persist. Overall, the regional impact of these effects to common wildlife would likely be minor due to the limited scope and scale of the projects across the Plan Area over the 15-year GCP plan duration. Implementation of the No Action Alternative would not be expected to result in impacts to the resource compared to baseline conditions and current trends.

Invasive Species and Noxious Weeds

Development and construction activities, including those considered under the No Action Alternative could introduce, or facilitate the spread of invasive species and noxious weeds in the Plan Area.

The introduction and spread of invasive species can threaten fish and wildlife and the habitats they rely on. Ground-disturbing activities and vehicle and equipment use associated with construction and development activities can introduce and spread invasive vegetation and noxious weeds that result in loss of wildlife habitat, reduction of native plant diversity, changes in community functions, and loss of system-dependent wildlife species.

¹⁴⁹ Leedy 1977

¹⁵⁰ Leedy 1977

¹⁵¹ Adams and Geis 1983

Forest fragmentation can indirectly facilitate the spread of invasive pest species. Fragmentation by development types that cause edges, such as roads, housing, and industrial uses are correlated with higher incidence of nonnative pest invasions in forests.¹⁵² Such disturbances can serve as a pathway for insect or other pests to access core or interior forested environments.

Contaminants, Spills, Dust, and Erosion

During construction, operation, and maintenance activities, pollutants such as oil and grease from machinery could be released through accidental spills or leaks. The resulting impacts could be minimized with implementation of spill prevention and control methods. Any escaping pollutant could adversely impact fish and wildlife habitat.

Fuels and other hazardous materials could spill or leak from storage containers, equipment operated near streams, or fuel transfers. Any spill that reaches a water body could be detrimental to aquatic life. Contaminants could have acute, direct effects on fish, or could have indirect, chronic effects such as altered behavior, changes in physiological processes, or changes in food sources. Large spills also could cause the direct mortality of species within the water body and indirect effects on the local food chain through ingestion of contaminated prey.

Such pollutants could affect wildlife directly, but also indirectly by impacting food supplies, or by causing illness or death. In some cases, the pollutants could bioaccumulate in prey species, leading to gradual illness or mortality. Fugitive dust resulting from construction and maintenance activities can also impact wildlife habitat by covering photosynthesizing leaves resulting in reduced primary productivity and by adversely affecting the availability and quality of browse or forage.

Erosion and sedimentation are common byproducts of construction and can impact fish-bearing streams, and storm-event runoff can carry pollutants that decrease oxygen levels, impacting fish and other aquatic organisms. Additional discussion of water quality associated with covered activities is included in EA Section 3.4.4 Water Quality.

These indirect impacts to wildlife could be minimized by implementing measures such as proper runoff and erosion control measures, fugitive dust suppression, and control and removal of accidental spills of fuel or waste oil during construction. Erosion and sediment control measures would minimize the amount of sediment from leaving construction sites and entering water bodies. Impacts on fisheries and aquatic resources from erosion could also be minimized by limiting the amount of time that construction activities would take place near water bodies.

Migratory Birds

Development and construction can impact migratory bird species. Primary impacts include loss and alteration of habitat associated with vegetation removal. Clearing and grading can remove nesting and foraging habitat, impact occupied nests, and result in destruction of eggs and mortality of young and unfledged birds. Construction can also temporarily displace birds into

¹⁵² Guo et al. 2018

adjacent habitats, which could increase competition for food and other resources. This in turn could increase stress, susceptibility to predation, and impact reproductive success.

Conversion of intact forested habitats to early successional stages and the increase in forest edge that results could adversely affect forest interior bird species by increasing rates of nest predation, parasitism, or interspecific competition; reducing pairing success; and inhibiting migration, dispersal, foraging, and other movements of species that are hesitant to cross openings.^{153, 154} The severity of fragmentation on any given species is determined by the duration and seasonal timing of construction, sensitivity of the individual, and parameters such as food availability, climate, cover, and topography. The breeding success of some forest interior bird species has been shown to be limited by the size of available unbroken forest tracts. Loss of forest habitat in tracts of marginal size could further reduce breeding success of forest interior birds.^{155, 156}

Project activities could overlap with the nesting seasons for some migratory birds. Construction during this time could cause direct and indirect impacts on the species that occupy the area. Direct effects would be from the loss or disturbance of nesting trees, nests, and young; unfledged birds could be lost as habitat is removed. Construction activities occurring adjacent to nesting individuals could result in nest abandonment, which could result in the chilling or mortality of eggs and young, or premature fledging and ejection from the nest. Indirect effects could be associated with human presence and construction noise. These effects could be temporary in areas where suitable habitat remains, as displaced birds could return once construction in that area is completed.

Construction and development activities that pursue ITPs on a project-by-project basis under the No Action Alternative would likely include CMs such as timing restrictions for tree clearing intended to minimize impacts to the Covered Species. Such measures would be expected to also minimize effects to forest dwelling migratory birds whose ranges overlap with the Covered Species. Mitigation measures that permanently protect forested habitat for the Covered Species would also likely benefit migratory birds with overlapping ranges. However, because the mitigation measures would be assessed independently for each project, the No Action Alternative would not provide the landscape-scale coordinated mitigation benefits for migratory birds expected under the proposed GCP.

Bald and Golden Eagles

Construction and development activities could affect bald eagles. Project activities can affect aerial foraging and predatory activities if construction occurs when roosting eagles are present. Disturbance of habitat can impact bald eagle foraging patterns or roosting sites. The Service recommends that Project Proponents adhere to the Eagle Guidelines if nests are found in the

¹⁵³ Terborgh 1989

¹⁵⁴ Faaborg et al. 1992

¹⁵⁵ Terborgh 1989

¹⁵⁶ Robbins et al. 1989

vicinity of a project. The Eagle Guidelines also specify that construction of roads and other linear utilities be constructed outside of the eagle nesting season.

Golden eagles could also be impacted by construction and development under the No Action Alternative. Activities that affect the forested ridges along the Appalachian Mountains where golden eagles overwinter and migrate could disturb or disrupt normal feeding and sheltering behaviors.

Project-specific environmental reviews under the No Action Alternative would be expected to identify potential sources of disturbance and provide CMs in keeping with relevant requirements including BGEPA, the Eagle Guidelines, and MBTA. States may also regulate activities that could impact eagles within their respective jurisdictions.

Threatened and Endangered Species

Each of the construction and development-related fish and wildlife impacts previously described could also impact threatened or endangered species within the Plan Area. However, because the proposed GCP only covers incidental take of the IBAT, NLEB and TCB, analysis of the No Action Alternative requires similar consideration of only projects that may result in incidental take of the three bat species.

Under both the No Action Alternative and the proposed GCP, projects determined to be reasonably certain to result in take of listed species other than the IBAT, NLEB and TCB, or in addition to the listed species, could consult with the local Service Field Office to seek technical assistance. Project Proponents then determine whether a project can be modified to avoid prohibited take and proceed, or whether to develop a GCP as part of an application for an ITP providing coverage for incidental take of all listed species that cannot be avoided. Because these standard stepwise processes apply to all projects regardless of whether the No Action Alternative or the proposed GCP is selected, effects to other listed species are considered minor and are not addressed further.

Indiana Bat, Northern Long-Eared Bat and Tricolored Bat

Under the No Action Alternative, construction, operation, and maintenance of residential and commercial development, roads, and utility infrastructure would continue within the Plan Area. Project activities likely to impact the IBAT, NLEB and TCB are those that occur in wooded or forested areas where the bats occur, or near caves, mines, or other features used as overwintering hibernacula sites. Impacts reasonably certain to result in take of the Covered Species include tree removal, habitat modification, and project-related noise and disturbance. Take in the form of mortality or injury may result from crushing and collision; impacts to breeding, feeding, and sheltering habitat; increased habitat fragmentation; and shifts from one vegetation community to another.

The type and amount of take and impacts to habitat would differ among construction methods, the time of year when actions take place, and with bat activity level when activities are underway. Construction of permanent structures or facilities such as roads would remove areas

that may be used by the Covered Species for breeding, feeding, or sheltering. Project activities that occur during the active season could reduce foraging and reproductive efficiency for affected bats for the duration of the active season. Species that make up food resources for the bats and their habitat would likely be impacted within individual Permit Areas, which could reduce available food sources, adversely affect reproductive potential, and decrease use by bats in affected areas.

To comply with the ESA, nonfederal projects determined to be reasonably certain to result in take of the Covered Species would require project review, development of an HCP and issuance of an ITP to authorize unavoidable incidental take. Each project would be assessed on a case-by-case basis to determine if minimization and mitigation measures offset the impacts of the taking to the maximum extent practicable, and if all required environmental reviews, including NEPA, are complete prior to ITP issuance. Population-level impacts from each project would be fully offset on a case-by-case basis. However, the No Action Alternative would not provide the coordinated and consistent landscape-scale recovery focused conservation program offered by the proposed GCP.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area.

Development Related Impacts to Common Fish and Wildlife

Impacts to fish and wildlife under the Proposed Alternative are generally expected to mirror those of the No Action Alternative. Disturbance of common wildlife species and loss or fragmentation of their habitats would result from the same construction, development, and maintenance activities. Impacts from the Covered Activities could include the same short-term effects (e.g., noise, mortality during construction) and long-term effects (e.g., habitat modification and fragmentation) expected under the No Action Alternative. The same potential for introduction of invasive species and noxious weeds, and likelihood of contaminants, spills, dust, and erosion would be expected under both the proposed and No Action Alternatives.

Under the Proposed Alternative, CMs intended to offset adverse impacts to the Covered Species would provide a landscape-scale habitat protection and management program that could also benefit other native wildlife species in the Plan Area. Compared to the No Action Alternative, the Proposed Alternative would be expected to result in more positive trends and outcomes for fish and wildlife species through the permanent protection of conservation lands. The degree to which each species benefits from the Proposed Alternative would vary based on their preference for habitat features similar to those of the Covered Species. The overall effect of the Proposed Alternative on fish and wildlife may be positive due to the coordinated and consistent conservation program and the creation of a network of conserved lands managed to meet the mitigation objectives of the GCP.

Migratory Birds

Similarly, impacts to migratory birds from approval of the Proposed Alternative are expected to be the same or more beneficial under the GCP. Though project impacts would be expected to generate the same disturbance and loss, alteration, and fragmentation of habitat expected under the No Action Alternative, the potential benefits of a coordinated and consistent conservation program protecting forested lands for the Covered Species would be expected to also benefit forest-dwelling migratory birds. No migratory birds would be expected to experience population-level declines from approval and implementation of the GCP that would cause status changes or reduce survivability in the wild. Therefore, the Proposed Alternative is not expected to cause significant impacts to migratory birds.

Bald and Golden Eagles

Impacts to bald and golden eagles would be the same under both the proposed GCP and the No Action Alternative. As a condition of participation in the proposed GCP, Project Proponents would agree to follow the Service's Eagle Guidelines if bald eagle nests are found in the vicinity of a project. The anticipated protection of a network of protected forest areas to meet the mitigation requirements offsetting the population-level effects to the Covered Species may also provide habitat protection benefits for nesting eagles. The Proposed Alternative is not expected to reduce the survivability or recovery of bald or golden eagles or cause a change in listing status for either species. The approval of the proposed GCP is not expected to cause significant impacts to bald or golden eagles.

Threatened and Endangered Species

As described for the No Action Alternative, any project determined to be reasonably certain to result in take of listed species other than IBATs, NLEBs and TCBs would not be eligible to participate through the streamlined GCP process. Though species may be indirectly affected by a proposed project, the effects cannot rise to the level of take. Any project expected to take other listed species would be directed to the local Service Field Office for technical assistance.

Because noncovered listed species must be avoided for all projects participating through the proposed GCP, no impacts that could reduce the likelihood of survival and recovery of these species in the wild or generate population-level changes that result in a change in species status could occur. The proposed action of approving and implementing the GCP and issuance of ITPs is; therefore, not expected to generate significant impacts to other threatened or endangered species.

Indiana Bat, Northern Long-Eared Bat, and Tricolored Bat

Under the Proposed Alternative, eligible construction of residential and commercial development, roads, and utility infrastructure projects within the Plan Area could proceed by adopting the GCP and applying for an ITP. The same project activities in wooded or forested areas or near caves, mines, or other features used as overwintering hibernacula sites could affect the Covered Species under both alternatives. The Covered Activities under the proposed GCP

would be expected to cause habitat fragmentation and loss resulting in the same direct and indirect effects to the Covered Species.

The GCP conservation program was designed to fully offset the impacts of the taking of Covered Species from habitat loss or disturbance resulting from Covered Activities. Mitigation measures are expected to fully offset the impacts of the taking by implementing equivalent conservation actions that benefit the Covered Species.

The GCP incorporates monitoring procedures to verify the effectiveness of prescribed CMs, which can be adapted to ensure that the GCP biological goals are achieved (GCP chapter 4).

The approval of the Proposed Alternative would result in issuance of incidental take authorization on up to 60,000 acres of habitat across the three states over the 15-year plan duration (20,000 each in NY, PA, and WV). The required mitigation for habitat impacts would consist of restoration, enhancement, and preservation of habitat that provides equivalent ecological value to the impacted Covered Species.

The Service anticipates that implementation of the GCP could increase benefits to the Covered Species resulting from mitigation within the Plan Area, compared with the No Action Alternative. The mitigation provided under the GCP would likely result in larger, contiguous tracts of land being protected, with greater conservation value, than would likely be achieved if similar acreage were protected on a project-by-project basis (No Action Alternative). Coordinated mitigation through ESA compliance would benefit the species by ensuring that anticipated habitat loss and degradation throughout the duration of the GCP would be more comprehensively balanced with conservation actions, such as habitat protection and management in perpetuity.

Under the Proposed Alternative the fully offset impacts of the taking prescribed by the GCP through the network of protected and managed lands is likely to lead to more effective conservation of the Covered Species over the duration of the plan. The proposal is expected to result in no net loss for the Covered Species and is not expected to cause species declines or reduce the survival and recovery of the Covered Species in the wild. Therefore, the Proposed Alternative is not expected to cause significant adverse impacts to either the IBAT, NLEB or TCB.

3.4.8 Land Use

This section describes existing land uses and reasonably foreseeable environmental trends and foreseeable patterns of land use changes in the Plan Area. Traditional and typical land uses in the Plan Area are described by ecoregion with a summary of long-term land use trends within the Plan Area. Fine scale resolution information is then presented for the most recent 10-year period for which data is available. Current and expected future land uses can inform determinations regarding the potential presence of the Covered Species and their habitats within a given area. General information regarding ownership of forested lands likely to be affected by the activities considered in the proposed GCP is also provided.

Land use and land cover are related but not synonymous concepts. Land use reflects human decisions and activity. Land cover describes surface features, including naturally occurring cover such as native vegetation as well as the result of human activities such as built environments or manipulated landscapes including cultivated crops or pastures. Agencies categorize and define various elements for their independent purposes when describing land use and cover. Acreages reported; therefore, vary due to differences in data collection, categorization, and reporting methods among multiple consulted sources. Acreages and percentages are included to provide context for the land uses and trends that may be affected by the Proposed Alternative. Other environmental outcomes related to land use changes, such as impacts to geology and soils, air quality, and water quality are discussed in other sections of this EA.

3.4.8.1 Affected Environment

Traditional and typical land uses are described at a broad scale following the EPA Level III Ecoregions of North America.⁴⁴ Appendix D, table 10 summarizes typical land uses and long-term trends by ecoregions within the Plan Area.

The USDA Natural Resources Inventory program (NRI) collects and produces information on the status, condition, and trends related to land, soil, water, and related resources on non-Federal lands in support of efforts to protect, restore, and enhance the nation's lands and waters. The NRI estimated that the total amount of developed non-Federal land increased from less than five percent to almost 7.8 percent for the 25-year period from 1982 to 2007.¹⁵⁷ Within the Plan Area, only WV has a statewide percentage of developed non-Federal land (6.4 percent) that falls below the national average, though the rate of land use conversion in WV is the highest of the three states considered (49.6 percent).⁷⁶ Land conversion from undeveloped or agricultural uses to suburban and urban development follows national trends for all three states in the Plan Area. Appendix D, table 11 summarizes changes in land uses based on cover types within the Plan Area from 1982 to 2017.

The NLCD documents and classifies land cover at a resolution of 30 meters and is updated every five years, allowing relatively fine scale analysis of cover types and land uses over time.¹¹⁸ Appendix D, table 12 summarizes land cover classes from the most recent NLCD (2016).

Because the routine construction and development activities likely to impact the Covered Species are primarily associated with forested lands, additional context related to these land uses is described for each state within the Plan Area.

Seventy-six percent of NY's forests are owned by families and individuals, corporations, and other private entities. The remaining 24 percent is in public ownership. The largest public owner of forest land is the State, which holds about 1.1 million acres of timberland and 3.0 million acres of reserve forest land.³⁸ Approximately 83 percent (15.7 million acres) of forest land in NY is classified as timberland, 3.2 million acres is reserved, and an additional 36,000 acres is considered low productivity forest land. The USFS reports that the total forest land in the state has remained relatively stable since 2007. Historically in the state, about 51 percent of forest land is in private ownership, and 49 percent is in public ownership. The USFS reports that the total forest land in the state has remained relatively stable since 2007. Historically in the state, about 51 percent of forest land is in private ownership, and 49 percent is in public ownership.

¹⁵⁷ USDA 2007

NYSDEC Biologist
2025-03-11 16:45:11

Forest cover is reported as stable in NY, PA and in WV - this means that the pace of forest conversion to alternate habitat types is not an issue for bats at a landscape scale.

to forest generally offset the loss of forest land to development. Recent changes in forest cover reflect ongoing conversion to nonforest uses and a slowing rate of farmland losses. Future changes to the amount of forest cover in NY are expected to reflect the pace of land development and agricultural economic trends.

About 96 percent of PA's forest lands are classified as timberland. Approximately 30 percent of the state's forests are in public ownership, of which about four percent consist of reserves that restrict commercial timber harvest by law or public policy. The overall area of PA's forests has been relatively stable since 1965. Losses of forest land to development and other nonforest uses have been about equal to that of agricultural and other nonforest land reverting to forest. The USFS report that they lack sufficient data to determine whether recent decreases in forest land are part of a trend or a continuation of short term acreage fluctuations observed in the past.³⁹ The USFS reports that the total area of WV's forests has been relatively stable since the late 1980s. Timberland accounts for 97 percent of forest lands in the state. Less than three percent of forest land is reserved from timber production and less than 0.1 percent is identified as unproductive. Families and individuals, corporations, and other private entities own about 86 percent of the forest land in the state. The USFS, State of WV, and other public entities hold the remainder.⁴⁰

3.4.8.2 Environmental Consequences

No Action Alternative

For this analysis, land use trends described previously are expected to continue over the plan duration. Under the No Action Alternative, projects that cannot avoid take of the Covered Species would be expected to seek ITPs to authorize incidental take resulting from their otherwise lawful construction and development activities. To meet ITP issuance criteria, each project proponent would independently develop a mitigation and conservation program tailored to meet their project needs. Each unique HCP and mitigation proposal would be reviewed for compliance with ESA, NEPA, NHPA, and all other applicable requirements. The pace of construction, development, and infrastructure activities could therefore be limited by the individual project-by-project review and permit approval process.

The siting and design process for new development and construction typically considers and must adhere to land use plans developed by Federal, regional, State, local, or other entities with land planning authorities. Project Proponents must adhere to land use requirements such as zoning regulations or development density constraints to secure building permits or other needed project approvals. Variances or other changes from existing land use plans typically require review and approval by the entity with regulatory authority. Impacts to land use from conflicts with land use plans are therefore not expected.

As described in Section 3.4.11 Socioeconomics, the human population in the Plan Area is expected to continue to increase over the plan duration. The expanding population would be expected to facilitate ongoing trends converting other land uses to residential and commercial uses and associated increases in transportation and utility infrastructure needs.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, the impacts under the Proposed Alternative are generally expected to mirror those described for the No Action Alternative. The primary differences between the considered alternatives are the shorter expected project permitting timelines possible with the streamlined approach and the planning certainty resulting from the consistent avoidance, minimization, and mitigation components of the conservation program under the Proposed Alternative.

The proposed conservation program outlines a standardized approach to mitigation and encourages protection of sites deemed to have high conservation value for the Covered Species. Land targeted for mitigation would be acquired in fee and/or encumbered by conservation easements requiring that properties be managed for the benefit of the Covered Species. Mitigation sites would be maintained or restored to forested conditions suitable for bat sheltering, breeding, and feeding activities. Because mitigation sites would not be subject to conversion to other land uses, the Proposed Alternative would be expected to foster creation of a permanent network of forested habitat reserves in the Plan Area.

While current land uses including conversion to residential and commercial uses and expanding suburban and urban development are expected to continue, the Proposed Alternative is not expected to accelerate or alter this ongoing long-term trend. The issuance of ITPs under the Proposed Alternative could result in up to 2,000 acres of impact per year in NY, which represents 0.08 percent of the forested areas in the state over the plan duration. Under the Proposed Alternative up to 2,000 acres in PA could be impacted per year, totaling 0.12 percent of the forested cover in the state over the plan duration; and in WV an annual total of up to 2,000 acres results in a cumulative total of 0.18 percent of forest lands. These impacts, at a minimum, would be offset by an equivalent amount of conservation actions that benefit the Covered Species. The GCP is expected to protect, restore, manage, and conserve habitat that provides equivalent ecological value to the impacted species through permittee-responsible mitigation, conservation banking approaches, and ILF programs.

Approval of the GCP and issuance and implementation of resulting ITPs would not be expected to impact residential or commercial development patterns, or the demand for associated transportation or utility infrastructure in the Plan Area. The availability of a consistent and streamlined project review and permitting process could provide certainty for land planning efforts.

Because all projects seeking permits through the GCP process must be otherwise lawful and; therefore, must comply with all applicable Federal, State, and local land planning and use requirements, no unapproved impacts to land uses are anticipated under the Proposed Alternative. Because the Proposed Alternative is not expected to alter current land use trends in the Plan Area, the resulting impacts to land use are not considered significant.

3.4.9 Aesthetics and Noise

The term aesthetics refers to the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities. Potential aesthetic impacts are an issue of increasing concern to both the public and governmental bodies dealing with siting and approving new development, transportation, and utility infrastructure. Consideration of the visual environment includes a determination of aesthetic values where the construction of these elements of the built environment could affect the scenic enjoyment of an area.

Noise is defined as unwanted sound that disrupts or interferes with normal activities or that diminishes the quality of the environment. Noise is usually caused by human activity and is added to the natural, or ambient, acoustic setting of an area. Though exposure to high levels of noise over an extended period can cause health hazards including hearing loss; the most common human response to environmental noise is annoyance. Individuals respond to similar noise events differently based upon various factors that may include the existing background level, noise character, level fluctuation, time of day, the perceived importance of the noise, the appropriateness of the setting, and the sensitivity of the individual.

3.4.9.1 Affected Environment

Aesthetics

The analysis focuses on potential visual impacts to public spaces with valued aesthetic qualities, such as publicly owned or accessible lands or scenic areas visible from roads or highways. The analysis area for this resource includes all portions of the three states present within the Plan Area, including potentially sensitive public resources that may include federal lands. Several factors contribute to an assessment of the sensitivity, or potential impact, to a scenic resource from routine construction and development projects. Values which combine to define an area's aesthetic identity may include:

- Uniqueness of the landscape in relation to the region as a whole
- Whether the scenic area is a foreground, middle ground, or background view
- Focus of the view
- Scale of elements in the scene
- Number of potential viewers
- Duration of the view
- Amount of previous modification or disturbance to the landscape

The analysis area exhibits a range of aesthetic qualities because it encompasses a wide variety of regions and landscapes. As described previously, the topography of the analysis area is highly variable, ranging from the beaches of the Atlantic Coast and Great Lakes to the extensive wetlands and bottomland hardwood forests, to densely forested hills and mountains. Landscapes with major water elements such as rivers and lakes are generally highly valued aesthetic qualities, and water features are prevalent throughout portions of the Plan Area. The Plan Area includes aesthetic resources such as designated scenic views, scenic roadways, and unique visual

elements as well as large areas of agricultural, industrial, and urban development. Many parts of the analysis area are visually pleasing while others have been highly impacted by human activity.

Aesthetic resources may be natural or humanmade, and include landforms, water resources, vegetation, and the built environment that make up the overall visual impression of an area. Potentially sensitive resources within the analysis area include public lands including those managed by the National Park Service (NPS), USFS, the Service, Wild and Scenic Rivers, and nationally and state-designated scenic byways.

The NPS is responsible for management of Battlefields, Historic Sites, Scenic Trails, Historic Trails, Historic Parks, Historic Sites, Memorials, Military Parks, Monuments, Parks and Preserves, Recreation Areas, and Seashores of national importance. Appendix D, table 13 provides a list of NPS lands within the analysis area.

The USFS manages four National Forests within the analysis area, identified in appendix D, table 14.

The National Wild and Scenic Rivers Act^{158, 159} allows the designation of rivers or portions of rivers due to their scenic, natural, historic, cultural, or recreational characteristics. The stated purpose of the Act is to preserve certain waters in a free-flowing condition for the enjoyment of present and future generations by safeguarding the special character of these places while providing for appropriate development and use. Designated areas are classified as wild, scenic, or recreational. Wild River Areas are free of impoundments, with primitive shorelines, unpolluted waters, and generally accessible only by trail. Scenic River Areas are also free of impoundments and mostly free of developed shorelines but are accessible by roads. Recreational River Areas may have been impounded or diverted in the past, may include some shoreline development, and are readily accessible by road or railroad. Designated river segments may be administered by Federal or state agencies, and management often includes federal, state, and local partners. There are seven designated river segments in the Plan Area, listed in appendix D, table 15.

The Service manages National Wildlife Refuges (NWRs) and Wildlife Management Areas (WMAs) as part of a national network of lands and waters administered for the conservation, management, and restoration of the fish, wildlife, and plant resources and their habitat for the benefit of present and future generations. The public often cites the aesthetic qualities that NWRs and WMAs provide, and these areas often provide scenic and recreational opportunities valued by local communities. Appendix D, table 16 lists NWRs and WMAs located in the analysis area.

The Intermodal Surface Transportation Efficiency Act of 1991¹⁶⁰ and subsequent legislation authorized the FHWA to designate roadways as All-American Roads (AAR) or National Scenic Byways (NSB) based on their archaeological, cultural, historic, natural, recreational, or scenic qualities. Each state within the analysis area has passed similar legislation authorizing the respective departments of transportation (NY Department of Transportation [NYDOT], PA

¹⁵⁸ Pub.L. 90-542

¹⁵⁹ 16 USC § 1271 *et seq.*

¹⁶⁰ Pub.L. 102-240

Department of Transportation [PennDOT], and WV Department of Transportation [WVDOT]) to issue state-level designations for similarly important roadways. There are three AARs, nine NSBs, and 13 State Scenic Byway designations in the analysis area, identified in appendix D, table 17.

Noise

Noise refers to a sound or sounds that are loud, unpleasant, unexpected, or undesired. Noise-sensitive receptors are facilities or areas where excessive noise may disrupt normal activity, cause annoyance, or loss of business. Land uses such as residential, religious, educational, recreational, and medical facilities are more sensitive to increased noise levels than commercial and industrial land uses. Human responses to noise can vary depending on the time of day, the type of noise, the sensitivity of the receptor, and the distance between the source of noise and the receptor. The analysis area for this resource extends beyond the defined Plan Area due to the potentially farther-reaching impacts of noise beyond its origin.

Numerous noise-sensitive receptors are located within the Plan Area; and thus, it is not reasonable or practical to identify all noise receptors, or to identify receptors adjacent to projects that could be constructed within the Plan Area because the location of those facilities is largely unknown.

Noise within the Plan Area is produced by a variety of human activities. Transportation, including road traffic (automobiles, tractor trailers, and motorcycles on U.S. Highways, State Highways, county roads, and residential streets), rail traffic, and air transportation causes a variety of noise at different levels. Construction of housing, commercial facilities, and roads increases noise within the analysis area through use of bulldozers, backhoes, and other types of construction equipment. Agricultural equipment such as tractors are common throughout the analysis area and also contribute to noise levels.

Sound is measured in decibels (dB) and is based on a logarithmic scale. A 10dB increase corresponds to a 100 percent increase in perceived sound or noise. An A-weighted decibel scale that measures sound perceptible to the human ear is commonly utilized to measure environmental noise or potential noise pollution.

Sound levels are often reported in terms of day-night average sounds level (Ldn). The Ldn is the average noise level over a 24-hour period with the noise between the hours of 10PM and 7AM artificially increased by 10dB to compensate for the increase in sensitivity to noise events and the lower level of background noise during these night-time hours. An Ldn of 55dB is recognized by the EPA, as an outdoor limit for protecting public health and welfare in residential areas. Ldn of 65dB is the noise level at which residential land use becomes questionable for structures with average or below average acoustic insulation. An Ldn exceeding 75dB is considered by many Federal agencies to be unacceptable for residential areas.¹⁶¹

¹⁶¹ EPA 1974

Reasonably foreseeable environmental trends related to noise in the analysis area include sound levels from ongoing uses including urban areas, major roadways, airports, and industrial and manufacturing sites. Densely populated areas including residential, commercial, and industrial developments tend to have higher sustained noise levels than less populated and more rural settings. Noise levels would be expected to increase with population growth and urban development.

3.4.9.2 Environmental Consequences

No Action Alternative

Aesthetics

Routine construction and development activities would result in conversion of undeveloped open space, native vegetation, and natural terrain to residential, commercial, and infrastructure uses. Aesthetic impacts would occur when construction and development of these projects and associated facilities create an intrusion into, or substantially alter the character of, the existing view or aesthetic character of a site. The significance of the impact is directly related to the quality of the view in the case of natural scenic areas, or to the importance of the existing setting in the use or enjoyment of an area in the case of valued community resources and recreational areas.

The construction of new structures and linear features like utility transmission lines could have both temporary effects, such as views of construction activities including the movement of construction workers and vehicles, as well as permanent aesthetic impacts, including views of cleared sites, rights-of-way, and the resulting built features.

Where wooded areas are cleared, the brush and woody debris could have a temporary impact on the local visual environment. However, the visual disturbances associated with construction activities would be expected to involve relatively small areas and most would be of short duration limited to the work or construction timeframe. Permanent impacts would involve views of constructed features and associated infrastructure, as well as views of cleared sites and rights-of-way. Depending on project specifics, measures to protect visual resources could include but are not limited to siting of proposed facilities (e.g., locating utility infrastructure in areas without public access on private property), finished grade contouring of rights-of-way, and landscape design and revegetation of cleared sites.

Offsite and indirect impacts to aesthetic resources may occur because constructed projects, cleared rights-of-way, and construction or maintenance equipment could be visible from roadways, residential areas, parks, and other community facilities.

Noise

Routine construction and development activities would be expected to increase sound levels in the vicinity of each project and noise levels would vary during the construction period. The type of mechanical equipment used and project duration both affect the amount of noise generated.

Project timelines could last from several days to several months or years depending on the scope and scale of each project. Projects adhering to applicable state and local regulations and ordinances would be expected to minimize impacts to noise sensitive areas to the extent possible. Routine construction and development activities that involve use of motorized equipment would create temporary noise level increases. Because sound is attenuated with distance, noise levels would be higher at receptors in closer proximity to project activities compared to those at greater distances. Noise level standards associated with sensitive receptors such as residences are relied on to assess anticipated project impacts.

Based on the 55 day-night level (Ldn) noise contour associated with EPA noise level standards for residences, noise levels from machinery and equipment associated with project activities are predicted to result in a noise exposure of 55 Ldn to a maximum distance of 900 feet during daytime hours. Noise exposure of 55 Ldn could occur up to 1,600 feet during nighttime hours, though nighttime noise levels would normally be unaffected because most construction and development-related activities occur during daylight hours.

Noise at these levels would result in perceptible increases in ambient noise where receptors exist within these distances. These noise level increases would likely result in temporary annoyance. Sound from project activities beyond these distances are not likely to contribute to ambient noise.

Noise from project activities could affect workers on site. Occupational Safety and Health Administration (OSHA) guidelines require monitoring and mitigation (e.g., hearing protection) for workers exposed to noise levels that exceed 85 A-weighted decibels. Because onsite workers would be protected by projects following OSHA requirements, workers would not be expected to experience adverse noise impacts.

While routine construction and development activities would be expected to generate noise, these impacts are expected to be temporary and short in duration. Noise impacts from project activities would be expected to be minor. Long-term trends in increasing noise levels resulting from increasing vehicular traffic, ongoing population growth and continuing urbanization would be expected to continue.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area.

Aesthetics

Impacts under the Proposed Alternative are expected to largely mirror those of the No Action Alternative. The main difference between the considered alternatives is the availability of the streamlined GCP mitigation program expected to result in coordinated and consolidated habitat mitigation sites. While similar aesthetic impacts would occur under both alternatives, offsetting

mitigation under the GCP would result in prioritized and more consistent habitat management sites. The establishment of fewer and more consistently managed long term mitigation sites is less likely to generate negative impacts to valued aesthetic qualities. Impacts to aesthetic resources under the Proposed Alternative are not expected to be significant.

Noise

The noise sources are the same for both alternatives, and the Proposed Alternative would not be expected to generate additional noise compared to the No Action Alternative. Impacts under the Proposed Alternative are expected to mirror those of the No Action Alternative and are not expected to be significant.

3.4.10 Cultural Resources

Cultural resources are prehistoric and historic archeological sites, districts, structures, or locations considered significant to a culture, a subculture, or a community for scientific, traditional, religious, or other reasons. The NHPA, as amended, created a framework for managing cultural resources in the United States. The law expanded the NRHP; established SHPOs, Tribal Historic Preservation Officers (THPOs), and the Advisory Council on Historic Preservation (ACHP). NHPA section 106 directs all Federal agencies to consider the effects of their actions and authorizations on historic properties and provides the ACHP an opportunity to comment.

In addition to the requirements prescribed by NHPA section 106, states also have an interest in and authority to manage and protect cultural resources within their respective jurisdictions. In NY, the State Parks, Recreation, and Historic Preservation Law of 1980 and the State Environmental Quality Review Act of 1978 address cultural and historic resource preservation. Additional information is available from the NY State Historic Preservation Office.¹⁶² In PA, the PA History Code is implemented by the PA Historical and Museum Commission.¹⁶³ In WV, the State Historic Preservation Act is implemented under the authority of the WV Department of Arts, Culture, and History.¹⁶⁴

3.4.10.1 Affected Environment

The Plan Area has been occupied and used by people since long before record-keeping began. There are numerous cultural resource sites from both prehistoric and historic periods throughout the Plan Area, and others may yet be identified. It is not practical to identify all known cultural resources in the Plan Area, and it is not possible to identify those that may be impacted by projects that could be constructed within the Plan Area because the location of those future project sites is unknown.

¹⁶² NY State Parks, Recreation, and Historic Preservation 2021

¹⁶³ PA Historical and Museum Commission 2022

¹⁶⁴ WV Department of Arts, Culture, and History 2022

Prehistoric archeological resources may include rock shelters, artifacts, lithic scatters, flaked stone scatters, rock rings or alignments, tool procurement sites, and rock art locations. Historic sites may include buildings, structures, features such as mine shafts, transportation routes, bridges, refuse deposits, historic homes and/or associated property, cemeteries, trails, and rural schools.

3.4.10.2 Environmental Consequences

No Action Alternative

Any construction or development activity that would disturb the ground surface or subsurface has the potential to adversely impact cultural resource sites. Under the No Action Alternative, Applicants seeking individual ITPs would be expected to comply with all applicable local, State, and Federal regulations pertaining to cultural resource protection for each of their proposed projects.

The NHPA section 106 process would occur during the development and review of individual project HCPs. Proposed projects would be reviewed by a local Service Field Offices in coordination with the Service's Regional Historic Preservation Officer. Projects that may affect cultural or historic resources would be required to complete consultation with SHPOs and/or THPOs for clearance or completion of compliance documentation (e.g., Phase I survey). If a project requires further planning related to impacts on historic or cultural resources, the SHPO in the state where the project would occur typically serves as the nonfederal representative to complete those plans.

Direct impacts from construction and development activities can cause physical destruction or alteration of all or part of a cultural resource. Direct impacts may result from construction activities (such as clearing, grading, excavation, or trenching) or through increased vehicular and pedestrian traffic. Increased vehicular traffic may damage surficial or shallowly buried sites, while pedestrian traffic may result in vandalism of some sites. Construction activities may also directly alter, damage, or destroy historic buildings, engineering structures, landscapes, or districts. Direct impacts can include isolation of a historic resource from or alteration of its surrounding environment (setting).

Indirect impacts include those effects caused by the project that are further removed in distance, or that occur later in time, but are reasonably foreseeable. These indirect impacts may include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts may result from alterations in the pattern of land use, changes in population density, accelerated growth rates, or increased pedestrian or vehicular traffic. Historic buildings, structures, landscapes, and districts are resources that can be adversely impacted by the indirect impact of proposed routine construction and development activities.

Avoidance is the preferred method to address impacts to cultural resources. Indirect impacts can often be minimized during the design and planning stages when cultural and historic resources are considered early in the project development process. Mitigation of unavoidable impacts to archeological and historical sites can be addressed with development and implementation of a

program reviewed and approved by the Historic Preservation Officer with authority and jurisdiction over the project site.

Because Project Proponents seeking individual ITPs under the No Action Alternative would be required to adhere to all applicable cultural and historic preservation regulations, the project review and consultation process would ensure that projects do not result in cultural resource impacts that are not accounted for and addressed in accordance with NHPA and other applicable requirements.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. As such, impacts under the Proposed Alternative are expected to mirror those of the No Action Alternative. To participate in the GCP, Applicants must agree to complete historical and cultural reviews of their project site and work with SHPO and/or THPO to address any significant impacts; accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and avoid adversely affecting the physical integrity of such sacred sites in accordance with applicable regulations.

Projects that cannot meet these requirements would be directed to coordinate with their local Service Field Office to seek technical assistance and additional NHPA coordination and would not be authorized through the GCP streamlined permitting process. The Service would ensure that projects seeking ITP authorization would adhere to these historic and cultural resource protections by incorporating permit conditions requiring regulatory compliance. GCP appendix E describes the stepwise approach that participating projects would follow to assist the Service in meeting the requirements of NHPA section 106 and associated directives. Impacts to cultural resources are therefore anticipated to be negligible or minor and not significant.

3.4.11 Socioeconomics

3.4.11.1 Affected Environment

The affected environment for socioeconomics includes consideration of regional population trends, demographics, employment by job sector, personal income, and economic activity across the Plan Area that could be influenced by the proposed action. Significance thresholds for socioeconomics include any communities or economic sectors that are negatively affected economically by a proposed project. The affected environment description includes the most recent available data (2020). The analysis area for socioeconomics includes all portions of the three states within the Plan Area; NY, PA, and WV.

This analysis used data collected from the U.S. Census Bureau, U.S. Bureau of Economic Analysis, and the U.S. Department of Commerce.

Recent Trends in Population

The 2020 census recorded 34,997,665 people in the analysis area, with 95 percent of the population in NY and PA (58 and 37 percent, respectively). The three-state area accounts for 3.3 percent of the nation's total land area but contains 10.5 percent of the nation's total population, as of the 2020 census. Within the three-state area, the total population has risen by 113,667 between 2010 and 2019 (appendix D, table 18). PA saw the highest percent growth, increasing by 0.8 percent, NY grew by 0.4 percent, and WV's population decreased by 3.3 percent. At the county level, populations grew modestly near larger population centers and decreased in more rural areas. McDowell and Wyoming Counties in southern WV saw the largest population decreases in the Plan Area, decreasing by 15.6 and 10.6 percent respectively, from 2010 to 2019. Berkley County, in eastern WV, saw the highest population growth in the three-state area at 10.7 percent growth.¹⁶⁵

Demographics

All three states are below the national average for persons 18 or younger and above the national average for persons 65 years and older. NY is the most racially diverse state in the three-state area while WV is the least diverse state and one of the least diverse states in the country.

Employment by Job Sector

Exploring employment by job sector across the three-state area highlights some similarities and stark differences between the states. The largest employing sector in NY and PA, health care, is just over 15 percent for all three states. WV's largest job sector is governmental, at 18 percent of the total jobs, followed closely by health care.¹⁶⁶

Personal Income and Economic Activity

All three states have poverty rates above the national average with WV the highest at 16 percent. WV also has the lowest median household income, per capita income, and home values.

Economic activity is robust across the Plan Area, accounting for 11.1 percent of the nation's total employment and 12.4 percent of the nation's payroll in 2019. However, NY and PA account for the majority of the economic activity. Minority owned firms account for 35, 13, and 5 percent of the total firms for NY, PA, and WV, respectively.

3.4.11.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no ITPs would be issued under the proposed GCP. Project Proponents engaged in routine residential and commercial, transportation, and utility

¹⁶⁵ U.S. Census Bureau 2021a

¹⁶⁶ U.S. Bureau of Economic Analysis 2021

development projects within the Plan Area would continue to comply with the ESA by avoiding take of the Covered Species, where practicable. Project Proponents would develop an HCP and apply for incidental take coverage from the Service on a project-by-project basis. Each application would continue to be evaluated independently under NEPA.

Under the No Action Alternative, commercial, transportation, and utility development projects would have to undergo current permitting processes, NEPA, and development of HCPs. Current socioeconomic conditions and trends would be unaffected by the No Action Alternative because it would be the same as current management.

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. Under the Proposed Alternative, commercial, transportation, and utility development projects may benefit from the streamlined permitting process. Proposed projects would be faster to implement, which could positively affect socioeconomic conditions. More efficient project implementation could result in increased job availability and more competitive wages, as well as facilitate timely completion of projects that ultimately improve or maintain socioeconomic conditions. The Plan Area has such a robust economy that the maximum footprint of projects over the 10-year GCP duration would not be appreciable for an area contributing 11.1 percent of the nation's total employment and 12.4 percent of the nation's payroll. Current socioeconomic conditions and trends would not be negatively impacted by the Proposed Alternative.

3.4.12 Environmental Justice

3.4.12.1 Affected Environment

EO 14096 (United States 2023), *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that environmental analyses of federal actions address any disproportionately high and adverse human health or environmental effects on minority, low-income, and Tribal communities.¹⁶⁷ The CEQ issued guidance for implementing EO 12898, which defines low-income populations and minority populations, and includes consideration of Native American tribes.¹⁶⁸

According to the CEQ guidance, minority and low-income communities can be identified where: (1) the minority/low-income population of the affected area exceeds 50 percent or (2) the minority/low-income population percentage in the affected area is meaningfully greater than the minority/low-income population percentages in the general population or other appropriate unit of the geographic analysis. On July 20, 2021, the Biden Administration issued a memorandum

¹⁶⁷ 88 FR 25251, April 26, 2023

¹⁶⁸ Young et al. 2021

for Interim Implementation Guidance for the Justice40 Initiative (M-21-28) that provided the following variables to determine disadvantaged communities:

- Low income, high and/or persistent poverty
- High unemployment and underemployment
- Racial and ethnic residential segregation
- Linguistic isolation
- High housing cost burden and substandard housing
- Distressed neighborhoods
- High transportation cost burden and/or low transportation access
- Disproportionate environmental stressor burden and high cumulative impacts
- Limited water and sanitation access and affordability
- Disproportionate impacts from climate change
- High energy cost burden and low energy access
- Jobs lost through the energy transition
- Access to healthcare

This analysis used data collected from the EPA's Environmental Justice Screening and Mapping Tool (EJSCREEN) that provided demographic and environmental indicators.¹⁶⁹ The following indicators were selected to effectively analyze potential impacts to environmental justice populations in the Plan Area:

- Percent people of color
- Percent low-income
- Percent less than high school education
- Percent in linguistic isolation
- Lead Paint Indicator

Significance thresholds for environmental justice are met if any community is negatively impacted economically as a result of the Proposed Alternative. The affected environment is described utilizing the most recent available data.

Minorities are captured by EJSCREEN's People of Color indicator, which includes individuals who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. NY has the highest levels of minorities with 37 percent of the 15,463 block groups comprised of greater than 50 percent minorities. These areas are concentrated in the lower Hudson Valley, NY, and Long Island and represent eight Federally recognized Tribes. PA has 18 percent of its block groups with greater than 50 percent minorities while WV has only one percent.¹⁷⁰

Low-income communities were portrayed by EJSCREEN as a percent of individuals whose ratio of household income to poverty level in the past 12 months was less than two. WV has the

¹⁶⁹ EPA 2021b

¹⁷⁰ EPA 2021b

greatest levels of low-income populations with 29 percent of the 1,592 block groups comprised of greater than 50 percent low income. Both NY and PA have 18 percent of their block groups at greater than 50 percent low-income. Applying a weighted average of the area, per state, of block groups to the amount of low-income shows that WV has a statewide average of 41 percent, while NY and PA have 28 and 27 percent, respectively.¹⁷¹

Education levels are portrayed by EJSCREEN as a percent of individuals aged 25 and over with less than high school degree. Block groups with greater than 50 percent of the population with less than a high school degree are scarce, with NY at 1.3 percent, PA at 0.5 percent, and WV at 0.4 percent. Weighted averages per state show that 10 percent of NY, 11 percent of PA, and 17 percent of WV have less than a high school education.¹⁷²

EJSCREEN provides a demographic screen called linguistic isolation that shows the percent of households of which no one aged 14 and over speaks English "very well" or speaks English "only". While not a major issue in the Plan Area, NY shows the highest levels of linguistic isolation with one percent of its block groups with greater than 50 percent linguistic isolated. PA has only five block groups, out of 9,740, with greater than 50 percent linguistic isolation, while WV has none.¹⁷³

EJSCREEN provides an environmental screen called Lead Paint Indicator which presents the percent of housing units built before 1960, as an indicator of potential exposure to lead paint. This indicator was selected because it has high levels across the analysis area. NY and PA have 62 percent and 54 percent of their block groups with greater than 50 percent of households with the potential of containing lead paint, while WV has 28 percent.¹⁷⁴

3.4.12.2 Environmental Consequences

No Action Alternative

The No Action Alternative would result in no change to current conditions given that proposed projects engaged in routine residential and commercial, transportation, and utility development projects within the Plan Area would continue to comply with the ESA by avoiding take of the Covered Species, where practicable. Permitted projects of similar type, size, and scope would continue to occur throughout the Plan Area and would not be expected to change with the implementation of the No Action Alternative. Project Proponents would develop an HCP and apply for ITPs from the Service on a project-by-project basis. Each application would continue to be evaluated independently under NEPA. Under the No Action Alternative, impacts to the environmental justice resource would not be expected to differ from current conditions.

¹⁷¹ EPA 2021b

¹⁷² EPA 2021b

¹⁷³ EPA 2021b

¹⁷⁴ EPA 2021b

Proposed Alternative

The Proposed Alternative would streamline the process for issuing ITPs for proponents whose activities are reasonably certain to result in take of the Covered Species within the Permit Area. Implementing the Proposed Alternative would not be expected to alter the types or quantity of development activities which could occur in the Plan Area. Under the Proposed Alternative, individual projects could be implemented more efficiently under the issuance of ITP permits under the proposed GCP. Projects permitted under the proposed GCP would be of a similar type, size, and scope as those described for the No Action Alternative and would not be expected to result in negative impacts to environmental justice populations as a result. Expedited project implementation could result in more timely completion of projects that benefit environmental justice populations, such as improvements to utilities and transportation as well as development projects. As described under the No Action Alternative, effects from the Proposed Alternative would likely be minimal considering the extensive Plan Area and 34-million-person population.¹⁷⁵

Chapter 4 Irreversible and Irretrievable Commitment of Resources

The NEPA regulations require that the discussion of environmental consequences include “any irreversible or irretrievable commitments of resources which would be involved with the proposal should it be implemented.”¹⁷⁶ Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that this use could have on future generations. Irreversible effects primarily result from the use or destruction of specific resources that cannot be replaced within a reasonable time frame, such as energy or minerals. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored because of the action, such as extinction of a threatened or endangered species or the disturbance of a cultural resource.

The issuance of ITPs under the Proposed Alternative for the Covered Species during development, transportation, and utility infrastructure would require little to no commitment of irreversible or irretrievable resources. The Covered Activities of the Proposed Alternative would result in the loss of Covered Species’ preferred habitat within the Plan Area. However, the GCP’s prescribed avoidance, minimization and mitigation measures would help preserve habitat for the Covered Species; thus, the viability of the IBAT, NLEB, and TCB are not expected to be adversely affected.

The commitment and funding by each Applicant for acquisition and permanent management of mitigation properties would be irreversible. The commitment and funding of mitigation and monitoring activities for the duration of the permit would also be irretrievable.

Chapter 5 Short-term Use of the Environment Versus Long-term Productivity

¹⁷⁵ U.S. Census Bureau 2021b

¹⁷⁶ 40 CFR § 1502.16

This section discusses the long-term effects of the GCP by evaluating the relationship between the short-term uses of the environment and the maintenance and enhancement of long-term productivity, as required by regulation.¹⁷⁷

The GCP objectives involve the need to conserve biological resources in an organized and effective manner with the anticipated construction, operation and/or maintenance activities expected to occur within the Plan Area. Thus, long term environmental productivity would be maintained through avoidance, minimization, and mitigation measures. Short-term uses of the environment, such as clearing activities associated with new construction, would be accommodated in a manner least likely to result in permanent damage to the Plan Area's natural resources. The long-term result would be an increase in ecological productivity through preservation, management, and maintenance of habitat. Ecological productivity would also be enhanced through the recovery of potentially imperiled species through mitigation for incidental take under the Proposed Alternative.

¹⁷⁷ 40 CFR § 1502.16

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Appendix A. List of Preparers

Role	Name	Representing
R5 Bat Coordinator/NY Field Office	Noelle Rayman-Metcalf	U.S. Fish and Wildlife Service
NY and Long Island Field Office-Supervisor	Ian Drew	U.S. Fish and Wildlife Service
PA Field Office-Service Biologist	Pam Shellenberger	U.S. Fish and Wildlife Service
PA Field Office-Supervisor/Project Leader	Sonja Jahrsdoerfer	U.S. Fish and Wildlife Service
WV Field Office-Service Biologist	Tiernan Ware	U.S. Fish and Wildlife Service
WV Field Office-Supervisor	Jennifer Norris	U.S. Fish and Wildlife Service
R5 Regional Division of Endangered Species-Manager	Martin Miller	U.S. Fish and Wildlife Service
R5 Regional HCP Coordinator	Eric Tattersall	U.S. Fish and Wildlife Service
R5 GIS/Database Specialist	Lindsay Stevenson	U.S. Fish and Wildlife Service
R5 Regional Historic Preservation Officer	Amy Wood	U.S. Fish and Wildlife Service
R5 Regional Tribal Liaison	Timothy Binzen	U.S. Fish and Wildlife Service
R5 Acting Public Affairs Specialist	Susan Wojtowicz	U.S. Fish and Wildlife Service
R5 Public Affairs Specialist	Marilyn Kitchell	U.S. Fish and Wildlife Service
Project Manager	Dessa Dale	DJ&A, P.C.
Biologist	Tyler Andrews	DJ&A, P.C.
Biologist	Allison Hendryx	DJ&A, P.C.
NEPA/GIS Specialist	Travis Benton	DJ&A, P.C.

Appendix B. List of Agencies and Persons Contacted

Name	Representing
Dan Rosenblatt, Wildlife Section Chief	NY State Department of Environmental Conservation
Angelena Ross, State Mammal Lead	NY State Department of Environmental Conservation
Ashley Meyer, State Bat Lead	NY State Department of Environmental Conservation
Jacqueline Lendrum Director – Division of Fish, Wildlife and Marine Resources	NY State Department of Environmental Conservation
Lynn Bogan, Environmental Stewardship Coordinator	NY State Office of Parks, Recreation, and Historic Preservation
Chris Nadareski, Section Chief - Bureau of Water Supply, Watershed Protection Plan	NY City Department of Environmental Protection
Terry Martino, Executive Director	Adirondack Park Agency
Cindy Dunn, Secretary	PA Department of Conservation and Natural Resources
Bryan Burhans, Executive Director	PA Game Commission
Tim Schaeffer, Executive Director	PA Fish and Boat Commission
Sid Freyermuth, Environmental Group Manager	PA Department of Environmental Protection
Paul Johansen, Chief, Wildlife Resources Section	WV Division of Natural Resources
Harold Ward, Cabinet Secretary	WV Department Environmental Protection
Alyssa Bennett, Small Mammals Biologist	Vermont Agency of Natural Resources, Fish and Wildlife Department

Appendix C. Figures

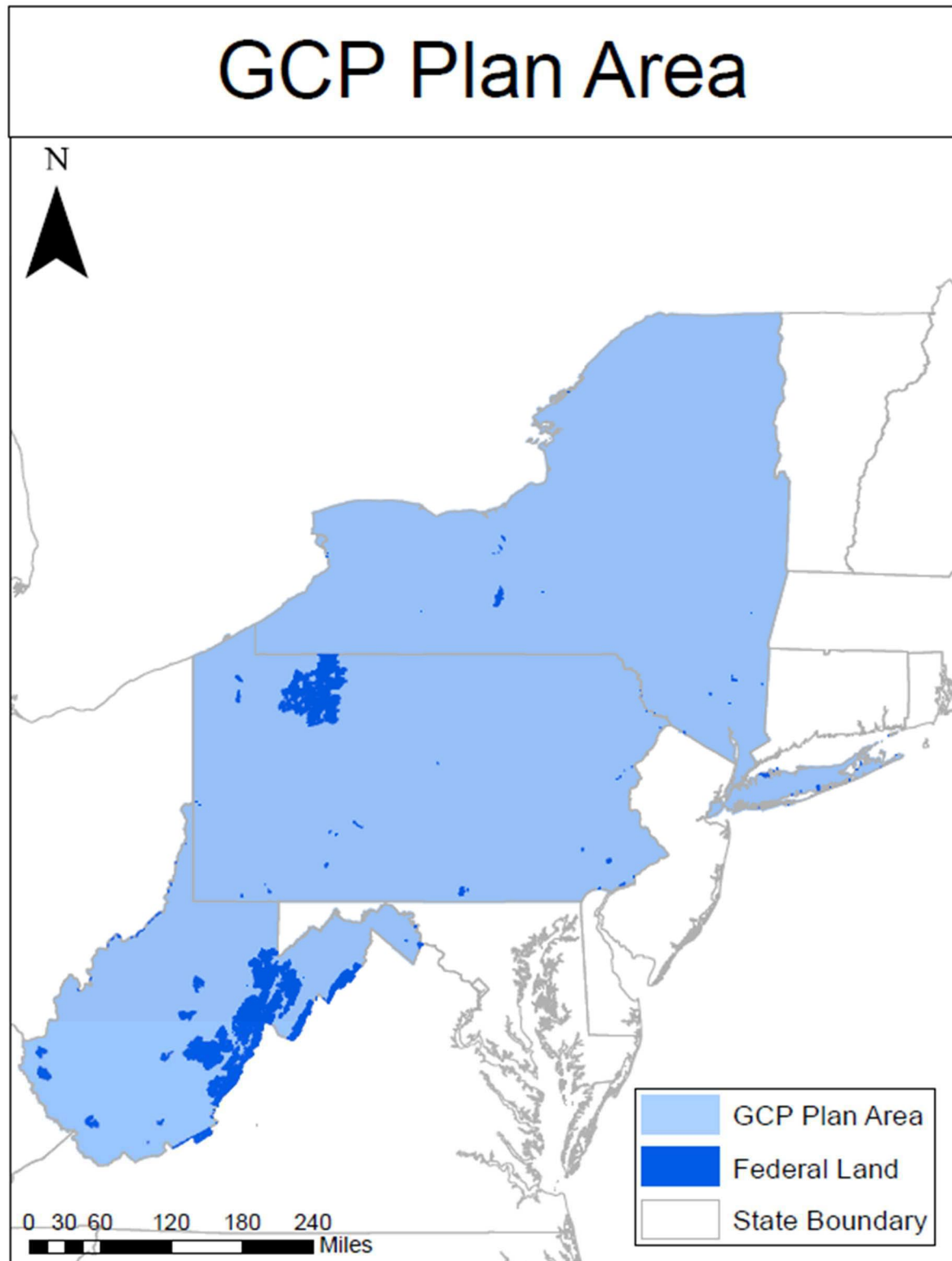


Figure 1. A map of the GCP Plan Area, excluding Federal lands.

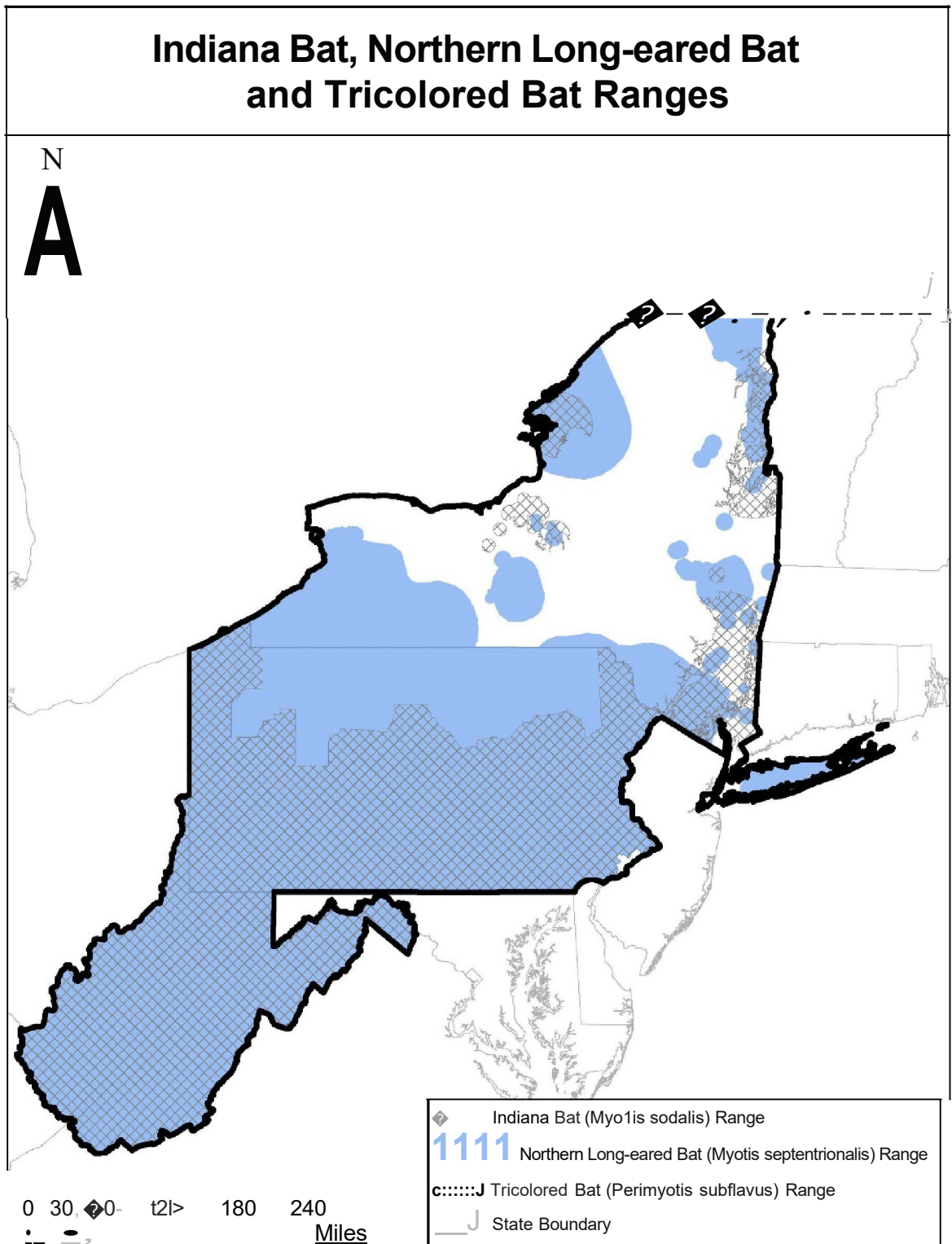


Figure 2. The ranges of the IBAT, NLEB and TCB in NY, PA, and WV.

Appendix D. Tables

Table 1. Nonattainment Areas within the Plan Area in 2021.¹⁷⁸

Area Name	Pollutant	Status
New York-N. New Jersey-Long Island, NY-NJ-CT	PM _{2.5}	Nonattainment
New York-N. New Jersey-Long Island, NY-NJ-CT	O ₃	Nonattainment
Jamestown, NY	O ₃	Nonattainment
New York Co, NY	PM ₁₀	Nonattainment
St. Lawrence Co, NY	SO _x	Nonattainment
Pittsburgh-Beaver Valley, PA	O ₃	Nonattainment
Pittsburgh-Beaver Valley, PA	PM _{2.5}	Nonattainment
Liberty-Clairton, PA	PM _{2.5}	Nonattainment
Allegheny, PA	SO _x	Nonattainment
Armstrong County, PA	SO _x	Nonattainment
Indiana, PA	SO _x	Nonattainment
Lower Beaver Valley, PA	Pb	Nonattainment
Beaver, PA	SO _x	Nonattainment
Reading, PA	O ₃	Nonattainment
Lyons, PA	Pb	Nonattainment
North Reading, PA	Pb	Nonattainment
Philadelphia-Wilmington-Atlantic City, PA-NY-MD-DE	O ₃	Nonattainment
Allentown-Bethlehem-Easton, PA	O ₃	Nonattainment
Lancaster, PA	O ₃	Nonattainment
Warren, PA	SO _x	Nonattainment

¹⁷⁸ EPA 2022

Table 2. Geologic features of Level III ecoregions present within the Plan Area.^{179, 180}

Level III Ecoregion	Description
Atlantic Coastal Pine Barrens	Coastal plain with climate moderated by proximity to the Atlantic. Characterized by sandy beaches, grassy dunes, bays, barrier islands, and marshes. Soils are a combination of Entisols and Ultisols in the form of terminal moraines, outwash plains, and coastal deposits with deep deposits of gravel, sand, silt, and clay. Hydrologically, the region hosts numerous perennial streams, lakes, swamps, bogs, and salt and freshwater marshes.
Blue Ridge	Terrain is generally rugged, varying from narrow ridges to hilly plateaus with areas of massive mountains and high peaks. Soils are a combination of Inceptisols and Ultisols overlying primarily metamorphic bedrock in the form of gneiss, schist, and quartzite along with areas of igneous and sedimentary rock. Hydrologically, the region has a high density of cool, clear perennial streams. Natural lakes are largely absent.
Central Appalachians	Rugged terrain with high hills and low mountains. Steep, narrow ridges, narrow winding valleys, and deep coves. Relief varies from 150 meters to 600 meters. Primarily a highly dissected, rugged plateau composed of Pennsylvanian-age sandstone, shale, conglomerate, and coal. High density of perennial moderate- and high-gradient streams with bedrock and boulder substrates. Some waterfalls. Lacks lakes, but a few reservoirs occur. Inceptisols and Ultisols are typical, with mostly mesic soil temperatures and udic soil moisture regimes.
Eastern Great Lakes Lowlands	Topography shaped by glacial lakes and episodic glacial flooding. Valleys and lowlands are underlain with interbedded limestone, shale, and sandstones, while mountainous areas are composed of more resistant rocks. Limestone derived soils are deep, fine-textured, and productive.
Erie Drift Plain	Rolling terrain with deposits from successive ice sheets and glacial lakes cover horizontally bedded sedimentary rock layers forming beach ridges, hummocky stagnation moraines, kettles, and wetlands. Soils are poorly drained. Regional terrain is predominantly a gently to strongly rolling dissected plateau with low rounded hills, scattered end moraines, kettles, and marshy lowlands due to heavy glaciation. Hydrologically, the region has a network of perennial and intermittent streams.
Middle Atlantic Coastal Plain	Low elevation flat plains, low terraces, dunes, barrier islands, and beaches are underlain by unconsolidated sediments. Poorly drained soils are common, and the region has a mix of coarse and finer textured soils. Low gradient streams and rivers, numerous swamps, marshes, and estuaries, a few large lakes.
Northeastern Coastal Zone	Landforms include rolling or irregular plains. Soils formed from glacial till that are relatively nutrient poor soils. Includes concentrations of Pleistocene glacial lakes, some of which are sensitive to acidification.
Northern Allegheny Plateau	Made up of horizontally bedded, erodible shales and siltstones, and moderately resistant sandstones. Consists of glaciated upland plateau with rolling hills, open valleys, and low mountains covered in glacial till. Soils are primarily Inceptisols overlying shales, siltstones, and sandstones. Hydrologically, the region has many perennial streams and small glacial lakes.
Northern	The ecoregion includes the Adirondacks and Catskill Mountains in NY and

¹⁷⁹ EPA 1999¹⁸⁰ Griffith 2010

Level III Ecoregion	Description
Appalachian and Atlantic Maritime Highlands	includes numerous perennial high-gradient streams and some larger rivers. Many large and small glacial lakes. Hills and mountains with narrow valleys. Some plains with hills. Most of the region has been glaciated. A variety of metamorphic and igneous rocks occur, along with some areas of sedimentary materials. Soils are generally nutrient-poor, with frigid and some cryic soil temperature regimes and udic and some aquic soil moisture regimes. Spodosols and Inceptisols are typical.
Northern Piedmont	Irregular plains and low hills of sedimentary rock. Includes scattered forested rocky ridges on intrusions of diabase and basalt. Soils vary and are nutrient poor in the well-drained uplands, and more fertile in the lowlands.
North Central Appalachians	Vast elevated plateau of horizontally bedded sandstone, shale, siltstone, conglomerate, and coal. Contains highly dissected hills and low mountains that were mostly unaffected by glaciations. Soils are generally low nutrient Inceptisols overlying horizontally bedded sandstone, shale, siltstone, conglomerate, and coal. Hydrologically, the region has numerous perennial streams and lakes.
Ridge and Valley	Includes a diversity of landscapes with relatively low-lying rolling valleys with ridges and low irregular hills. Soils are a combination of Ultisols and Inceptisols overlying a variety of limestone, dolomite, shale, siltstone, sandstone, chert, mudstone, and marble. Hydrologically, the regional drainage is in a trellised pattern with smaller streams on the slopes draining into meandering streams in the valley, combined with natural springs.
Western Allegheny Plateau	Mostly unglaciated dissected plateau composed of horizontally bedded sedimentary rock. Regional terrain is an unglaciated, dissected plateau with areas of rugged hills. Hydrologically, the region has a high density of perennial streams, and natural lakes are largely absent.

Table 3. NRCS soil suborders within the Plan Area.^{181, 182}

Soil Order	Description
Alfisols	Generally, well developed soils resulting from weathering processes that leach clay materials and other constituents out of the surface layer and into the subsoil where they can hold and supply moisture and nutrients to plants. Formed primarily under forest, savanna, or mixed vegetative cover. Found predominantly in temperate humid and subhumid regions and are productive soils typically used for agricultural and silvicultural activities
Inceptisols	Soil occurs in a wide variety of semiarid to humid environments. Generally, exhibits moderate degrees of soil weathering and development. Predominantly found in mountainous areas, steep slopes, young geomorphic surfaces, and on resistant parent materials.
Spodosols	Form from weathering processes that strip organic matter from the surface layer and deposit them with aluminum and iron in the subsoil. Commonly occur in areas of coarse-textured deposits. These soils tend to be acidic and infertile, and often occur under coniferous forest in cool, moist climates.

¹⁸¹ USDA 1999

¹⁸² University of Idaho 2007

Soil Order	Description
Ultisols	Form from intense weathering and leaching that result in clay-enriched subsoil dominated by quartz, kaolinite, and iron oxides. Typically, acid soils with narrow near-surface nutrient layers.

Table 4. Sole source aquifers within the Plan Area.¹⁸³

Sole Source Aquifer Name	States
Cattaraugus Creek Basin Aquifer	NY
Clinton Street-Ballpark Valley Aquifer	NY
Cortland Homer Preble Aquifer System	NY
Delaware River Streamflow Zone/New Jersey Coastal Plains Aquifer	NY, PA
Highlands Aquifer System Passaic	NY
Kings/Queens Counties (Brooklyn-Queens) Aquifer System	NY
Nassau/Suffolk Counties Long Island	NY
New Jersey Fifteen Basin Aquifers	NY, PA
Northern Tug Hill Glacial Aquifer	NY
Prospect Hill Aquifer, Clark County	WV
Ramapo River Basin Aquifer Systems	NY
Schenectady-Niskayuna	NY
Seven Valleys Aquifer, York County	PA

¹⁸³ <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

Table 5. General description of typical vegetation types of the Level III ecoregions within the Plan Area.^{184, 185, 186}

Level III Ecoregion	Typical vegetation
Atlantic Coastal Pine Barrens	Predominantly covered by pine-oak forests, dominated by pitch pine, scarlet oak, black oak, and some areas of shortleaf pine and chestnut oak. Native vegetation in inland areas include mixed oak forests of white oak, black oak, American beech, pignut hickory, mockernut hickory, black walnut, yellow poplar, and red maple, although much of it has been cleared. Areas of Atlantic white cedar swamps occur. Coastal and dune areas are dominated by dune woodlands, low shrub thickets, and areas of dune grass.
Blue Ridge	Predominantly Appalachian oak forests along with oak, hemlock, cove hardwoods, and pine communities. American chestnut, a species of high ecologic and economic importance, once dominated forests in the region but was largely wiped out by Chestnut blight by the 1930's. The chestnut was principally replaced by yellow poplar, chestnut oak, white oak, black locust, red maple, and various species of pine. Higher elevation forests are dominated by northern hardwoods such as American beech, yellow birch, yellow buckeye, and maples.
Central Appalachians	Mostly mixed mesophytic forest, once dominated by American chestnut, now with chestnut oak, red maple, white oak, black oak, beech, yellow-poplar, sugar maple, ash, basswood, buckeye, and hemlock. Some areas of Appalachian oak forest, and others with more northern hardwood forests of maple, beech, birch, and hemlock. Small areas of red spruce and hemlock at highest elevations in the north-central portion of the region.
Eastern Great Lakes Lowlands	The natural vegetation was largely Beech-Maple Forest; shoreline vegetation on the sandy beaches, dunes, and flats includes sea rocket, beach grass, bluestem, and Virginia pine.
Erie Drift Plain	Native vegetation is composed of beech-maple forests, mixed oak forests, and mixed mesophytic forests. Common species include northern red oak, white oak, shagbark hickory, sugar maple, yellow birch, American beech, and eastern hemlock. Elm-ash swamp forests and sphagnum peat bogs are also common in the lowlands.
Middle Atlantic Coastal Plain	Forest cover in the region was once dominated by longleaf pine, with more oak-hickory-pine to the north. It is now mostly loblolly and some shortleaf pine, with patches of oak, gum, and cypress near major streams. Cordgrass, saltgrass, and rushes in coastal marshes; beach grass and sea oats on dunes.
Northeastern Coastal Zone	Soils formed from glacial till support Appalachian oak forests and northeastern oak-pine forests.
Northern Allegheny Plateau	Natural vegetation primarily Appalachian oak forest, with some northern hardwood forest at higher elevations. Typical species include white oak, black oak, hickory, white pine, sugar maple, American beech, and yellow birch.

¹⁸⁴ EPA 1999

¹⁸⁵ Griffith 2010

¹⁸⁶ EPA 1999

Level III Ecoregion	Typical vegetation
Northern Appalachian and Atlantic Maritime Highlands	Mostly mixed hardwood and spruce-fir forests. Forest vegetation is somewhat transitional between the boreal regions to the north and the broadleaf deciduous forests to the south. Typical forests include mixed hardwoods of sugar maple, beech, and yellow birch; mixed forests with hardwoods and hemlock and white pine; and spruce-fir forests with balsam fir, red spruce, and birches. In swampy areas, black spruce, red maple, black ash, and tamarack.
Northern Piedmont	Forest vegetation is Appalachian oak-hickory forest on well-drained uplands, with sugar maple and mixed hardwood forests on more fertile soils.
North Central Appalachians	More forest covered than most adjacent ecoregions. Generally, northern hardwood forests of sugar maple, beech, and yellow birch, and Appalachian oak forests with white oak, red oak, and hickories. Some areas with hemlock, pitch pine, and white pine. Some bogs and marshes.
Ridge and Valley	Native vegetation of valleys, slopes, and hilltops is sugar maple/mixed hardwood. Hemlock grows with hardwoods on cool and moist sites.
Western Allegheny Plateau	Soils support a potential natural vegetation of Appalachian Oak Forest dominated by white oaks and red oaks. Natural vegetation is predominantly mixed mesophytic forest with areas of Appalachian oak forest. Common species include chestnut oak, red maple, white oak, black oak, American beech, yellow poplar, sugar maple, ash, American basswood, buckeye, and eastern hemlock.

Table 6. Plant species listed as endangered (E) or threatened (T) under the ESA within the Plan Area.

Species	Listing Status ¹⁸⁷	Presence by State
Ferns and Allies		
American hart's-tongue fern (<i>Asplenium scolopendrium</i> var. <i>americanum</i>)	T	NY
Flowering Plants		
Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)	E	NY, PA, WV
Small whorled pogonia (<i>Isotria medeoloides</i>)	T	NY, PA, WV
Houghton's goldenrod (<i>Solidago houghtonii</i>)	T	NY
Leedy's roseroot (<i>Rhodiola integrifolia</i> ssp. <i>leedyi</i>)	T	NY
Northern wild monkshood (<i>Aconitum noveboracense</i>)	T	NY
Sandplain gerardia (<i>Agalinus acuta</i>)	E	NY
Seabeach amaranth (<i>Amarantus pumilus</i>)	T	NY
Virginia spiraea (<i>Spiraea virginiana</i>)	T	WV
Shale barren rockcress (<i>Boechera serotina</i>)	E	WV
Harperella (<i>Ptilimnium nodosum</i>)	E	WV

¹⁸⁷ No critical habitat has been proposed for the species listed in this table.

Table 7. Fish and wildlife diversity (number of species) by state within the Plan Area.^{188, 189, 190, 191, 192, 193, 194}

State	Insects	Fishes	Amphibians	Reptiles	Birds	Mammals
NY	1,070	179	33	40	495	68
PA	1,089	159	40	38	435	66
WV	1,100	179	48	39	354	72

Table 8. Common fish and wildlife species by Level III ecoregion in the Plan Area.¹⁹⁵

Level III Ecoregion	Common Species

¹⁸⁸ Carlson et al. 2016

¹⁸⁹ NYSDEC Herp Atlas Project 1999

¹⁹⁰ NY State Ornithological Association 2021

¹⁹¹ PA Fish and Boat Commission 2021

¹⁹² PA Ornithological Records Committee 2020

¹⁹³ WV Bird Record Committee 2021

¹⁹⁴ WV Department of Environmental Protection 2021

¹⁹⁵ Griffith 2010

Level III Ecoregion	Common Species
Atlantic Coastal Pine Barrens	White-tailed deer, fox, raccoon, cottontail rabbit, gray squirrel, pheasant, bobwhite quail, piping plover, black skimmer, least tern
Blue Ridge	Black bear, white-tail deer, wild boar, bobcat, red squirrel, northern flying squirrel, cottontail rabbit, rock vole, wild turkey, raven, grouse, saw-whet owl, blackburnian warbler, brook trout, red-spotted newt, long-tailed salamander (one of the most diverse salamander populations in the world), many species of reptiles, thousands of species of invertebrates
Central Appalachians	Black bear, white-tailed deer, red fox, gray fox, bobcat, weasel, red squirrel, fox squirrel, big brown bat, wild turkey, ruffed grouse, blue jay, scarlet tanager, hermit thrush, tufted titmouse, box turtle, timber rattlesnake, sculpins, smallmouth bass, minnows, and darters
Eastern Great Lakes Lowlands	White-tailed deer, black bear, moose, coyote, red fox, raccoon, snowshoe hare, red squirrel, gray squirrel, osprey, screech owl, ruffed grouse, pileated woodpecker, cardinal, wood thrush, Canada warbler, canvasback, wood duck
Erie Drift Plain	White-tailed deer, red fox, woodchuck, raccoon, opossum, beaver, striped skunk, eastern chipmunk, fox squirrel, bald eagle, osprey, red-tailed hawk, northern flicker, canvasback, wood duck, Canada warbler, eastern screech owl, snapping turtle, dusky salamander
Middle Atlantic Coastal Plain	Black bear, white-tailed deer, bobcat, gray fox, raccoon, cottontail rabbit, gray squirrel, wild turkey, bobwhite, mourning dove, cormorants, herons, northern cardinal, prothonotary warbler, box turtle
Northeastern Coastal Zone	White-tailed deer, black bear, bobcat, coyote, beaver, gray squirrel, white-footed mouse
Northern Allegheny Plateau	American black bear, gray fox, beaver, striped skunk, gray squirrel, wild turkey, ruffed grouse, American woodcock, wood duck, Cooper's hawk, cerulean warbler, redback salamander, wood turtle
Northern Appalachian and Atlantic Maritime Highlands	Moose, black bear, white-tailed deer, red fox, bobcat, lynx, snowshoe hare, porcupine, fisher, beaver, northern flying squirrel, osprey, red-tailed hawk, wild turkey, ruffed grouse, black-backed woodpecker, gray jay, common loon, red-back salamander.
Northern Piedmont	White-tailed deer, gray fox, red squirrel, raccoon, cottontail rabbit, mink, muskrat, ruffed grouse, meadowlark, field sparrow, blue heron
North Central Appalachians	Black bear, white-tailed deer, bobcat, coyote, beaver, red fox, gray fox, raccoon, gray squirrel, mink, river otter, snowshoe hare, red-shouldered hawk, saw-whet owl, northern goshawk, wild turkey, ruffed grouse, warblers, gray tree frog
Ridge and Valley	White-tailed deer, black bear, bobcat, red fox, gray fox, raccoon, skunk, muskrat, mink, cottontail rabbit, eastern fox squirrel, bald eagle, wild turkey, bobwhite, red-eye vireo, cardinal, box turtle, timber rattlesnake, sculpins, minnows, darters
Western Allegheny Plateau	White-tailed deer, gray fox, woodchuck, gray squirrel, wild turkey, ruffed grouse, barred owl, pileated woodpecker, ovenbird, Kentucky warbler, northern water snake, dusky salamander

Table 9. Fish and wildlife species listed as endangered or threatened under the ESA, proposed for listing or are candidate species present in the Plan Area.

Species	Listing Status	Critical Habitat	Presence by State
Mollusks			
Mussel, Clubshell (<i>Pleurobema clava</i>)	E	-	NY, PA, WV
Mussel, Dwarf wedgemussel (<i>Alasmidonta heterodon</i>)	E	-	NY, PA
Mussel, Northern riffleshell (<i>Epioblasma torulosa rangiana</i>)	E	-	NY, PA, WV
Mussel, Fanshell (<i>Cyprogenia stegaria</i>)	E	-	PA, WV
Mussel, Pink mucket (<i>Lampsilis abrupta</i>)	E	-	WV
Mussel, Rayed bean (<i>Villosa fabalis</i>)	E	-	NY, PA, WV
Mussel, Sheepnose (<i>Plethobasus cyphus</i>)	E	-	PA, WV
Mussel, Snuffbox (<i>Epioblasma triquetra</i>)	E	-	PA, WV
Mussel, Rabbitsfoot (<i>Quadrula cylindrica cylindrica</i>)	T	+	PA
Mussel, James spiny (<i>Pleuobema collina</i>)	E	-	WV
Mussel, Spectaclecase (<i>Cumberlandia monodonta</i>)	E	-	WV
Mussel, Round hickorynut (<i>Obovaria subrotunda</i>)	T	+	PA, WV
Mussel, Longsolid (<i>Fusconaia subrotunda</i>)	T	+	NY, PA, WV
Mussel, Purple cat's paw (<i>Epioblasma obliquata obliquata</i>)	E	-	WV
Mussel, Salamander (<i>Simpsonias ambigua</i>)	PE	P+	NY, PA, WV
Mussel, Tan riffleshell (<i>Epioblasma Florentina walker</i>)	E	-	WV
Snail, Flat-spined three-toothed land (<i>Triodopsis platysayoides</i>)	T	-	WV
Snail, Chittenango ovate amber (<i>Novisuccinea chittenangoensis</i>)	T	-	NY
Crustaceans			
Guyandotte River crayfish (<i>Cambarus veteranus</i>)	E	+	WV
Big Sandy crayfish (<i>Cambarus callainus</i>)	T	+	WV
Madison Cave isopod (<i>Antrolana lira</i>)	T	-	WV
Insects			
Rusty-patched bumble bee (<i>Bombus affinis</i>)	E	-	PA, WV
Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)	E	-	NY
Bog buck moth (<i>Hemileuca maia menyanthevora</i>)	E	-	NY
Monarch butterfly (<i>Danaus plexippus</i>)	C	-	NY, PA, WV
Fishes			
Atlantic sturgeon (<i>Acipenser oxyrinchus</i>)	E	+	NY, PA
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	E	-	NY, PA
Candy darter (<i>Etheostoma osburni</i>)	E	+	WV

Diamond darter (<i>Crystallaria cincotta</i>)	E	+	WV
Amphibians			
Cheat Mountain salamander (<i>Plethodon nettingi</i>)	T	-	WV
West Virginia spring salamander (<i>Gyrinophilus subterraneus</i>)	PE	+	WV
Reptiles			
Bog turtle (<i>Glyptemys muhlbergii</i>)	T	-	NY, PA
Eastern massasauga rattlesnake (<i>Sistrurus catenatus catenatus</i>)	T	-	NY, PA
Birds			
Piping plover (<i>Charadrius melodus</i>) (Great Lakes)	E	+	NY, PA
Piping plover (<i>Charadrius melodus</i>) (Atlantic Coast)	T	-	NY
Rufa red knot (<i>Calidris canutus rufa</i>)	T	P+	NY, PA, WV
Eastern black rail (<i>Laterallus jamaicensis jamaicensis</i>)	T	-	NY, PA, WV
Roseate tern (<i>Sterna dougallii dougallii</i>)	E	-	NY
Mammals			
Indiana bat (<i>Myotis sodalis</i>)	E	+	NY, PA, WV
Northern long-eared bat (<i>Myotis septentrionalis</i>)	E	-	NY, PA, WV
Virginia big-eared bat (<i>Corynorhinus townsendii virginianus</i>)	E	+	WV
Gray bat (<i>Myotis grisescens</i>)	E	-	WV
Tricolored bat (<i>Perimyotis subflavus</i>)	PE	-	NY, PA, WV

Listing status: (T) threatened
(E) endangered
(PT) proposed threatened
(PE) proposed endangered
(C) candidate for listing

Critical habitat: (-) critical habitat has not been designated for this species
(+) critical habitat has been designated for this species
(P) critical habitat has been proposed for this species

Table 10. Typical land uses by Level III ecoregion in the Plan Area.¹⁸⁰

Level III Ecoregion	Typical Land uses
Atlantic Coastal Pine Barrens	Large areas dominated by urban and suburban development and transportation infrastructure. Some areas of agriculture, with corn, wheat, soybean, vegetable, dairy, and poultry farming. Tourism and recreation uses are important to local economies.
Blue Ridge	Forest-related land uses occur along with some small areas of pasture and hay production, apple orchards, and Christmas tree farms. Recreation, tourism, and hunting are important. Includes large areas of public lands including national forests and national parks.
Central Appalachians	Mostly forest land uses. Includes some small areas of pasture, livestock, or dairy operations. Surface and underground bituminous coal mines are common, reshaping ridges and hollows, and causing the siltation and acidification of many streams.
Eastern Great Lakes Lowlands	Agriculture is the dominant land use. Although orchards, vineyards, and vegetable farming are important locally, a large percentage of the agriculture is associated with dairy operations. Small grains, corn, soybeans, and hay are typical. Some areas of woodland remain. Urban, suburban, and industrial uses are extensive in some areas.
Erie Drift Plain	Much of the Erie Drift Plain is now in farms, many associated with dairy operations. Feed grains and forage crops are typical. Farm woodlots provide sawlogs for construction, firewood, and specialty products. Areas of urban development and industrial activity occur locally.
Middle Atlantic Coastal Plain	Cropland including wheat, corn, soybeans, potatoes, cotton, blueberries, and peanuts. Chicken, turkey, and hog production has a high density in some areas. Recreation and tourism along coastal strips.
Northeastern Coastal Zone	Although attempts were made to farm much of the Northeastern Coastal Zone after the region was settled by Europeans, land use now mainly consists of forests, woodlands, and urban and suburban development, with only some minor areas of pasture and cropland.
Northern Allegheny Plateau	Mostly forested with some logging. Some public national forest lands. Areas of livestock and dairy farming, and some cropland with hay, corn, small grains, and some tobacco. Surface and underground coal mining is extensive and has caused the sedimentation and acidification of many surface waters.
Northern Appalachian and Atlantic Maritime Highlands	Relatively sparsely populated. Recreation, tourism, and forestry are primary land uses. Farm-to-forest conversion began in the 19 th century and continues today. In spite of this trend, alluvial valleys, glacial lake basins, and areas of limestone-derived soils are still farmed for dairy products, forage crops, apples, and potatoes. In addition to the timber industry, recreational homes and associated lodging and services sustain the forested regions economically, but they also create development pressure that threatens to change the pastoral character of the region.
Northern Piedmont	Mostly agriculture and urban, suburban, and industrial uses. Feed and forage crops and soybeans are typical. Nurseries and horticultural products, and Christmas trees occupy some areas. Some woodlots and horse and hobby farms occur.
North Central Appalachians	Land uses are generally tied to forestry and recreation, but some coal, oil, and gas extraction occurs in the west. Some national and state public forest land. Some dairy farming occurs. Vacation and suburban developments are increasing.

Level III Ecoregion	Typical Land uses
Ridge and Valley	A mosaic of woodland, pasture, and cropland. Present-day forests cover about 50% of the region. Some areas of pine plantations. Hay, pasture, and grain for beef and dairy cattle are common crops, along with some areas of corn, soybeans, tobacco, and cotton.
Western Allegheny Plateau	Mostly forested with some logging. Some public national forest lands. Areas of livestock and dairy farming, and some cropland with hay, corn, small grains, and some tobacco. Surface and underground coal mining is extensive and has caused the sedimentation and acidification of many surface waters.

Table 11. Approximate acreage and change in non-Federal land uses in the Plan Area, 1982 to 2017 (in thousands of acres).¹⁹⁶

State	Cropland	Pastureland	Forest Land	Other Rural Uses	Total Rural Uses
1982					
NY	5,848.0	3,860.6	16,573.4	655.8	26,937.8
PA	5,891.7	2,641.7	15,598.4	934.3	25,066.1
WV	1,078.1	1,881.3	10,374.4	238.6	13,572.4
2017					
NY	4,960.1	2,550.9	17,545.0	802.3	25,874.2
PA	4,936.7	1,891.2	15,674.4	809.6	23,322.1
WV	642.1	1,438.6	10,533.9	277.8	12,892.9
		Change	in Acreage		
NY	-887.9 (-15.2%)	-1,309.7 (-33.9%)	971.6 (+5.9%)	146.5 (+22.3%)	-1,063.6 (-3.9%)
PA	-955 (-16.2%)	-750.5 (-28.4%)	76 (+0.5%)	-124.7 (-13.3%)	-1,744 (-7.0%)
WV	-436 (-40.4%)	-442.7 (-23.5%)	159.5 (+1.5%)	39.2 (+16.4%)	-679.5 (-5.0%)

¹⁹⁶ USDA 2020

Table 12. Approximate acreage and change by NLCD land cover class in the Plan Area (in thousands of acres).¹⁹⁷

State	Wetland	Upland	Conifer Forest	Deciduous Forest	Mixed Forest	Woody Wetland	Develop Land	Other
2006								
NY	275.79	465.11	2,553.71	11,416.00	3,359.38	2,298.73	3,038.80	7,661.57
PA	65.06	398.99	526.05	13,091.46	3,706.71	419.16	3,424.93	6,813.62
WV	17.81	388.77	206.91	10,132.14	1,167.67	14.46	886.79	1,523.65
2016								
NY	261.10	493.21	2,549.20	11,383.48	3,380.91	2,345.73	3,110.17	7,545.28
PA	65.85	512.86	519.69	12,956.08	3,712.58	426.21	3,523.03	6,729.69
WV	16.96	461.71	212.95	10,022.27	1,190.94	15.61	917.74	1,500.03
Change in Acreage								
NY	-14.69 (-5.32%)	28.09 (6.04%)	-4.50 (-0.18%)	-32.53 (-0.28 %)	21.53 (0.64 %)	47.01 (2.04%)	71.37 (2.34%)	-116.29 (-1.50%)
PA	0.79 (1.21%)	113.86 (28.54%)	-6.36 (-1.21%)	-135.38 (-1.03%)	5.87 (0.15%)	7.05 (1.68%)	98.09 (2.86%)	-83.92 (-1.23%)
WV	-0.85 (-4.76)	72.94 (18.76%)	6.03 (2.91%)	-109.87 (-1.08%)	23.27 (1.99%)	1.14 (7.90%)	30.94 (3.48%)	-23.62 (-1.55)

¹⁹⁷ <https://www.sciencebase.gov/catalog/item/5d4c6a1de4b01d82ce8dfd2f>

Table 13. National Park Service lands in the Plan Area.^{198, 199, 200}

National Park Service Lands	Location
African Burial Ground National Monument	NY
Allegheny Portage Railroad National Historic Site	PA
Appalachian National Scenic Trail	NY, PA, WV
Captain John Smith Chesapeake National Historic Trail	NY, PA
Castle Clinton National Monument	NY
Chesapeake and Ohio Canal National Historic Park	WV
Chesapeake Bay	NY, PA, WV
Delaware Water Gap National Recreation Area	PA
Edgar Allan Poe National Historic Site	PA
Eisenhower National Historic Site	PA
Eleanor Roosevelt National Historic Site	NY
First State National Historical Park	PA
Federal Hall National Memorial	NY
Fire Island National Seashore	NY
Flight 93 National Memorial	PA
Fort Necessity National Battlefield	PA
Fort Stanwix National Monument	NY
Friendship Hill National Historic Site	PA
Gateway National Recreation Area	NY
Gauley River National Recreation Area	WV
General Grant National Memorial	NY
Gettysburg National Military Park	PA
Gloria Dei Church National Historic Site	PA
Governors Island National Monument	NY
Hamilton Grange National Memorial	NY
Harpers Ferry National Historic Park	WV
Harriet Tubman National Historical Park	NY
Home of Franklin D Roosevelt National Historic Site	NY
Hopewell Furnace National Historic Site	PA

¹⁹⁸ NPS 2020a¹⁹⁹ NPS 2020b²⁰⁰ NPS 2020c

National Park Service Lands	Location
Independence National Historic Park	PA
Johnstown Flood National Memorial	PA
Lewis and Clark National Historic Trail	PA, WV
Lower East Side Tenement Museum National Historic Site	NY
Martin Van Buren National Historic Site	NY
National Parks of New York Harbor	NY
New River Gorge National Park and Preserve	WV
North Country National Scenic Trail	NY, PA
Potomac Heritage National Scenic Trail	PA
Sagamore Hill National Historic Site	NY
Saint Paul's Church National Historic Site	NY
Saratoga National Historic Park	NY
Statue of Liberty National Monument	NY
Steamtown National Historic Site	PA
Stonewall National Monument	NY
Thaddeus Kosciuszko National Memorial	PA
Theodore Roosevelt Birthplace National Historic Site	NY
Theodore Roosevelt Inaugural National Historic Site	NY
Thomas Cole National Historic Site	NY
Valley Forge National Historic Park	PA
Vanderbilt Mansion National Historic Site	NY
Washington-Rochambeau Revolutionary Route National Historic Trail	NY, PA
Women's Rights National Historic Park	NY

Table 14. National Forests within the Plan Area.

U.S. Forest Service Lands	Location by State	Approximate Acreage
Allegheny National Forest	PA	517,000
Finger Lakes National Forest	NY	16,250
George Washington and Jefferson National Forests	WV	123,630
Monongahela National Forest	WV	919,000

Table 15. Designated Wild and Scenic Rivers in the Plan Area.

Wild and Scenic Rivers	Classification (miles)	Lead Agency	Location by State
Allegheny Wild and Scenic River	Recreational (86.6 miles)	USFS	PA
Bluestone National Scenic River	Scenic (10 miles)	NPS	WV
Clarion Wild and Scenic River	Scenic (17.1 miles)	USFS	PA
	Recreational (34.6 miles)		
Lower Delaware National Wild and Scenic River	Scenic (25.4 miles)	NPS	PA
	Recreational (41.9 miles)		
Middle Delaware Wild and Scenic River	Scenic (35.0 miles)	NPS	PA
	Recreational (5.0 miles)		
Upper Delaware Scenic and Recreational River	Scenic (23.1 miles)	NPS	NY, PA
	Recreational (50.3 miles)		
White Clay Wild and Scenic River*	Scenic (25.6 miles)	NPS	PA
	Recreational (173.4 miles)		

* Some of the data reported for the White Clay Wild and Scenic River fall outside of the analysis area in adjacent portions of New Jersey.

Table 16. National Wildlife Refuges and Management Areas within the Plan Area.

National Wildlife Refuges	Description	Location and Acreage

National Wildlife Refuges	Description	Location and Acreage
Amagansett NWR	Supports native fish and wildlife by managing fragile Atlantic coast shoreline habitats.	NY (36 acres)
Canaan Valley NWR	Manages unique wetlands and cool, moist, high elevation wildlife habitats.	WV (16,550 acres)
Cherry Valley NWR	Supports migratory birds and other wildlife by managing habitat in a mosaic of wetland and upland habitats.	PA (5,471 acres)
Conscience Point NWR	Manages woodlands, saltmarsh, and maritime grassland wildlife habitats.	NY (60 acres)
Elizabeth A. Morton NWR	Supports fish and wildlife by managing diverse habitats including upland forest, fields, ponds, salt marsh, sandy and rocky beaches, and a lagoon.	NY (187 acres)
Erie NWR	Manages habitat for a diverse array of fish and wildlife species including resident and migratory birds and waterfowl.	PA (5,206 acres)
Iroquois NWR	Benefits resident and migratory birds and other wildlife by managing wetlands, bottomland hardwoods, grasslands and shrubland habitats.	NY (10.828 acres)
John Heinz NWR at Tinicum	Manages a variety of fish and wildlife habitat including freshwater tidal marsh, open waters, mudflats, and woodlands along the Delaware Estuary.	PA (1,000 acres)
Lido Beach WMA	Supports native fish and wildlife by managing tidal wetlands with saltmarsh and scrub thicket habitats.	NY (22 acres)
Montezuma NWR	Manages resting, feeding, and nesting habitat for waterfowl, migratory birds, And other wildlife.	NY (9,809 acres)
Ohio River Islands NWR	Protects, conserves, and restores river floodplain habitat for the native wildlife, migratory birds, and freshwater mussels.	WV (3,440 acres)
Oyster Bay NWR	Manages important subtidal, saltmarsh, and freshwater fish and wildlife habitats.	NY (3,209 acres)
Sayville NWR	Supports a diversity of migratory songbirds and raptors on a mixture of oak-pitch pine forests and grasslands.	NY (127 acres)
Seatuck NWR	Manages diverse upland and wetland wildlife habitats.	NY (209 acres)
Shawangunk Grasslands NWR	Supports grassland-dependent migratory birds and wintering raptors.	NY (597 acres)
Target Rock NWR	Manages fish and wildlife habitat including mature oak-hickory forest, rocky beaches, a brackish pond, and several vernal pools.	NY (80 acres)
Wertheim NWR	Manages a variety of fish and wildlife habitats including oak-pine woodlands, grasslands, freshwater, brackish, and saltwater wetlands.	NY (2,500 acres)

Table 17. National and State Scenic Byways in the Plan Area.

Scenic Byways	Designation	Location
Brandywine Valley Scenic Byway	PennDOT	PA
Bucktail Trail	PennDOT	PA
Coal Heritage Trail	NSB	WV
Cheat River Byway	WVDOT	WV
Farm Heritage Road	WVDOT	WV
Great Lakes Seaway Trail	NSB	PA
High Plateau Scenic Byway	PennDOT	PA
Highland Scenic Highway	NSB	WV
Historic National Road - PA	AAR	PA
Historic National Road - WV	AAR	WV
Journey Through Hallowed Ground	NSB	PA
Kinzua Bridge Byway	PennDOT	PA
Lakes to Locks Passage	AAR	NY
Laurel Highlands Scenic Byway	PennDOT	PA
Little Kanawha Parkway	WVDOT	WV
Midland Trail	NSB	WV
Mohawk Towpath Scenic Byway	NSB	NY
Northwestern Turnpike	WVDOT	WV
Ohio Lincoln Highway Historic Byway	WVDOT	WV
Old Route 7 Byway	WVDOT	WV
Palisades Scenic Byway	NSB	NY
Rich Mountain Backway	WVDOT	WV
Staunton-Parkersburg Turnpike	NSB	WV
Upper Delaware Scenic Byway	NYDOT	NY
Washington Heritage Trail	NSB	WV

Table 18. U.S. Census Bureau population trend data for the Plan Area.

U.S. Census Bureau Statistic²⁰¹	NY	PA	WV	United States
Population estimates, July 1, 2019	19,453,561	12,801,989	1,792,147	328,239,523

²⁰¹ U.S. Census Bureau 2019

Population estimates base, April 1, 2010	19,378,144	12,702,868	1,853,018	308,758,105
Population, percent change - April 1, 2010 (estimates base) to July 1, 2019	0.40%	0.80%	-3.30%	6.30%

Appendix E. Public Comments

**Multi-Bat Species
General Conservation Plan
for
Routine Development Projects in
New York, Pennsylvania, and West Virginia**

U.S. Fish and Wildlife Service
October 2024



Executive Summary

The U.S. Fish and Wildlife Service implements the Endangered Species Act (ESA) by working with others to conserve the ecosystems upon which threatened and endangered species depend, and by developing and maintaining programs to improve the status of these species to the point that protection under the ESA is no longer necessary.

This General Conservation Plan (GCP) describes one such program focused on improving the status of the federally listed Indiana bat (*Myotis sodalis*; Endangered) and northern long-eared bat (*Myotis septentrionalis*; Endangered), and the tricolored bat (*Perimyotis subflavus*; Proposed Endangered), (individually and collectively called the Covered Species) in the states of New York, Pennsylvania, and West Virginia (i.e., the GCP Plan Area). This GCP also provides a streamlined permitting process to assist Project Proponents whose activities are reasonably certain to result in take of these species. This document briefly summarizes threats faced by these species and outlines specific conservation measures (CMs) consistent with the objectives outlined in the recovery plan and regional conservation strategy intended to foster recovery of remaining populations of Indiana bats where they occur in the three-State area covered by the plan. The conservation needs for northern long-eared bats and tricolored bats are similar.

This GCP was created to assist individual Applicants with satisfying the statutory and regulatory requirements of a habitat conservation plan for issuance of an incidental take permit under ESA Section 10(a)(1)(B). Project Proponents seeking to comply with the requirements of the ESA who verify that their project meets the requirements described in the plan, and who agree to implement the CMs that apply to their project can adopt this GCP to satisfy the conservation plan component of their application when applying for a Permit.

This process is intended to facilitate compliance with ESA requirements, increase efficiency of Permit issuance for eligible projects, and generate more consistent and comprehensive landscape-scale conservation actions to benefit the Covered Species.

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Glossary

[Note: Terms included in the glossary are italicized and underlined the first time they are used in this document.]

active season – The annual period from spring staging and migration through fall migration and swarming. This includes all key stages in the Covered Species annual life cycle except hibernation. The timing and duration of the active season varies with variables. Field offices can provide the dates and timing that apply to specific projects.

adaptive management – A method for examining alternative strategies to achieve biological goals and objectives, and then, if necessary, adjusting future management actions according to what is learned (65 FR¹ 35252, HCP and ITP Processing Handbook).

Applicant – Refers to any person, as defined in ESA Section 3(13), who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action (50 CFR² 402.02). Under the GCP, a Project Proponent is a potential Applicant, and becomes an Applicant at the time they submit a complete application as determined by the Service.

assumed occupied habitat – Areas within the range of the Covered Species that have not been surveyed and the Applicant has elected to assume are occupied because the Covered Species are reasonably likely to occur in these areas based on their location and the presence of suitable habitat.

assumed occupied hibernacula – See definition for assumed occupied habitat.

bank sponsor – Any public or private entity responsible for establishing, and in most circumstances, operating a conservation bank (Service Director's May 2, 2003, memorandum, Guidance for the Establishment, Use, and Operation of Conservation Banks; 2023 Service Mitigation Policy Section 6.6.3.b; 2023 Service ESA Compensatory Mitigation Policy Section 7.3 and appendix B).

conservation banking – A method used to offset adverse impacts occurring elsewhere to the same listed species. A conservation bank is a parcel of land on which a Federal landowner has conserved, restored, and/or created, and has dedicated to the public for Federal or state protected species (HCP and ITP Processing Handbook, May 2, 2003, memorandum, Guidance for the Establishment, Use, and Operation of Conservation Banks; 2023 Service Mitigation Policy; 2023 Service ESA Compensatory Mitigation Policy).

conservation measures (CMs) – Actions to benefit or promote the recovery of a listed and proposed species that are included by the Federal agency as an integral part of an action. These actions will be taken by the Federal agency or Applicant to compensate for project effects on the species under review. These measures may include:

¹ FR stands for *Federal Register*.

² CFR stands for Code of Federal Regulations.

prior to the initiation of consultation, or actions which the Federal agency committed to complete in a biological assessment or similar document (see section xii, HCP and ITP Processing Handbook).

conservation plan – The plan required by ESA Section 10(a)(2)(B) that an Applicant must submit when applying for a Permit. Conservation plans are also known as “habitat conservation plans” or “HCPs.” Incidental take is authorized through a Section 10(a)(1)(B) Permit (HCP and ITP Processing Handbook, 50 CFR 17.3). *See also* “general conservation plan” (“GCP”) and “individual project plan” (“IPP”).

Author

Conservation measures implemented prior to project proposal is not compatible with New York’s regulatory framework.

Covered Activities – Activities that a Permittee will conduct for which take is authorized in an ESA Section 10(a)(1)(B) Permit (HCP and ITP Processing Handbook). Covered Activities for the purposes of this GCP are discussed in section 3.4.

Covered Species – Species for which incidental take is authorized in a Permit and is adequately covered in an HCP or GCP. Covered Species also include species that are not federally listed as threatened or endangered species that have been adequately addressed in an HCP or GCP as though they were listed and are therefore, included on the Permit (HCP and ITP Processing Handbook). Covered Species for the purposes of this GCP are discussed in section 2 and are the IBAT, NLEB, and TCB.

diameter at breast height (DBH) – A standard method of expressing the diameter of the trunk or bole of a standing tree. In the United States, DBH is typically measured at 4.5 feet above ground.

documented habitat – Suitable forested habitat that has been surveyed using the most recent version of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines. *See* defined in the presence of one or more of the Covered Species. *See* defined and occupied habitat.

Author

Author

Unnecessary to include multiple terms for the same definition.

endangered species – Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of the Act presents an overwhelming and overriding risk to man (ESA Section 3).

Unnecessary to include multiple terms for the same definition. *See* defined in the presence of one or more of the Covered Species. *See* defined and occupied habitat? If the habitat was surveyed using an older version (as in last year, three years ago), by this definition, the habitat would not be documented even if the previous survey was positive. Ditto for known/occupied

Environmental Assessment (EA) – A concise public document prepared by a Federal agency in compliance with National Environmental Policy Act (NEPA), that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI). (40 CFR 1508.9)

Endangered Species Act (ESA) – A Federal statute that provides for listing and conservation of species (16 U.S.C. 1531-1543; 87 Stat 884).

fall swarming area – Fall swarming areas are found in forested areas where the Covered Species roost, forage, and travel. *See* defined a hibernaculum during the fall

Author

Remove comma

³ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

mid-August to mid-November for the IBAT and NLEB, and mid-August to mid-October for the TCB. Bats also use these areas for mating and to build up fat reserves. Areas include forested patches, as well as linear features such as fences and other wooded corridors. These wooded areas may be dense or loose with varying amounts of canopy closure. See table 2.0 for general timing of the annual cycle in the GCP Plan Area.

fall swarming habitat – See definition for fall swarming area.

fully offset – Completely mitigating any adverse effects expected to remain after avoidance and minimization measures are implemented. In other words, CMs are commensurate with the level and type of impacts of the taking and will compensate for the impacts of the taking. Fully offset means the biological value that would be lost (from the Covered Activities) will be replaced (through implementation of conservation actions) with equivalent biological value (HCP and ITP Processing Handbook).

general conservation plan – A completed landscape-level conservation plan and NEPA compliance document produced either by the Service, or by another entity in cooperation with the Service; however, no Permit is issued at the time the conservation plan is approved. This approach is recommended in situations where it is anticipated that numerous individual HCPs would be needed to cover many similar, unrelated proposed actions, but where no Applicant is appropriate to serve as a master Permittee. In this type of HCP, the Service defines the geographic scope of the GCP, the conservation plan, and associated mitigation requirements. In this process, the Service completes a single Findings document, a single Section 7 Biological Opinion, and a single NEPA document for all actions covered under the GCP. The GCP is made available for adoption and use by numerous Applicants who become eligible to receive individual Permits when they can demonstrate compliance with the conservation plan and mitigation requirements of the GCP (Service Policy Memo October 5, 2007; HCP and ITP Processing Handbook).

harm – “...an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering” (50 CFR 17.3, 1981 Final Rule, 46 FR 54750).

hibernacula – Natural or artificial (man-made) features where the Covered Species overwinter. Hibernacula for IBATs predominantly includes caves, mines, and other cave-like structures (e.g., active or abandoned mines, railroad tunnels, bridges). NLEBs hibernate in habitat similar to Indiana bats, but may also use non-traditional hibernacula (e.g., buildings, talus slopes, rock crevices/outcroppings). TCBs hibernate in similar habitats as IBATs and NLEBs and have also been observed in rock crevices/outcroppings. See table 2.0 for general timing of the annual cycle in the GCP Plan Area.

historic property – Under the National Historic Preservation Act (NHPA), a historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register, including artifacts, records, and material remains related to a building, structure, or object (NHPA Section 106, 36 CFR 800.16(1)(i)).

Author

May also include tall structures on the landscape used as meet-up spots for mating (i.e., wind turbines)

Author

Should include bridges/culverts. Unlikely to be used in most of NY, but has been observed in NJ, and may occur in places like LI

inactive season – The annual period when the Covered Species hibernate. The timing and duration of the inactive season for each species varies with weather and local conditions. Local field offices can provide the dates and timing that apply to specific project areas.

incidental take – Take of federally listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or Applicant (50 CFR 402.02, HCP and ITP Processing Handbook).

incidental take permit (Permit) – A Permit issued under ESA Section 10(a)(1)(B) that authorizes, limits, or describes take of ESA listed species to a non-Federal party undertaking an otherwise lawful activity that is reasonably anticipated to result in take of an endangered or threatened species. Application for a Permit is subject to certain requirements, including preparation by the Applicant of a conservation plan, generally “Conservation Plan” or “HCP.”

Individual Project Plan (IPP) – A project-specific conservation plan that is submitted to the local field office as part of the GCP application process.

known habitat – Suitable forested habitat that has been surveyed (using the most recent version of the Service’s Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines⁴) and resulted in the presence of one or more of the Covered Species. See definition for documented habitat and occupied habitat.

maternity colony home range (known or documented summer habitat):

IBAT maternity colony home range – Areas that include suitable summer habitat in which bats roost and forage during the summer, typically occurring within 5 miles of a documented mist-net capture or acoustic detection, or within 2.5 miles of a known suitable roost tree.

NLEB maternity colony home range – Areas that include suitable summer habitat in which bats roost and forage during the summer, typically occurring within 3 miles of a documented mist-net capture or acoustic detection, or within 1.5 miles of a known suitable roost tree.

TCB maternity colony home range – Areas that include suitable summer habitat in which bats roost and forage during the summer, typically occurring within 3 miles of a documented mist-net capture or acoustic detection, or within 1.5 miles of a known suitable roost tree.

National Environmental Policy Act (NEPA) – The NEPA of 1969, as amended (42 USC § 4321, *et seq.*), is a Federal statute that requires Federal agencies to evaluate and disclose the effects of their discretionary proposed actions on the human environment.

No Surprises Rule – The No Surprises Rule (63 FR 8859), provides regulatory assurances to the Permittee of a Permit issued under ESA Section 10(a)(1)(B) that no additional land use restrictions or financial compensation beyond that described in the HCP and under the Permit conditions will be required of the Permittee with respect to species covered by the Permit, even if

⁴ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

unforeseen circumstances arise after the Permit is issued indicating that additional mitigation is needed for a given species covered by a Permit (50 CFR 17).

occupied habitat – Suitable forested habitat that has been surveyed (using the most recent version of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines⁵) and resulted in the presence of one or more of the Covered Species. See definition for documented habitat and known habitat.

Permit Area – The geographic area where a Permit applies (HCP and ITP Processing Handbook). The Permit Area for ITPs issued in association with this GCP will be defined for each individual project and must be completely within the GCP Plan Area consisting of the states of NY, PA, and WV, excluding Federal lands.

Permittee – Person(s) as defined in ESA Section 3(13) that holds an active Permit. An Applicant becomes a Permittee upon issuance of a Permit.

phenology – The seasonal timing of events in the life of an organism.

Plan Area – The specific geographic area where Covered Activities described in the GCP, including mitigation, may occur (HCP and ITP Processing Handbook). The Plan Area for this GCP includes the states of NY, PA, and WV, excluding Federal lands.

Project Proponent – A potential Applicant. For the purposes of this plan, a Project Proponent is any person⁶ planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.

proposed species – Any species the Service has determined is in danger of extinction throughout all or a significant portion of its range (proposed endangered) or is likely to become endangered within the foreseeable future throughout all or a significant portion of its range (proposed threatened), and the Service has proposed a draft rule to list as either endangered or threatened under the ESA. Proposed species are not protected by take prohibitions of ESA Section 9 until the rule to list a species is finalized. Under ESA Section 7(a)(4), Federal agencies must confer with the Service if their action will jeopardize the continued existence of a proposed species.

roost – A natural (e.g., tree, leaf cluster, etc.) or artificial/manmade (e.g., bat box, culvert, etc.) structure that is used by bats during the active season for sheltering and/or pup rearing.

spring staging area – Spring staging areas are found in forested areas where the Covered Species roost, forage, and travel, around a hibernaculum, during the spring staging period from mid-March to mid-May for IBATs and NLEBs, and late April to early-May for TCBs. Bats may spend a few hours or days around hibernacula preparing for migration or migrate immediately to summer habitat. These areas include forested patches as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or

⁵ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

⁶ See definition in ESA Section 3(13).

loose aggregates of trees with variable amounts of canopy closure. See table 2.0 for general timing of the Covered Species annual cycle in the GCP Plan Area.

spring staging habitat – See definition for spring staging area.

suitable documented roost – A natural or artificial structure in which occupancy has been confirmed and which remains suitable for sheltering and/or pup rearing during the active season.

suitable summer habitat:

IBAT – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 5 inches DBH that have exfoliating bark, cracks, crevices, and/or hollow features such as fencerows, riparian forests, and other wooded corridors). These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are located within 1,000 feet of other forested habitat. IBATs have also been observed roosting in human-made structures, such as bridges and bat houses (artificial roost structures); therefore, these structures should also be considered potential summer habitat.

Author

This is a departure from the 4 inches DBH used for this species to date, with no reference to source of information for this change.

have also been observed roosting in human-made structures (artificial roost structures); therefore, these structures should also be considered potential summer habitat.

NLEB – Suitable summer habitat consists of a wide variety of forested habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than 3 inches DBH that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of forested habitat. The NLEB has also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. See the Rangewide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for additional details on suitable habitat.⁷

TCB – Suitable summer habitat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing trees with potential roost substrate (i.e., live trees and/or snags greater than 3 inches DBH that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. TCBs will roost in a variety of tree species, especially oaks (*Quercus* spp.), and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (i.e., greater than 1 centimeter).⁸ Occasional summer roosts also include clusters of dead pines (*Pinus echinata*), live branches of Norway spruce (*Picea abies*),

Author

Should include open areas of water (streams, ponds, etc.)

roost in a variety of tree species, especially oaks (*Quercus* spp.), and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (i.e., greater than 1 centimeter).⁸

Author

Clarify if this is DBH or some other unit of measure (i.e., diameter at root flare).

⁷ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

⁸ Leput 2004

(*Juniperus virginiana*), abandoned gray squirrel (*Sciurus carolinensis*) nests, and under exfoliating birch (*Betula* spp.) bark.⁹ TCBs commonly roost in the mid to upper canopy of trees although males will occasionally roost in dead leaves at lower heights (e.g., less than 16 feet [5 meters] from the ground).¹⁰ TCBs seem to prefer foraging along forested edges of larger forest clearings, along edges of riparian areas, and over water and avoid foraging in dense, unbroken forests, small forest openings, and narrow road cuts through forests.¹¹ TCBs also roost in human-made structures, such as bridges and culverts, and occasionally in barns or the underside of open-sided shelters (e.g., porches, pavilions); therefore, these structures should also be considered potential summer habitat. Unsuitable roosting habitat includes trees found in highly developed urban areas (e.g., street trees, downtown areas).¹²

threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (ESA Section 3).

take – “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (ESA Section 3).

travel/commuting habitat – Treed areas (i.e., riparian corridors, hedgerows) between documented (via acoustic detections, captures, or radio telemetry) summer foraging and roosting habitat.

⁹ Veilleux et al. 2003; Perry and Thill 2007; WDNR 2016; WDNR 2017a; WDNR 2017b; WDNR 2018; Thames 2020; Hammesfahr et al. 2022

¹⁰ Perry and Thill 2007

¹¹ Davis and Mumford 1962; Kurta 1995; Lacki and Hutchinson 1999; Ford et al. 2005; Menzel et al. 2005; Thames 2020

¹² Helms 2010

1.0 Introduction

1.1 Overview and Background

The U.S. Fish and Wildlife Service (Service) implements the *Endangered Species Act* (ESA) by working with others to conserve the ecosystems upon which *threatened* and *endangered species* depend, and by developing and maintaining conservation programs for these species to improve their status to the point that protection under the ESA is no longer necessary. This *General Conservation Plan* (GCP) describes one such program focused on improving the status of the following federally listed species (collectively called the *Covered Species*): the Indiana bat (*Myotis sodalis*; Endangered; IBAT) and the northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered; TCB) in the states of New York (NY), Pennsylvania (PA), and West Virginia (WV). This GCP briefly summarizes the threats faced by these species and describes strategies created to address those threats. This GCP also provides a streamlined ESA permitting process to assist nonfederal Project Proponents with their ESA compliance. This GCP outlines specific *CMs* consistent with the objectives outlined in a regional conservation strategy intended to foster recovery of remaining populations of IBATs where they occur; however, the conservation needs of all three bat species are similar. This GCP may also streamline ESA implementation for projects that involve Federal agency actions that may affect the Covered Species (see appendix F).

This GCP facilitates participation by proactively identifying conservation needs for the Covered Species and applying consistent review and approval standards for eligible projects. Landowners and nonfederal *Project Proponents* that choose to participate gain regulatory assurances through ESA Section 10(a)(1)(B) and the timeline advantages of a streamlined review and Permit issuance processes. This GCP will not increase or encourage development, rather it provides a permitting tool for Project Proponents with recurring project types. It also provides a conservation and compliance strategy for several recurring project types within a given geographic area for a discrete period, and the Service has identified integrated mitigation opportunities at scales not possible when considering each project on a case-by-case basis. It is not possible for any plan to analyze the effects of every possible project type or activity; therefore, this GCP is focused on accommodating a subset of recurring project types that have well-understood project-level effects. Similar GCP approaches may be developed to accommodate other project types if or when the Service has sufficient data to complete analyses of the effects of those projects and appropriate CMs. This initial iteration of the GCP for routine development projects is intended to serve as a proof-of-concept that, if successful at increasing the efficiency of Permit processing while delivering recovery-focused conservation benefits, could be expanded to other areas. Similarly, should other species be listed that could benefit from this GCP, the GCP could be amended to cover those species. This GCP satisfies all requirements of a *conservation plan* (ESA Section 10(a)(2)(A)).

1.2 Purpose and Need

The Service developed this GCP to satisfy requirements to carry out programs for the conservation of threatened or endangered species,¹³ and to fulfill obligations that direct the

¹³ ESA Section 7(a)(1)

Service to issue Permits to non-Federal entities for take of endangered and threatened species that may occur incidental to otherwise lawful activities¹⁴ when certain criteria are satisfied.¹⁵

ESA Section 9(a)(1)(B) prohibits take of any fish or wildlife species listed as endangered. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Incidental take is that which is incidental to, and not the purpose of, carrying out an otherwise lawful activity.¹⁶ Harm is further defined¹⁷ to mean “an act which actually kills or injures wildlife” and includes “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, and sheltering.”

The Service developed this GCP to provide an optional, consistent, and flexible process to assist Project Proponents, whose otherwise lawful activities are reasonably certain to result in the take of the Covered Species, in complying with the ESA. Whether or not a project is covered under ESA Section 10(a)(1)(B) is a decision of the Project Proponent. The GCP does not compel a Project Proponent to pursue a Permit or to do so using the compliance strategy set forth in this GCP. Project Proponents can take the GCP into account and proceed in a number of ways, based upon their own assessment. If the Project Proponent determines that a project is reasonably certain to result in the take of a federally listed or proposed species, as included in this GCP, it is the Project Proponent's choice to proceed (at their own risk) as planned without a Permit, modify the project to avoid take and proceed without a Permit, or prepare and submit an application¹⁸ for a Permit.

Author

High standard to meet when the species is not present and the habitat lost is not limiting.

Author

The standard set here is that take is reasonably certain. The conservation measures outlined in this document do not adequately address this definition take as they make take uncertain. While this is protective for the covered species, this is conflicting language that is contradictory for the need of the permit in the first place.

1.2.1 Background

To obtain a Permit, an Applicant must provide a conservation plan that meets specific requirements identified in ESA Section 10(a)(2)(A) and its implementing regulations for endangered¹⁹ and threatened species.²⁰ Among other requirements, the plan must specify the impacts that are likely to result from the taking, the measures the Applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement such measures. Conservation plans meeting these requirements have come to be known as "habitat conservation plans" or "HCPs."

1.2.2 Habitat Conservation Plans

In the typical HCP process, a Project Proponent develops, often with the assistance of a consultant, a document describing their project and analyzing the type and amount of take expected to occur for each federally listed species. The Project Proponent proposes measures intended to avoid or minimize and mitigate the resulting impacts of the taking (preferably in coordination with the Service) and describes how such measures will be implemented. The

¹⁴ ESA Section 10(a)(1)(B)

¹⁵ ESA Section 10(a)(2)(B)

¹⁶ ESA Section 3(19)

¹⁷ 50 CFR 402.02

¹⁸ https://fwsepermits.servicenowservices.com/nav_to.do?uri=%2Fhome_splash.do%3Fsysparm_direct%3Dtrue

¹⁹ 50 CFR 17.22

²⁰ 50 CFR 17.32

Applicant then submits their draft HCP to the Service. After the Service's review, comments are returned to the Applicant for incorporation into a subsequent draft HCP. This process is repeated until both parties are satisfied that the HCP meets the Applicant's project needs and all applicable statutory and regulatory issuance criteria.

Once the HCP development begins, parallel processes required to satisfy other applicable regulatory requirements such as the NEPA²¹ and the NHPA²² are initiated. Once all such requirements are satisfied, the Service notifies the public that an application for a Permit has been received and provides the supporting documentation for review and comment. After comments are collected and addressed, the Service can complete application processing and submit a final package with a recommendation to the Regional decision maker whether to issue the requested Permit. Each Applicant, whose package is approved, receives a Permit tailored to the needs of their specific project, with terms and conditions reflecting and adopting the conservation commitments outlined in the HCP that they developed. The HCP process was designed to address each individual Applicant's needs on a project-specific basis.

Congress intended that the HCP program should authorize incidental take, but also integrate non-Federal development and land use activities with public conservation goals, resolve conflicts between protection of federally listed species and economic activities on non-Federal lands, and create a climate of partnership and cooperation. Congress intended the HCP program to address species in an ecosystem context, generate long-term commitments to conserve species, and deliver regulatory assurances to Project Proponents. The HCP program was envisioned as an opportunity to establish creative partnerships among the public and private sectors, and State, municipal, and Federal agencies to conserve endangered and threatened species and their habitats.²³

1.2.3 General Conservation Plans

To achieve Congress' stated intents, agency policy²⁴ allows the Service to prepare GCPs, such as this GCP, to promote strategic conservation efforts while streamlining permitting for non-Federal projects. A GCP consists of a landscape-level HCP produced by the Service. A GCP defines a geographic scope, specifies activities that can be covered, and outlines offsetting mitigation requirements based on a landscape-scale conservation strategy for a Covered Species. A conservation strategy summarizes a species' needs and threats in a defined geographic area and identifies specific measures intended to address or fully offset the impacts of those threats. A conservation strategy describes where and how preferred conservation outcomes can be obtained within a specific area, and guides projects to contribute to the Service's goals to recover species to the point that they no longer require the measures prescribed in the ESA.

When developing a GCP, the Service considers the potential impact of all Covered Activities to the Covered Species as well as the beneficial effects of offsetting minimization and mitigation measures over a prescribed period. After public review and comment, the Service makes approved GCPs available for adoption and use by Applicants who receive individual Permits

²¹ 42 U.S.C. § 4321, *et seq.*

²² 54 U.S.C. § 300101, *et seq.*

²³ H.R. Rep. No. 97-835 (1982)

²⁴ October 5, 2007, *Final General Conservation Plan Policy*

when they demonstrate their eligibility and commit to implement the measures outlined in the plan.

Under the GCP process, Project Proponents are relieved of the requirement to develop their own project-by-project HCPs. Landowners and Project Proponents that meet eligibility criteria may choose whether they wish to adopt the GCP when applying for a Permit, or conversely, whether they prefer to develop their own plan using the project-specific HCP process. Eligible Project Proponents that choose to participate through the GCP can be granted a Permit under the streamlined review and approval process. Interested parties are encouraged to coordinate with the Service to determine if their proposed activities qualify to participate through the GCP and apply for Permits without having to prepare their own HCPs.

1.2.4 GCP Approach to Satisfy Other Required Statutes and Policies

Applicants adopting this GCP must agree to comply with all applicable Federal, State, and local statutes and regulations to ensure that their actions are otherwise lawful; therefore, eligible to be covered by a Permit. Nothing in this GCP is intended to supersede existing Federal, State, or local laws or regulations.

In developing this GCP, the Service has addressed federally required environmental compliance processes or prescribed how regulations that apply to certain projects can be satisfied to meet permit issuance criteria. The Service will confirm what other Federal laws (e.g., Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act) apply to an Applicant's proposed project before issuing a requested Permit.

The Service must comply with ESA Section 7(a)(2) for the proposed action of issuing Permits through the GCP process. The Service must ensure that the continued existence of any federally listed species (and proposed species as included in this GCP) is not likely to be jeopardized and that no designated critical habitat will be destroyed or adversely modified by the proposed action.²⁵

Approval of a GCP is a Federal action subject to compliance with NEPA.²⁶ The Service's NEPA analysis for this GCP evaluates the range of reasonably foreseeable effects of the proposed and alternative actions on the human environment. The Service satisfies its NEPA obligations by notifying the public and inviting review and comment of the draft NEPA documents prior to making any decisions regarding approval of the GCP. For this GCP, the Service has prepared an environmental assessment (EA). The EA provides a detailed evaluation of the effects of the proposed action and alternatives on the human environment. The draft EA is available for public review and comment along with this draft GCP.

²⁵ Permits issued under this GCP are only available to relevant projects that will not result in unauthorized take of any federally listed species other than the Covered Species. Accordingly, for its action pursuant to the GCP, the Service considers the critical habitat and jeopardy of the IBAT, NLEB, and TCB.

²⁶ 40 CFR§1500, 43 CFR§46, Chapter 13 in HCP and ITP Processing Handbook

Compliance with the NHPA,²⁷ is required by law for all Federal undertakings. An undertaking is defined as “a project, activity, or program... requiring a Federal permit, license or approval.”²⁸ The Service determined that the issuance of a Permit constitutes an undertaking subject to review and compliance with NHPA Section 106.²⁹ This document establishes processes to ensure that the Service will satisfy its obligations under the NHPA for each Permit issued through the streamlined GCP review and approval process.

The Department of the Interior requires that the Service consult with Tribes when ESA actions may affect Indian lands, Tribal trust resources, or the exercise of American Indian Tribal rights.³⁰ These policies direct the Service to make efforts to establish effective government-to-government working relationships with Tribes to achieve the common goal of promoting and protecting the health of ecosystems on Indian lands. Whenever the activities under an HCP may impact Tribal trust resources, the exercise of Tribal rights, or Indian lands, the Service is required to consult with and seek the participation of the affected Indian Tribes to the maximum extent practicable. This includes providing affected Tribes with adequate opportunities to participate in data collection, consensus seeking, and other relevant processes. The Service notified federally recognized Tribes of this GCP to ensure appropriate consideration of effects to Tribal lands, Tribal trust resources, and the exercise of American Indian Tribal rights.

The Service will prepare a single set of Findings and Recommendations documenting that the GCP satisfies all applicable statutory and regulatory requirements, includes responses to substantive public comments, and includes a recommendation on issuance of Permits. The Service will provide notice and make this GCP and the associated environmental compliance documents available to ensure that the public will be able to review and comment on the entire scope of the plan.

Under this streamlined permitting approach, the Service will confirm for each Applicant’s request for a Permit that activities to be covered are consistent with the requirements of the GCP, the NEPA and intra-Service section 7 analyses, the NHPA, Tribal coordination processes, and any other applicable Federal regulations (appendix C). The Service will prepare a memorandum documenting those determinations for each Permit issued. Applicants remain responsible for complying with any State or local statutes or regulations.

The Service is required to provide notice in the *Federal Register* of all Permit applications that are received.³¹ To reduce workload, and to streamline the public notice process, the Service will publish the initial notice of availability to the *Federal Register*. General information about individual permits issued thereafter, will be posted to <https://www.fws.gov/project/routine-development-gcp>. On an annual basis, the Service is required to make public notifications to the *Federal Register* by using a batched public notice process.

²⁷ 16 U.S.C. 470(f)

²⁸ 36 CFR 800.16(y)

²⁹ Appendix A, HCP and ITP Issuance Handbook

³⁰ e.g., Secretarial Order 3206

³¹ ESA Section 10(c)

1.3 GCP Plan and Permit Areas

The *Plan Area* includes all lands necessary for a conservation plan to be fully implemented (*e.g.*, the specific geographic area where the described activities, including mitigation, will occur).³² For this GCP, the Plan Area consists of the states of NY, PA, and WV where habitat for the Covered Species occurs, except for Federal lands (figure 1.1). The Plan Area encompasses diverse habitats, resources, and various degrees of existing development.

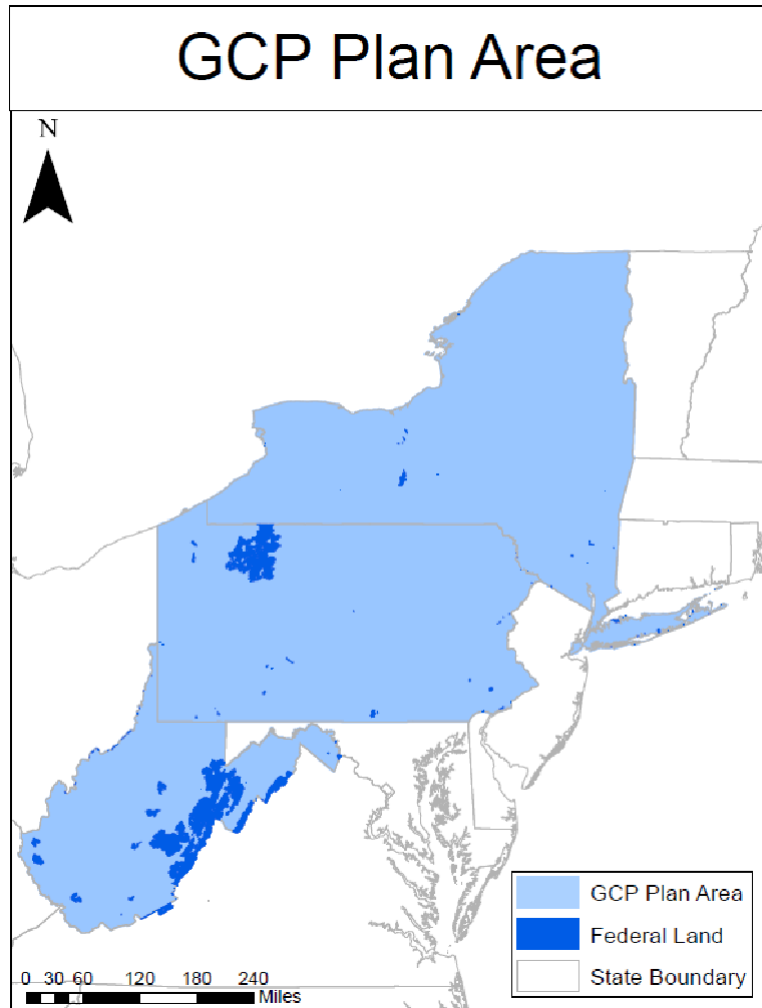


Figure 1.1. A map of the GCP Plan Area, excluding Federal lands.

The *Permit Area* is a subset of the Plan Area under the control of an Applicant that describes where a proposed project and its associated Covered Activities will occur. For this GCP, the Permit Area will be defined for each Permit.

³² Section 6.1, HCP and ITP Permitting Handbook

This GCP analyzed and provides coverage for projects that are wholly contained within the Plan Area. Projects outside of the Plan Area are not eligible to participate through this streamlined process. For projects that extend beyond the GCP Plan Area, Project Proponents are encouraged to contact their local field office for technical assistance to address the impacts their projects may have on federally listed species or their habitats.

1.4 Duration of the GCP and of Individually Issued Permits

Upon approval, this GCP will be available for adoption and use by eligible Applicants for a period of 10 years, unless amended or renewed.

Individual permits issued through the streamlined GCP process may be authorized for a term of up to 5 years. Therefore, Permittees will have up to 5 years to complete their projects, even if the Permit is issued in the final year (i.e., year 10) of the GCP. Permittees that require additional time to complete their projects may seek renewal of their Permits in accordance with GCP section 6.4 and applicable regulations.

1.5 Alternatives to the Taking

ESA Section 10(a)(2)(A)(iii) requires that the conservation plan describe what alternative actions to the taking were considered, and the reasons why such alternatives are not being utilized. The proposed action alternative is the use and implementation of the GCP. Often, the proposed alternative is selected because complete avoidance of federally listed species and their associated habitats is not practical or feasible for covered activities in the Plan Area.

The only alternative to the proposed action alternative the Service considered for Project Proponents is the no-action alternative. Under this alternative, if take is occurring from project activities, the Project Proponent would develop an individual HCP for their projects. The no-action alternative requires Project Proponents to develop independent HCPs, which would require Project Proponents and the Service to expend added resources completing the permitting process with no anticipated added benefits for the Covered Species. Regardless of whether Applicants utilize this GCP or develop independent HCPs to obtain Permits, they must meet the legal standards as identified in the issuance criteria found at 50 CFR 13 and 17, including to minimize and mitigate the effects of the resulting take to the “maximum extent practicable.” One conservation benefit of implementing this GCP is the ability of the Service to better coordinate the conservation efforts (i.e., mitigation) of the various permitted projects through consistent and prioritized CMs to be implemented across the landscape. In this way, Applicants can benefit from the ability to take advantage of the pre-project work the Service has completed, while the species can benefit through the improved coordination of conservation efforts across the landscape. For these reasons, the individual HCP alternative is not as advantageous for either Applicants, the Service, or the Covered Species.

2.0 Covered Species

This section provides an overview of the status and distribution, life history, and threats to the GCP Covered Species, which include the IBAT, NLEB, and TCB.

2.1 Status and Distribution

2.1.1 Indiana Bat

The IBAT is a temperate, insectivorous, migratory bat that hibernates in mines and caves in the winter and spends summers in wooded areas. The species was listed as being in danger of extinction under the Endangered Species Preservation Act of 1966,³³ and received protection as an endangered species when the ESA was signed into law in 1973. Critical habitat was designated in 1976 for the species at 13 *hibernacula* locations (consisting of 11 caves and 2 mines) in six states, including Hellhole Cave in WV (41 FR 41914). The Service developed a recovery plan for the species in 1983.³⁴ An agency draft of a revised plan was published in 1999 but was never finalized. A revision incorporating updated scientific information and recovery actions addressing specific threats was published in 2007.³⁵ After release of the draft revised recovery plan, previously undescribed impacts from white-nose syndrome (WNS) (see section 2.3.7) were discovered.

The IBAT recovery plan delineated four recovery units based on population discreteness, differences in population trends, and differences in land use and macrohabitats (figure 2.1). The GCP Plan Area includes portions of the Appalachian Mountains and Northeast recovery units.

To achieve the goal of maintaining adaptive capacity for the species (representation), the Service's recovery actions are focused on maintaining multiple (redundant) healthy (resilient) populations in each recovery unit³⁶.

³³ 32 FR 4001, March 11, 1967

³⁴ Service 1983

³⁵ Service 2007

³⁶ Resiliency, redundancy, and representation are defined as follows:

- **Resiliency** means having sufficiently large populations for the species to withstand stochastic events (arising from random factors). We can measure resiliency based on metrics of population health (e.g., birth versus death rates and population size), if that information exists. Resilient populations are better able to withstand disturbances such as random fluctuations in birth rates (demographic stochasticity), variations in rainfall (environmental stochasticity), or the effects of human activities.
- **Redundancy** means having a sufficient number of populations for the species to withstand catastrophic events (such as a rare destructive natural event or episode involving many populations). Redundancy is about spreading the risk and can be measured through the duplication and distribution of populations across the range of the species. Generally, the greater the number of populations a species has distributed over a larger landscape, the better it can withstand catastrophic events.
- **Representation** means having the breadth of genetic makeup of the species to adapt to changing environmental conditions. Representation can be measured through the genetic diversity within and among populations and the ecological diversity (also called environmental variation or diversity) of populations across the species' range. The more representation, or diversity, a species has, the more it is capable of adapting to changes (natural or human caused) in its environment. In the absence of species-specific genetic and ecological diversity information, we evaluate representation based on the extent and variability of habitat characteristics within the geographical range (Shaffer et al., 2002; Wolf et al. 2015).

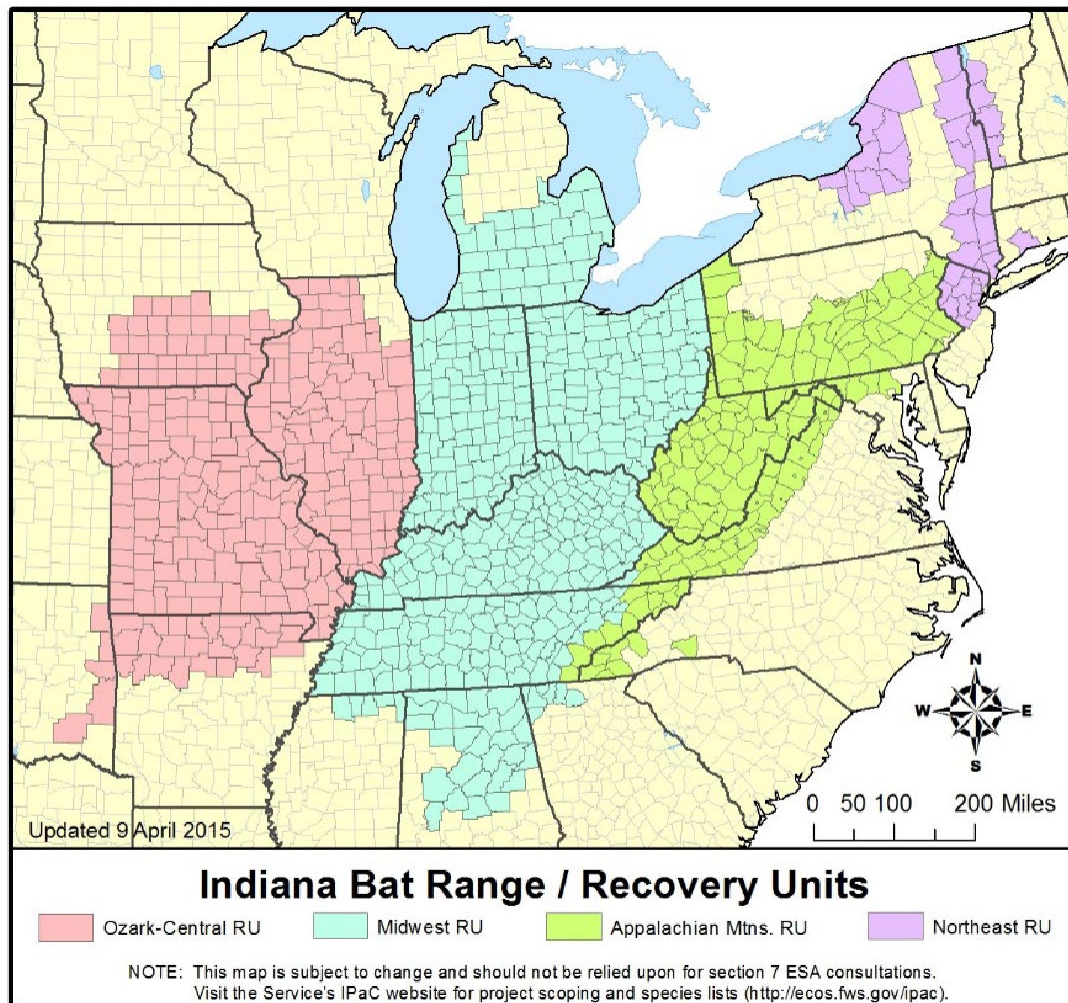


Figure 2.1. Indiana bat recovery units.

Overall, IBAT populations are increasing with some recovery units showing evidence of stable and declining population numbers (figure 2.2).³⁷ Declines are associated with the onset of WNS, which spread south and west from NY across the range of the species. Though declines have been observed in all recovery units, impacts have been most severe in areas with the longest exposure to WNS. Since the onset of WNS, population declines of 75-99 percent have been reported in NY, PA, and WV. Intrinsic biological constraints also affect IBAT reproductive capacity. Because healthy adult females can produce only one pup per year, high adult female survival rates are needed to maintain or increase populations.³⁸

³⁷ Service 2024

³⁸ Thogmartin et al. 2013

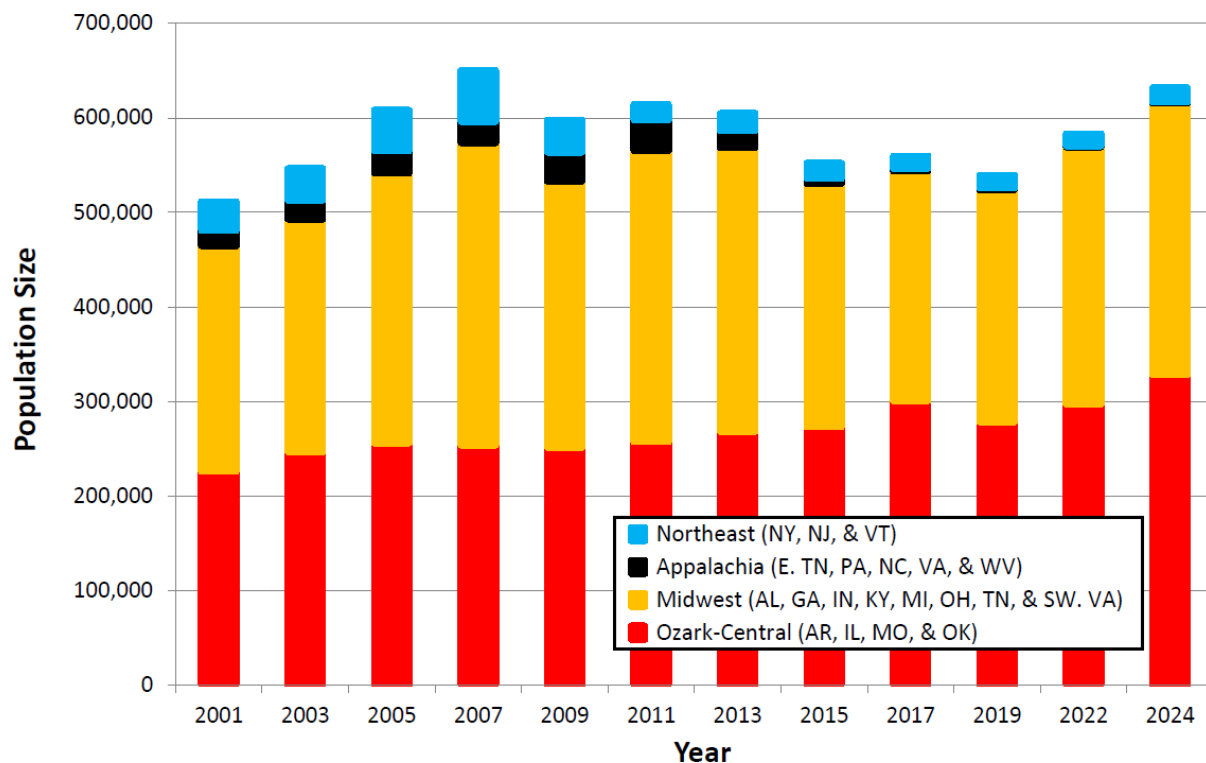


Figure 2.2 Indiana bat winter population estimates by recovery unit from 2001 to 2024.³⁹

Redundancy within IBAT populations has significantly declined. The species is no longer found in several previously occupied hibernacula, and a small number of locations now host most of the surviving individuals. The causes of variation in mortality by site are not understood. According to the 2019 IBAT 5-Year Review, 93 percent of the IBATs identified in the Northeast recovery unit were found at a single location, and 72 percent of the individuals found in the Appalachian Mountains recovery unit were found at three hibernacula sites.⁴⁰ This concentration of individuals increases the population-level threat posed by potential adverse impacts at any of these remaining locations.

Regarding maternity colony populations on the summer landscape, changes are not clear; however, variation is expected to reflect winter observations as noted above.

2.1.2 Northern Long-Eared Bat

Similar to the IBAT, the NLEB is a temperate, insectivorous, migratory bat that typically overwinters in caves or mines and spends the remainder of the year in forested areas.⁴¹

On November 29, 2022, the Service published a final rule to reclassify the NLEB as endangered under the ESA. The current range of the NLEB includes 37 States, and 8 Canadian Provinces

³⁹ Service 2024

⁴⁰ Service 2019

⁴¹ Service 2022a

(figure 2.3). Prior to the arrival of WNS, the species was widely distributed⁴² and consistently documented during summer and winter surveys in the eastern portion of the range.⁴³

Historically, the NLEB was widely distributed in the eastern part of its range.⁴⁴ Prior to the documentation of WNS, NLEBs were consistently caught during summer mist-net surveys and detected during acoustic surveys in the eastern U.S. (80 FR 17974). The NLEB continues to be distributed across much of its historical range, but there are many gaps within the range where bats are no longer detected or captured, and in other areas, their occurrence is sparse. Similar to summer distribution, NLEBs were known to occur in many hibernacula throughout the East. Since WNS was documented, multiple hibernacula have no reported NLEBs. Frick *et al.* (2015) documented the local extinction of NLEBs from 69 percent of sites included in their analyses (468 sites where WNS had been present for at least 4 years in VT, NY, PA, MD, WV, and VA).

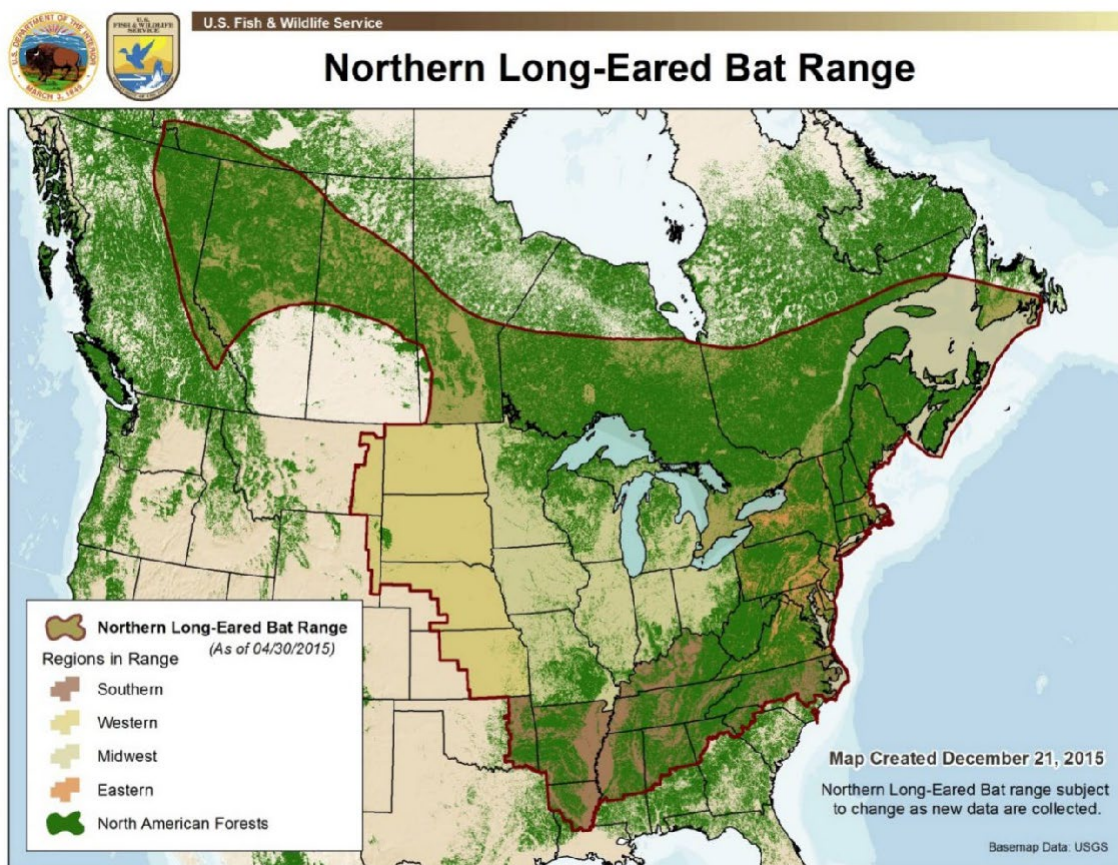


Figure 2.3 The range of the NLEB throughout the U.S. and Canada.

⁴² Caceres and Barclay 2000

⁴³ 80 FR 17974

⁴⁴ Service 2022a

2.1.3 Tricolored Bat

Similar to both the IBAT and NLEB, the TCB is a temperate, insectivorous, migratory bat that typically overwinters in caves or mines and spends the remainder of the year in forested areas, and occasionally roosts in man-made structures.⁴⁵

On September 14, 2022, the Service published a proposed rule to list the TCB as endangered under the ESA. The species faces potential extinction due to the rangewide impacts of WNS.

The current range of the TCB includes 39 states, 4 Canadian Provinces, and Guatemala, Honduras, Belize, Nicaragua, and Mexico (figure 2.4). Prior to 2006 (pre-WNS), the TCB was highly abundant and widespread, with over 140,000 bats observed hibernating in 1,951 known hibernacula spread across greater than one billion acres in 34 states and 1 Canadian province.⁴⁶ TCB numbers varied temporally and spatially, but abundance and occurrence on the landscape were generally stable.⁴⁷ Although the majority of winter colony sizes were small (less than 100 individuals), the vast majority of individuals occupied a small subset of hibernacula. For example, in 2000, 32 percent (n=508) of the known winter colonies contained 90 percent of total known winter abundance.⁴⁸

With WNS now widespread across much of the TCB range, the species continues to be distributed across much of its historical range, but there are many gaps within the range where bats are no longer detected or captured, and in other areas, their occurrence is sparse. The effect of WNS on the TCB has been extreme, such that most summer and winter colonies have experienced severe declines following the arrival of WNS. Just 4 years after the discovery of WNS, for example, a study estimated that the TCB experienced a 75 percent decline in winter counts across 42 sites in Vermont, NY and PA.⁴⁹ Similarly, another study estimated the arrival of WNS led to a 10-fold decrease in TCB colony size.⁵⁰ Most recently, data used from 27 states and 2 provinces concluded WNS caused estimated population declines of 90–100 percent across 59 percent of the species range.⁵¹

⁴⁵ Service 2021a

⁴⁶ Service 2021a

⁴⁷ Cheng *et al.* 2021; Wiens *et al.* 2022

⁴⁸ Service 2021a

⁴⁹ Turner *et al.* 2011

⁵⁰ Frick *et al.* 2015

⁵¹ Cheng *et al.* 2021

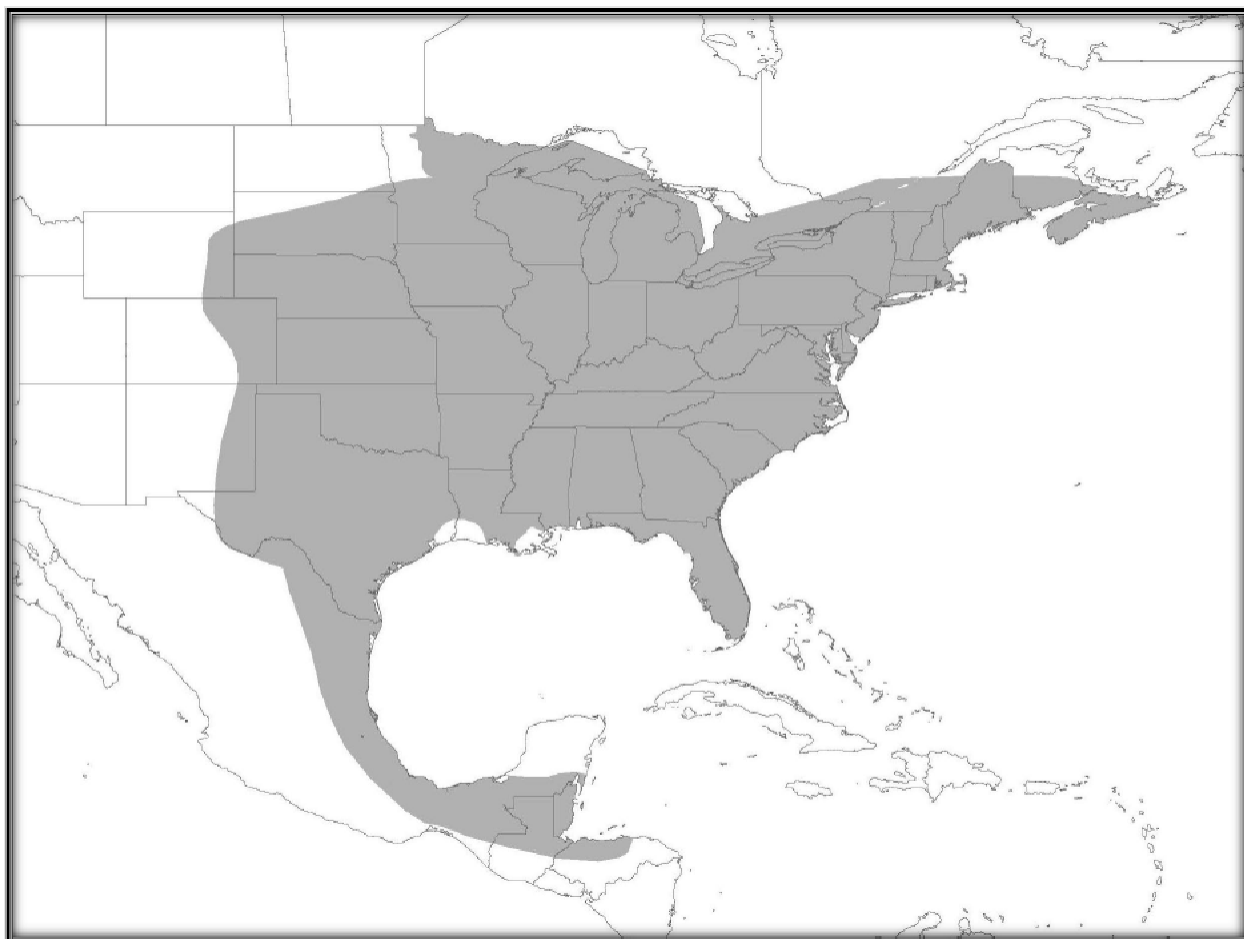


Figure 2.4. The range of the TCB throughout Canada, the U.S., and Central America.

2.2 Life Histories

The key elements in the annual life cycle of the IBAT, NLEB and TCB are similar. A summary of the life history information is presented here for all three species, with notes of any elements that are unique to the species. More detailed information (i.e., SSA, 5-year Review, Recovery Plan) can be found by searching the species-specific pages at <https://ecos.fws.gov>.

The key stages in the annual life cycle for the Covered Species include hibernation, spring staging and migration, pregnancy, lactation, volancy (flight)/weaning, fall migration and swarming (figures 2.5 and 2.6). All periods outside of hibernation are considered the active season. While timing varies with weather and latitude, these species go into hibernation from mid-fall through mid-spring each year. In the spring, reproductive females form maternity colonies where they bear and raise their young in wooded areas during the summer.

Author: [Name] hibernates between [Date] and [Date] at [Location] and elevation [Elevation].

Occasionally, the females may use artificial structures during summer months.⁵² In the GCP Plan Area, the spring migration period is generally from mid-March or early April to early or mid-May, depending on the species. Female bats begin migration shortly after emerging from hibernation and are pregnant when they reach their summer area. Females emerge from hibernation prior to males. Reproductively active females store sperm from autumn copulations through winter. Ovulation takes place after the bats emerge from hibernation in spring. The period after hibernation and just before spring migration is typically referred to as “staging,” a time when bats forage and a limited amount of mating occurs. This period can be as short as a day for an individual, but not all bats emerge on the same day.

Males and non-reproductive females do not typically *roost* in colonies and may stay close to their hibernaculum, though some will migrate to summer habitat. IBAT and NLEB pups are born between late May and early June, while TCB pups are born between June and July. Nursing of pups continues until weaning, which is shortly after young become volant (able to fly) about a month later (mid-to late-July for IBATs and NLEBs and mid-July to August for TCBs). Fall migration typically occurs between mid-August and mid-October for IBATs and NLEBs and late July to August for TCBs, though the timing of these events is also influenced by weather and latitude.⁵³ Upon arrival at hibernacula, all three species “swarm,” a behavior in which large numbers of bats fly in and out of cave entrances from dusk to dawn. Swarming continues for several weeks, and mating occurs during the latter part of the period. After mating, females enter directly into hibernation, but not necessarily at the same hibernaculum where mating occurred. Most bats of both sexes hibernate by the end of November (by early to mid-October in northern areas, depending on the species).

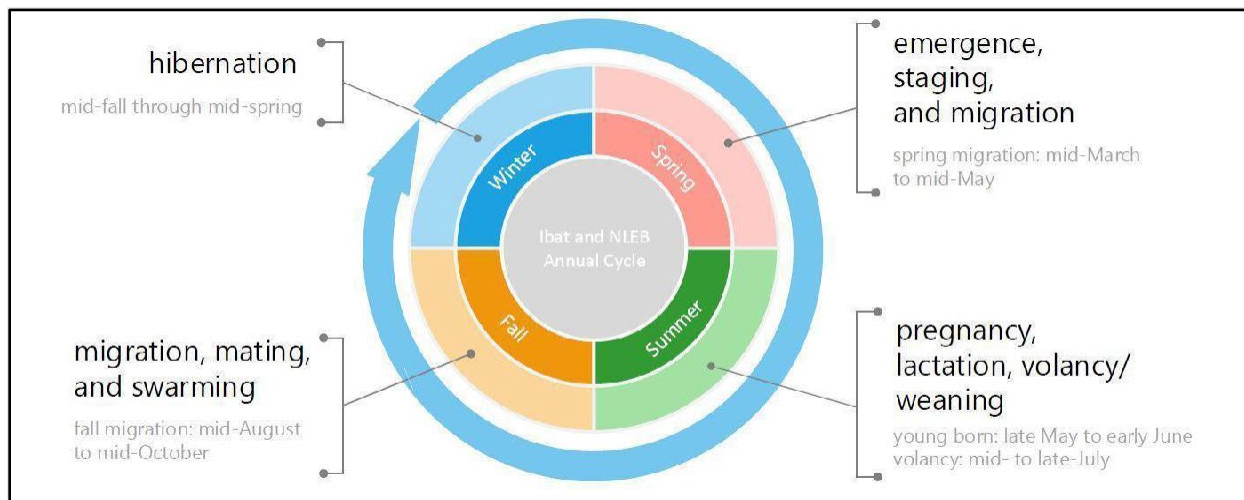


Figure 2.5. An illustration of major components and timing of the IBAT and NLEB annual cycle.

⁵² von Oettingen, S., pers. comm.; Service 2022a; Service 2021a

⁵³ Service 2007

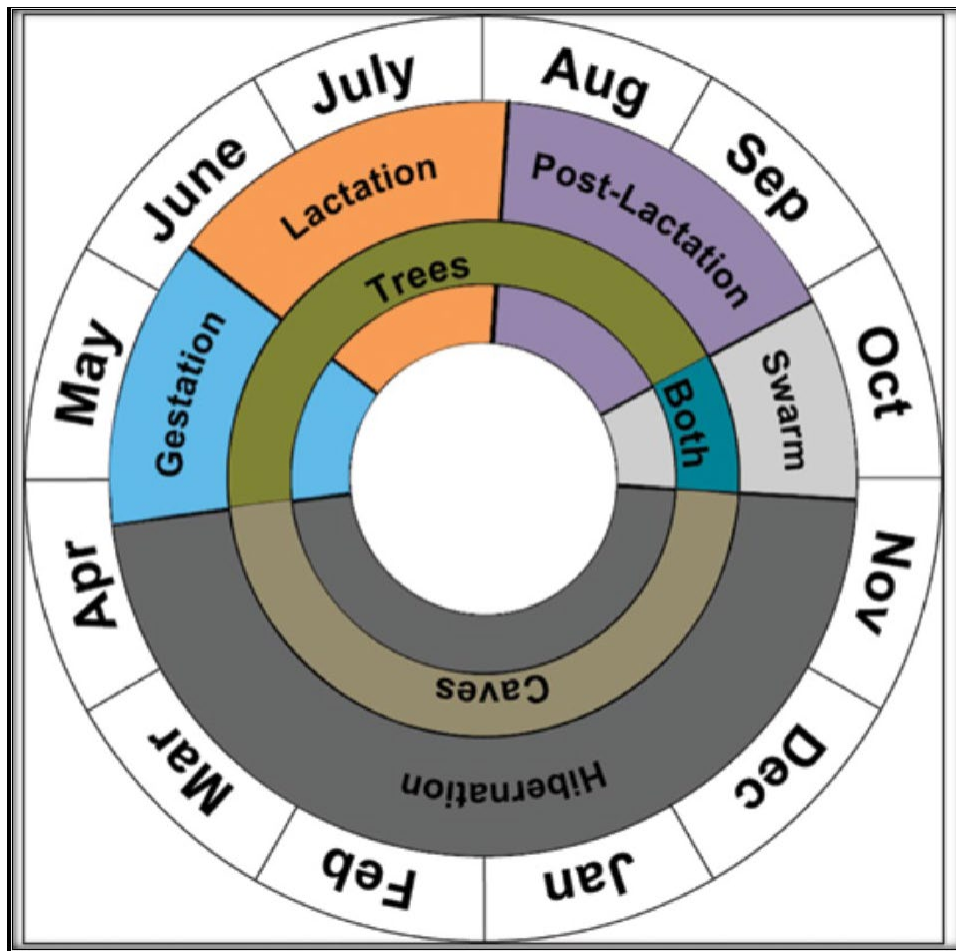


Figure 2.6. An illustration of major components and timing of the tricolored bat annual cycle.

Throughout their range, the basic resource needs for the bats include safe winter hibernation sites; forested spring staging and *fall swarming areas*; connected forested summer habitat for roosting, foraging, and commuting; forested migratory stopover habitat; safe migration passage; insects; and clean drinking water (e.g., streams, riparian areas, and wetlands). The following sections provide additional brief description of various components of life history and biology.

2.2.1 Summer Habitat

Suitable summer habitat for these species consists of forested areas where they roost, forage, and travel. This includes forests and woodlots containing potential roosts as well as adjacent and interspersed non-forested areas such as emergent wetlands and the edges of agricultural fields, old fields, and pastures. Linear features such as fencerows, riparian forests, and other wooded corridors are also used. Forested areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

Foraging behavior in these species typically occurs on forested hillsides and ridges, with occasional foraging over forest clearings, water, and along roads.⁵⁴ The IBAT and TCB commonly forage along riparian areas.⁵⁵

IBATs and NLEBs appear to avoid foraging in or crossing large open areas, choosing instead to use tree-lined pathways, small openings, or open fields close to woodlands.⁵⁶ However, TCBs will forage and cross over large open areas⁵⁷, but also will use edge habitat similar to IBATs and NLEBs.⁵⁸ For a complete definition, see the summer suitable habitat definition in the glossary.

2.2.2 Maternity Colonies and Roosts

Upon emergence from hibernacula in the spring, females seek suitable maternity colonies. Colonies exhibit fission-fusion behavior where members may join or leave a group to form a group (fusion), though composition of the group is in flux, with individuals frequently departing to be solitary or to form smaller groups (fission) before returning to the main unit.⁵⁹ As part of this behavior, all three species switch roosts often, typically every 2–3 days.⁶⁰ Bats switch roosts for a variety of reasons, including for temperature regulation, precipitation, predation, parasitism, and to make use of ephemeral roost sites.⁶¹ The need to investigate new potential roost trees prior to their current roost tree and/or roost substrate becoming uninhabitable (e.g., tree falls over and/or leaves fall off), may be the most likely scenario for roost switching behavior.⁶² IBAT and NLEB maternity colonies use networks of roost trees often centered around one or more primary (IBAT) or central-node (NLEB) roost trees.⁶³ TCBs are also a colonial roosting species; however, it is unknown if they exhibit similar networks of roosting trees as IBATs or NLEBs. For IBATs and NLEBs, individual bats and small groups that collectively make up a maternity colony are often dispersed among a network of roost trees at any given time.⁶⁴ All three species could be found roosting in structures like barns, sheds, bunkers, and beneath porch roofs particularly in areas where suitable tree roosts are unavailable. Male and nonreproductive female NLEBs may also roost in cooler places, including caves and mines.⁶⁵ TCBs are rarely observed in caves during the summer.⁶⁶ However, small numbers (mostly males) have been observed in mines.⁶⁷ Humphrey et al. 1976 reported two observations

Author

It should be made more clear that maternal colonies may use non-tree roosts (i.e. manmade structures); this only seems apparent for non-maternity roosts

⁵⁴ van Zyll de Jong 1985

⁵⁵ Brack and Whitaker 2001; LaVal et al. 1977

⁵⁶ Patriquin and Barclay 2003; Yates and Muzika 2006

⁵⁷ Turner, M., pers. comm., 2023.

⁵⁸ Barbour and Davis 1969; Mumford and Whitaker 1982; Baker 1983; Fujita and Kunz 1984; Bender and Parmley 2008; Hein et al. 2008

⁵⁹ Barclay and Kurta 2007; Garroway and Broders 2007

⁶⁰ Foster and Kurta 1999; Veilleux and Veilleux 2004; Owen et al. 2002; Kurta et al. 2002; Kurta 2005; Carter and Feldhamer 2005; Quinn and Broders 2007; Poissant et al. 2010

⁶¹ Carter and Feldhamer 2005

⁶² Kurta et al. 2002; Carter and Feldhamer 2005; Timpone et al. 2010

⁶³ Callahan et al. 1997; Kurta et al. 2002; Silvis et al. 2015

⁶⁴ Kurta 2005

⁶⁵ Barbour and Davis 1969; Amelon and Burhans 2006

⁶⁶ Briggler and Prather 2003

⁶⁷ Damm and Geluso 2008

of TCB maternity colonies in caves in Missouri. TCBs were observed roosting in rock shelters in cliffs in Kentucky (KY).⁶⁸

The exact number of roost trees a maternity colony uses at any given time (or throughout the season) has not been determined, because:

1. not every bat in a colony can be tracked;
2. not all bats can be tracked simultaneously;
3. bats are generally tracked for a short period; and
4. the number of trees used by a bat is correlated with number of days it is radio-tracked.⁶⁹

IBAT maternity colonies vary in size, with most documented maternity colonies containing less than 100 adult females.⁷⁰ NLEB maternity colonies also range in size, although between 30⁷¹ and 60⁷² individuals may be most common. TCB bat maternity colony sizes are the smallest of the three species, and range between 1 and 29 females.⁷³ All three species show some degree of interannual fidelity to single roost trees and/or maternity areas.

Roost tree preferences vary between the three species. IBATs are known to use a wide variety of tree species (greater than 5 inches *DBH*) based on presence of cracks, crevices, or presence of peeling bark. Typical IBAT primary roosts are located under exfoliating bark of dead ash, elm, hickory, maple, oak, or poplar, although any tree that retains large, thick slabs of peeling bark may be suitable. Primary IBAT roosts are usually composed of trees in early-to-mid stages of decay. NLEBs use a wider variety of roost types, including cavities, underneath bark, crevices, and within hollows of both live and dead trees and/or snags (typically greater than 3 inches *DBH*). During the summer, TCBs predominantly roost in the foliage of deciduous hardwood trees. Roosts are often in clusters of live and dead foliage of live and recently dead trees or broken branches that retain dead leaves. Dead leaf roosts vary in size but are similar in shape: umbrella-like shelter, resulting in a protective roof of dead foliage and a hollow core into which bats retreat.⁷⁴ Single dead oak leaves may also serve as roosting sites for lone males.⁷⁵ Live-leaf roosts are typically dense in structure but occasionally exhibit only a few leaves serving as shelter.⁷⁶ TCBs select oaks more often than any other tree species, followed by hickories and to a lesser extent, maples. Dead oak leaves persist longer on trees compared to other species and provide weather and visual protection for roosting TCBs.⁷⁷

⁶⁸ Lacki and Hutchinson 1999

⁶⁹ Gumbert et al. 2002; Kurta et al. 2002

⁷⁰ Whitaker and Brack 2002

⁷¹ Whitaker and Mumford 2009

⁷² Caceres and Barclay 2000

⁷³ Hoying and Kunz 1998; Whitaker 1998; Veilleux and Veilleux 2004; Perry and Thill 2007; Poissant et al. 2010

⁷⁴ Veilleux et al. 2003; Thames 2020

⁷⁵ Perry and Thill 2007

⁷⁶ Veilleux et al. 2003

⁷⁷ Veilleux et al. 2003

Average *maternity colony home range* sizes of individual IBATs may be several hundred acres in size⁷⁸ (e.g., 357.5 acres⁷⁹ and 205 acres,⁸⁰ and can be as much as 12,566 acres⁸¹). IBAT core roosting areas are smaller than foraging areas, with roosts often clustered in space. Colonies of IBATs have larger home ranges than individual bats with areas of overlapping core roosting/foraging areas and areas that do not overlap. Average home range sizes of individual NLEBs have been estimated at 148.8 to 173.7 acres, with colony home ranges being larger.⁸² Size of both foraging and core roosting areas likely varies depending on habitat quality. Home ranges for two lactating female TCBs roosting in trees were 420 acres and 642 acres.⁸³ Home ranges for male TCBs can be much larger than reproductive females.⁸⁴

2.2.3 Reproduction

Breeding begins in late summer or early fall when males begin swarming near hibernacula. After copulation, females store sperm during hibernation to delay fertilization until spring. When they emerge from their hibernacula, females ovulate, and the stored sperm fertilizes an egg. After fertilization, pregnant females migrate to summer areas where they roost in colonies and give birth to a single pup (two pups for TCBs). Most females within a maternity colony give birth around the same time, which may occur from late May or early June to early July (IBAT), mid-July (NLEB) or June and July (TCB), depending on the colony's latitude and elevation. Lactation then lasts 3 to 5 weeks, with IBAT and NLEB pups becoming volant between early July and early August and TCB pups becoming volant between mid-July and August.

2.2.4 Migration

Males and non-reproductive females may summer near hibernacula or migrate to summer habitat some distance from their hibernaculum. IBATs are known to migrate up to hundreds of miles from their hibernacula.⁸⁵ For example, IBAT migration distances between hibernacula and summer colonies have been documented as far as 357 miles in the Midwest.⁸⁶ In contrast, NLEBs are not considered to be a long-distance migrant (typically 40-50 miles). TCBs have been documented to migrate between 13 and 149 miles (21 and 240 km) between winter and summer habitat.⁸⁷ Migration is an energetically demanding behavior for all three species, particularly in the spring when their fat reserves and food supplies are low, and females are pregnant. Part of the conservation strategy of this GCP is to conserve the Covered Species as they migrate between hibernacula and their summer roosting habitat.

⁷⁸ Menzel et al. 2005; Sparks et al. 2005; Watrous et al. 2006; Jachowski et al. 2014; Kniewski and Gehrt 2014; Divoll and O'Keefe 2018

⁷⁹ Menzel et al. 2005

⁸⁰ Watrous et al. 2006

⁸¹ Service 2011

⁸² Owen et al. 2003; Lacki et al. 2009

⁸³ Wisconsin DNR 2018

⁸⁴ Thames 2020

⁸⁵ Service 2007

⁸⁶ Winhold and Kurta 2006

⁸⁷ Cockrum 1956; Griffin 1940; Griffin 1945; Barbour and Davis 1969; Samoray et al. 2019; White pers. comm., 2023

2.2.5 Winter Habitat and Ecology

Hibernacula for IBATs predominantly includes caves, mines, and other cave-like structures (e.g., active or abandoned mines, railroad tunnels, bridges). NLEBs may also use non-traditional hibernacula (e.g., buildings, talus slopes, rock crevices/outcroppings). TCBs typically overwinter in caves and mines and other cave-like structures (e.g., active or abandoned mines, railroad tunnels, bridges). Broadly, all three species hibernate from October to April depending on latitude and local weather conditions, with the exception of December on Long Island, NY specifically for NLEBs and TCBs. All three species are known for their interannual fidelity to their hibernacula sites.

Caves that meet temperature requirements for IBATs are rare. Most IBATs hibernate in caves or mines where the ambient temperature remains below 50 °F, but infrequently drops below freezing.⁸⁸ Caves that historically sheltered the largest populations of hibernating IBATs were those that provided the largest volumes and structural diversity, thus ensuring stable internal temperatures over wide ranges of external temperatures with a low likelihood of freezing.⁸⁹

IBATs generally hibernate in large clusters, sometimes with other species, with densities of 300 to 484 bats per square foot observed prior to WNS.⁹⁰

NLEB hibernacula typically have cracks and crevices for roosting, and relatively constant, cool temperatures (32 to 48 °F) with high humidity and no strong air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible. NLEBs tend to roost singly or in small groups, with hibernating population sizes ranging from just a few individuals to larger than 100.⁹¹ NLEBs display more winter activity than other cave species, and individuals often move between hibernacula throughout the winter.⁹²

TCBs are one of the first species to enter hibernation in the fall and one of the last species to emerge in the spring,⁹³ and they hibernate in more caves and mines than any other cave-hibernating species in eastern North America.⁹⁴ This species is found in deeper parts of caves and mines where ambient temperatures are constant and warm (compared to temperatures chosen by other hibernating species) and have high humidity (99 percent).⁹⁵ TCBs can number from 1 to several 100 within a hibernaculum, roosting singly, in pairs or in small clusters.⁹⁶

2.2.6 Spring Staging and Fall Swarming Habitat

⁸⁸ Hall 1962; Myers 1964; Henshaw 1965; Humphrey 1978

⁸⁹ Tuttle and Kennedy 2002

⁹⁰ Service 2007

⁹¹ Service 2022a

⁹² Griffin 1940; Whitaker and Rissler 1992; Caceres and Barclay 2000

⁹³ LaVal and LaVal 1980; Merritt 1987

⁹⁴ Sealander and Young 1955; Barbour and Davis 1969

⁹⁵ Barbour and Davis 1969; Mohr 1976; Fujita and Kunz 1984; Raesly and Gates 1987

⁹⁶ Barbour and Davis 1969; Banfield 1974; Gottschang 1981; Fujita and Kunz 1984; Raesly and Gates 1987; Hofmeister 1989; Altringham 1996; Briggler and Prather 2003; Damm and Geluso 2008; Sandal et al. 2001

In general, IBATs, NLEBs and TCBs use roosts in the spring and fall similar to those selected during the summer. Suitable spring staging/fall swarming areas are found in forested areas where they roost, forage, and travel, around a hibernaculum. This includes forested patches as well as linear features such as fencerows, riparian forests, and other wooded corridors. These forested areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Isolated trees are considered suitable habitat when they exhibit the characteristics of a suitable roost tree and are less than 1,000 feet from the next nearest suitable roost tree, woodlot, or wooded fencerow; although, distance is unknown for the TCB.

Table 2.0. General timing of the covered species annual cycle in the GCP Plan Area.

Season	NY	PA	WV
Maternity Season*	April 1-August 15	April 1-August 15	April 1-August 15
Active Season**	April 1-September 30 or October 31 (Upstate NY – IBAT, NLEB, TCB) March 1 to November 30 (Long Island – NLEB, TCB)	April 1-November 14	Author Consider re-phrasing to something like “NY (excluding Long Island)” to avoid confusion about the geographic range of “Upstate NY.”
Inactive Season***	October 1-March 31 (Upstate NY – IBAT, NLEB, TCB) November 1-March 31 (Upstate NY – IBAT, NLEB, TCB) December 1-February 28 (Long Island – NLEB, TCB)	November 15-March 31	Author These dates should be removed as bats may still be present on the landscape in NY after October 1.

*The maternity season includes the range of time when the Covered Species are concentrated in maternity colonies, which includes the pup season. The pup season includes the range of time when females are close to giving birth and have non-volant (i.e., unable to fly) young.

**The active season includes the range of time when the Covered Species may be present outside of hibernacula and using various habitats for parts of their life cycle. For Long Island, NY, both NLEBs and TCBs are active longer in summer based on acoustic records and thus, have a longer active season noted in the table.

***The inactive season includes the range of time when the Covered Species are hibernating. For Long Island, NY, the inactive season is shorter for NLEBs and TCBs as they are active during a longer portion of the year. Inactive seasons are given depending on the distance a proposed project is from a hibernaculum: if proposed project is > 10 miles from a Priority (P) 3 or P4 hibernaculum or > 20 miles from a P1 or P2 hibernaculum, the inactive season is November 1 to March 31; if proposed project is ≤ 10 miles from a P1 or P2 hibernaculum or ≤ 20 miles from a P3 or P4 hibernaculum, the inactive season is October 1 to March 31; if proposed project is ≤ 5 miles from a hibernaculum, the inactive season is September 1 to March 31.

Author

NY does not use any dates other than Nov 1 - Mar 31 for any other counties in the state outside of Long Island. Recommend deleting this language.

2.3 Threats to Survival

This section briefly describes the primary threats to the species, not all of which relate directly to this GCP. Threats associated with the Covered Activities within this GCP are discussed in section 4.5.1.

Loss or degradation of occupied habitat, human disturbance at hibernacula, and pesticides were among the causes of decline first identified for the IBAT.⁹⁷ The Service plan identified additional threats including impacts to summer habitat, contaminants, the effects of climate change, and collisions with man-made structures. 5-year reviews identified WNS as the most significant threat to IBATs. 10-year reviews included nonnative invasive insect and plant species as threats to the species.

Similar to the IBAT, the Service currently considers WNS, wind energy, collisions with man-made structures, mortality, habitat loss, and climate change as the primary threats to NLEBs and TCBs with WNS being the most significant.¹⁰⁰

2.3.1 Loss or Degradation of Habitat

As stated above, IBATs, NLEBs, and TCBs require suitable habitat for roosting, foraging, and commuting between those habitats during spring, summer, and fall. This generally includes forested features, wetlands, and water sources. All three species also require safe migration habitat and winter habitat. Loss or degradation of these habitats reduces species survival and reproduction.

As discussed in more detail below, loss or degradation of these habitats can result from impacts to individual roosts, removal or fragmentation of roosting or foraging areas and travel corridors, impacts to spring staging or fall swarming areas, and loss or degradation of hibernacula.

2.3.1.1 Impacts to Individual Roosts

The Covered Species display breeding site fidelity in which they rely on previously established roost sites each year. The loss of individual roosts can affect maternity colonies regardless of whether the impacts occur during the active (spring/summer/fall) or inactive (winter) seasons.

For example, loss of individual roosts may affect maternity colony fission-fusion dynamics. Although occasional loss of a roost site is a natural phenomenon to which maternity colonies can adapt, the loss of multiple roosts likely stresses individual bats, as well as the social structure of the colony.¹⁰¹ Maternity colonies are comprised of individual bats that overwinter in several different hibernacula. These individuals must be able to reassemble each year to form maternity colonies. Loss of established roosting and foraging areas reduces opportunities for bats returning from wintering sites to gather in familiar locations to reassemble.

⁹⁷ Service 1983

⁹⁸ Service 2007

⁹⁹ Service 2009; Service 2019

¹⁰⁰ Service 2021a; Service 2022a

¹⁰¹ Service 2007

Author

It seems disingenuous to list the threats in the order they are. While non-WNS threats were the original cause of listing, until WNS hit, the IBAT was making a strong recovery, one that is still sustained in the face of WNS based on figure 2.2. Placing WNS last here mistakenly places these other threats in the forefront when NLEBs and TCBs would

Author

More so than any other threat, individuals do not return to a colony because of poor overwinter survival due to WNS.

The loss of one or more primary roost(s)/central node tree(s) or multiple alternate roosts may cause colonies to fragment (split into multiple colonies).¹⁰²

Because their colonial behavior contributes to reproductive success, colonies are expected to result in reduced thermoregulatory benefits (bats cluster to require increased energy expenditures or increased use of torpor¹⁰³ that reduces recruitment¹⁰⁴ and/or reduced adult survival.

Smaller colonies may be expected to provide less thermoregulatory benefit to nonvolant pups in cool spring temperatures. Female bats have narrow energy budgets in spring need to have sufficient energy to keep warm, forage, and sustain flight distances. Smaller colonies are expected to reduce pregnancy success and pup survival.

2.3.1.2 Loss or Fragmentation of Roosting and Foraging Areas

Habitat connectivity aids orientation, attracts insects, and provides shelter from predators.¹⁰⁵ One study demonstrated that IBATs chose to travel along corridors rather than fly over open fields, even though use of such corridors increased energy costs. Obtaining equivalent resources in highly fragmented landscapes containing smaller, more distant patches of suitable habitat requires longer or more frequent commuting when compared with landscapes containing larger habitat patches.¹⁰⁷ The Covered Species preclude the use of overly patchy habitats.¹⁰⁸

The impact of shifting flight patterns and foraging areas on individual bats, the stress of hibernation and migration may be affected by the increased energy costs of searching for new roosting/foraging habitat in fragmented landscapes. Pregnant females displaced from preferred roosting/foraging areas may have reduced energy to search for alternative habitat¹⁰⁹, which could result in reduced pup survival (failure to carry to full term or failure to raise pup to volancy) for some colonies. Pups given birth may have pups with lower birth weights given the increased energy costs associated with longer flights, or their pups may experience delayed development. Pups that would also be experienced by pups once they become volant, the survival of these pups as they enter hibernation with potentially reduced energy reserves. The effect of the loss of roosting/foraging habitat on individual bats from the maternity colonies may be reduced reproduction for that year.

Author

Even if this was a substantiated threat (where is the evidence that reproductive success is tied to number of female bats in a colony?), the loss of habitat should have the opposite effect. In a landscape with fewer options, shouldn't more bats select the same one? In other words, this effect is countered by the loss of habitat.

Author

Again, tie to loss of habitat makes no sense. 90% fewer animals on the landscape due to WNS means fewer animals available for each colony overall. There has not been a corresponding 90% reduction in habitat, so remaining animals are trying to establish colonies over broader distances because habitat is more widespread and available.

Author

This should be defined. None of the three species does particularly well in old growth, large forest blocks - they all need forest/wetland edges to feed. CMs for

Author

Again - define the landscape where forested habitat is limiting. If single trees within 1000ft of 10 acres of forest are potential habitat, as the maps on the FWS NLEB page show, the species habitat is everywhere (suitable habitat is the dominant habitat/most abundant of all habitat types on the landscape).

¹⁰² Sparks 2003; Silvis et al. 2014a; Silvis et al. 2014b

¹⁰³ A state of lowered physiological activity typically characterized by reduced metabolism, heart rate, respiration, and body temperature that occurs in varying degrees especially in hibernating animals.

¹⁰⁴ The process of adding new individuals to a population or subpopulation by growth, reproduction, or immigration.

¹⁰⁵ Racey and Entwistle 2003

¹⁰⁶ Murray and Kurta 2004

¹⁰⁷ Kniowski and Gehrt 2014

¹⁰⁸ Patterson et al. 2003

¹⁰⁹ Gardner and Cook 2002; Kurta and Murray 2002

¹¹⁰ Humphrey 1975; Frick et al. 2010

2.3.1.3 Loss and/or Fragmentation of Spring Staging and Fall Swarming Areas

The Service assumes that exposure or risk of *harm* from loss or fragmentation of habitat increases with proximity to a hibernaculum, although this relationship is not quantified. Swarming areas must support the foraging and roosting needs of large numbers of bats during the fall swarming period. After arriving at a swarming location, bats begin to engage in mating and other social interactions. While bats congregate at swarming locations, they do not hibernate in the same areas where they swarm. Loss of roosting areas near hibernacula may result in reduced fat accumulation during fall and, in turn, reduced overwintering survival.

Author

No way to assess actual risk - when does the risk become a likely outcome versus NLAA?
If hibernacula, they may lose foraging habitat around them, reduced

2.3.1.4 Loss or Degradation of Hibernacula

Destruction and degradation of winter hibernacula have been identified as long-standing and ongoing threats to all three species,¹¹¹ and vandalism at these sites was identified as a threat in the earliest recovery plans for the IBAT.¹¹² Loss or modification of these winter roost sites can result in impacts ranging from harm to individuals to population level-effects.¹¹³ For example, excavation or filling hibernacula can result in alteration of the thermal or humidity regime and ability of sites to support hibernating bats. Further, bats present during any excavation or filling can be crushed or suffocated.¹¹⁴

In addition, debris buildup at entrances or on cave gates can significantly modify the cave or mine site characteristics by restricting airflow and the course of natural water flow. Water flow restriction can lead to flooding, thus drowning hibernating bats.¹¹⁵ Several known NLEB hibernacula are subject to flooding, presenting a threat to hibernating bats.¹¹⁶

2.3.2 Disturbance

Human disturbance of hibernating bats has long been understood to be a primary threat to the Covered Species and remains a concern today.¹¹⁷ Such disturbance can result from intentional killing or harassment of bats,¹¹⁸ recreational caving, cave commercialization (i.e., cave tours and other commercial uses of caves), vandalism, or research-related activities.

Human disturbance can cause hibernating bats to arouse more frequently, result in movements within or between caves, and cause depletion of energy stores at a time when food and water resources are unavailable.¹¹⁹ This is even more important for sites where bats may be impacted

¹¹¹ 80 FR 17974; Service 2007; Service 2019; Service 2022a

¹¹² Service 1983

¹¹³ Service 2022a; Service 2007; Spanjer and Fenton 2005

¹¹⁴ Service 2022a

¹¹⁵ Amelon and Burhans 2006

¹¹⁶ G. Nordquist, pers. comm., 2012

¹¹⁷ Amelon and Burhans 2006; Service 2007; Service 2012; Service 2021a; Service 2022a

¹¹⁸ Tuttle 1979

¹¹⁹ Beer 1955; Tuttle 1979; Thomas et al. 1990; Speakman et al. 1991; Thomas 1995

by WNS, because more frequent arousal from torpor increases the probability of mortality in bats with limited fat stores.¹²⁰

Though progress has been made in reducing the number of caves and mines in which disturbance threatens hibernating bats, the threat has not been eliminated. Though several high-priority hibernacula have been protected, others remain vulnerable to unauthorized entry and vandalism.¹²¹

2.3.3 Environmental Contaminants

Environmental contaminants such as pesticides, oil pits, and spills have the potential to negatively impact bats. Contaminants (e.g., hydraulic fluids, gasoline) from construction vehicles and equipment can degrade nearby waterways and affect the insect forage base. Roads and road use can generate pollution that enters the air or water and degrades habitat.¹²² Spills, although infrequent and often related to accidents, can transfer contaminants directly from vehicles or cargo into the environment.¹²³

Spilled contaminants, such as vehicle and equipment fuels, lubricants, and hydraulic fluids, can create an above ground or subterranean path to a hibernaculum and adversely affect bats through inhalation, ingestion (in drinking water), or dermal absorption.¹²⁴

2.3.4 Collisions with Man-Made Objects

Collisions with man-made objects including poorly constructed cave gates, vehicles, communication towers, airplanes, and wind energy turbines have been reported and could represent a threat to local populations under certain conditions.¹²⁵

Wind energy has become the largest and one of the fastest growing sources of renewable energy in the U.S.¹²⁶ The current and ongoing expansion of wind energy facilities may lead to a meaningful impact on the population dynamics of the Covered Species, depending on the magnitude of risk from collision faced by migrating and summer resident bats.¹²⁷

2.3.5 Effects of Climate Change

Accumulating evidence suggests that the *phenology* of organisms, species biogeography and the composition and dynamics of communities are changing in response to a changing climate, and that these effects could constitute a threat to the Covered Species.¹²⁸

¹²⁰ Boyles and Willis 2010; Service 2022a

¹²¹ Service 2019

¹²² Campbell and Doeg 1989

¹²³ PA Game Commission and PA Department of Conservation and Natural Resources 2020

¹²⁴ PA Game Commission and PA Department of Conservation and Natural Resources 2020

¹²⁵ Service 2007; Service 2019; Service 2022a

¹²⁶ AWEA 2020

¹²⁷ Service 2019

¹²⁸ Walther et al. 2002; Jones et al. 2009; Rebelo et al. 2010; Jones and Rebelo 2013; O'Shea et al. 2016; Sherwin et al. 2013; Frick et al. 2019

Climate influences food availability, timing of hibernation, frequency and duration of torpor, rate of energy expenditure, reproduction, and development rates of juveniles.¹²⁹ Likely future impacts are changes in the range and the timing of migration.¹³⁰ Warmer climates may benefit females by causing earlier parturition (birth) and weaning of young, allowing more time to mate and store fat reserves in preparation for hibernation. Similarly, earlier gestation and parturition may benefit juveniles by providing a longer growth period prior to the breeding and hibernation season.¹³¹ In contrast, disruption of hibernation, extreme weather events, reduced water availability in arid environments, and the spread of disease also may cause significant mortalities.¹³²

Climate change is expected to affect the timing and magnitude of precipitation. While lack of water due to warmer and drier conditions may be problematic, too much springtime precipitation can also result in negative consequences to insectivorous bats. During heavier precipitation events, there may be decreased insect availability and reduced echolocation ability resulting in decreased foraging success.¹³³ Precipitation also wets bat fur, reducing its insulating value and increasing a bat's metabolic rate.¹³⁴

Changes in temperature may affect hibernation periods and the availability of suitable hibernacula in the future (e.g., some currently occupied sites may become too warm). Increased variation in climatic extremes raises the possibility of bats emerging from hibernation early or at a greater frequency. That would not only put hibernating bats at risk from depleted energy stores but could also affect the birth and survival of pups. Resources, especially insect prey, may be limited or variable during periods of early arousal from hibernation. Thus, climate change will likely also affect the future distribution of suitable hibernacula.¹³⁵ Therefore, finding suitable maternity sites may be a function of finding new hibernacula, and summer and winter range shifts may occur concurrently.

Climate change may also impact the Covered Species in ways that are more difficult to quantify. For example, this may include phenological mismatch (e.g., timing of various insect hatches not aligning with key life history periods of spring emergence, pregnancy, lactation, or fall swarming). In addition, there may be shifts in distribution of bats, forest communities, invasive plants, invasive forest pest species, or insect prey. With increasing temperatures, a poleward range expansion of temperate-zone species is predicted.¹³⁶ Any northern range shifts; however, will be limited based on availability of suitable hibernacula and energetic requirements for hibernation and migration. While more northerly sites may become suitable for hibernation, there may be other constraints on successful recruitment at higher latitudes. Shorter in higher latitudes or elevations, which may be particularly important in addition to potential bat range shifts, long-term increases in global temperature with shifts in butterfly ranges¹³⁷ and similar responses are anticipated

Author

The active season is limited by temperature and insect availability, so climate change would be lengthening the active season in these locations. Could still lead to mismatches, but as the next few lines state, the availability of prey is expected to expand as well.

¹²⁹ Sherwin et al. 2013

¹³⁰ Mistry and Moreno-Valdez 2008; Lundy et al. 2010; Dixon 2011; Ancillotto et al. 2018; Stepanian and Wainwright 2018

¹³¹ Burles et al. 2009; Frick et al. 2010

¹³² Adams and Hayes 2008; Jones et al. 2009; Adams 2010; Hayes and Adams 2017

¹³³ Geipel et al. 2019

¹³⁴ Webb and King 1984; Voigt et al. 2011

¹³⁵ Humphries et al. 2002

¹³⁶ Humphries et al. 2004

¹³⁷ Parmesan et al. 1999; Wilson et al. 2007; Breed et al. 2013

prey. Milder winters may result in range expansions of insects or pathogens with a distribution currently limited by cold temperatures (e.g., hemlock woolly adelgid, southern pine beetle). Climate change could impact (e.g., disease, range shifts, phenology) tree species commonly used as roost trees,¹³⁸ but it is not clear how maternity colonies will respond as a result of these impacts.

Climate change may influence WNS as temperature, humidity, phenology, and microclimates warm.¹⁴⁰

Author

This could also reduce the effects of WNS by shortening the inactive season and reducing the stress caused by longer hibernation needs. The covered species may also alter their winter survival strategy by opting to enter shorter bouts of torpor rather than hibernation, as TCB and NLEB do in southern portions of their range. This would

2.3.6 Nonnative and Invasive Species

Biological invasions by nonnative invasive species represent a significant threat to the maintenance of natural forest ecosystems.¹⁴¹ Invasive forest insect pests, such as the emerald ash borer (*Agrilus planipennis*), Asian long-horned beetle (*Anoplophora glabripennis*), and the spongy moth (*Lymantria dispar*) can significantly impair the health, productivity, species richness, and overall biodiversity of eastern U.S. forests and could affect the bat communities dependent on them.¹⁴² Though specific effects to the Covered Species are not well reported, the impacts of nonnative invasive species to the habitats upon which the bats depend are well-documented, and the resulting effects to bats are presumed to be significant in portions of the species' range.¹⁴³ For example, though IBATs can use many different tree species as primary roosts, in certain portions of the species range they may preferentially select for ash trees, which are currently being impacted by the emerald ash borer. This species-specific selection has the potential to generate short-term benefits to the IBAT as it provides additional dead and dying tree roost potential but can have long-term adverse effects because trees will eventually fall over and become unusable as roosting trees. Depending on the density of ash trees in a given area, there could be a significant loss of roost trees that may fragment maternity colonies and cause reduced reproductive success.¹⁴⁴

Other nonnative invasive species such as tree of heaven (*Ailanthus altissima*), garlic mustard (*Alliaria petiolata*), European and Japanese barberry (*Berberis* spp.), Oriental bittersweet (*Celastrus orbiculatus*), invasive shrub honeysuckles (*Lonicera* spp.), common buckthorn (*Rhamnus cathartica*), mile-a-minute vine (*Persicaria perfoliata*), kudzu (*Pueraria lobata*) and others can negatively impact the quality of bat habitat by outcompeting native vegetation and altering succession of native forest species. Nonnative plants may also affect the amount of insect biomass available to bats and other insectivores and disrupt terrestrial and aquatic food

¹³⁸ Service 2019; Service 2022a

¹³⁹ Hayman et al. 2016; McClure et al. 2020; Hoyt et al. 2021

¹⁴⁰ Service 2019

¹⁴¹ Liebhold et al. 1995

¹⁴² Wallner 1997; Aukema et al. 2011

¹⁴³ Service 2019; Service 2022a

¹⁴⁴ Kurta et al. 2002

webs.¹⁴⁵ Numerous other nonnative invasive species impact forest dynamics within the species' range, but few are well-studied or easily controlled at present.¹⁴⁶

7 White-Nose Syndrome

 Over a decade, WNS has been the foremost stressor on the Covered
disease affecting bats that is caused by the fungal pathogen *Pseudogymnoascus*
(*Pd*).¹⁴⁷ The disease and pathogen were first discovered in eastern NY
showing presence since 2006), and since then have spread to at least 4
North America (figure 2.7).¹⁴⁸ *Pd* invades the skin of bats, initiating a
and behavioral processes that often lead to mortality.¹⁴⁹ Infection leads to
frequency and duration of arousals during hibernation and raises energy
bouts, both of which cause premature depletion of critical fat reserves
winter.¹⁵⁰ Bats that do not succumb to starvation in hibernacula often seek riskier roosting
locations near entrances to roosts or emerge from roosts altogether, where they face exposure to
winter conditions and scarce prey resources on the landscape.¹⁵¹ The weeks following emergence
from hibernation also mark a critical period because prey availability is still limited, energetic
costs of healing from WNS are high, and the potential for complications arising from
reactivation of the immune system upon emergence from hibernation (immune reconstitution
inflammatory syndrome) that can lead directly to mortality or impact reproductive success.¹⁵²

Author
Seems to down play WNS - this is the only threat with reasonable estimates of impacts and is the reason for listing two of the three, and not delisting the third. Seems like they should lead with the 90-99% mortality of populations exposed to WNS in this paragraph. And why list it as the last of the threats to the species?

¹⁴⁵ Tallamy 2004; Tallamy et al. 2010; McNeish et al. 2017

¹⁴⁶ Brack et al. 2013; Welch and Leppanen 2017

¹⁴⁷ Blehert et al. 2009; Turner and Reeder 2009; Lorch et al. 2011; Puechmaille et al. 2011; Willis et al. 2011; Coleman and Reichard 2014; Frick et al. 2016; Bernard et al. 2020; Hoyt et al. 2021

¹⁴⁸ Meteyer et al. 2009

¹⁴⁹ Warnecke et al. 2013; Verant et al. 2014

¹⁵⁰ Reeder et al. 2012; McGuire et al. 2017; Cheng et al. 2019

¹⁵¹ Langwig et al. 2012

¹⁵² Reichard and Kunz 2009; Meteyer et al. 2012; Field et al. 2015; Fuller et al. 2020

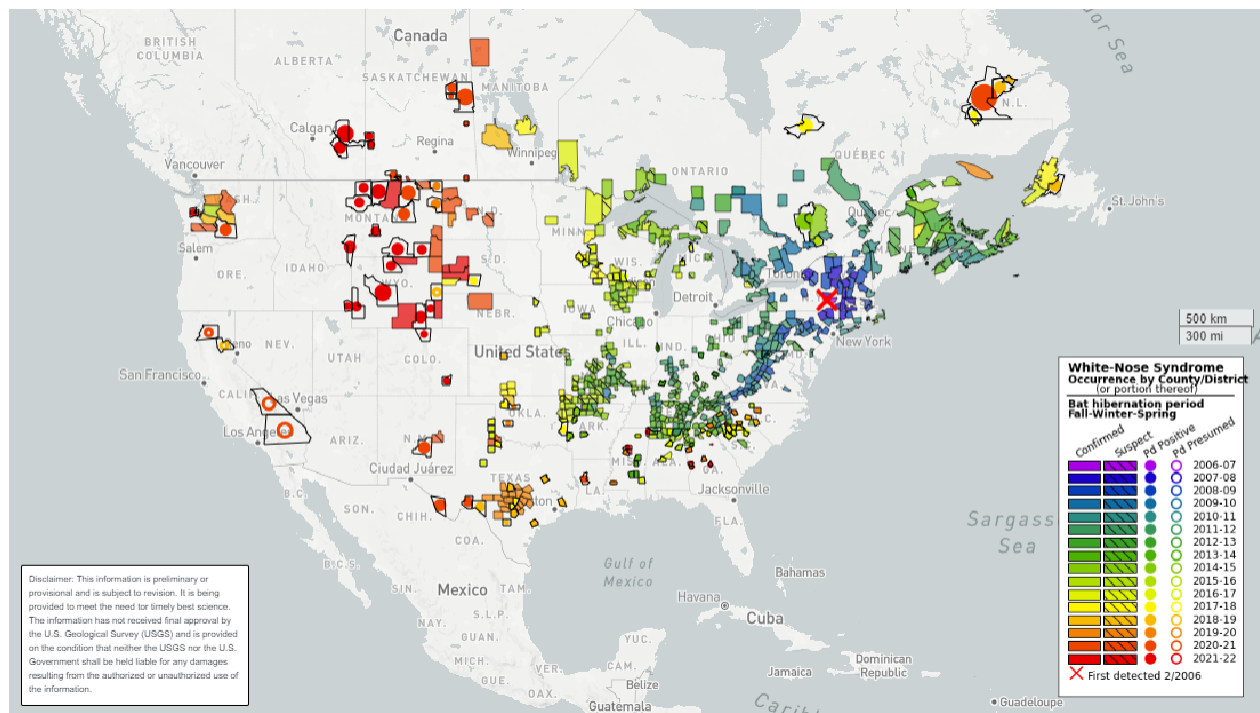


Figure 2.7. Occurrence of Pd and WNS in North America based on surveillance efforts in the U.S. and Canada: disease confirmed (color-coded), suspected (stripes), Pd detected but not confirmed (solid circles), and Pd detected but inconclusive lab results (open circles). Pd and WNS occurrence records generally reflect locations of winter roosts and are not representative of the summer distribution of affected bats (<https://www.whitenosesyndrome.org/> accessed April 26, 2023).

WNS-affected bats that survive overwintering emerge from hibernation with greatly depleted fat reserves compared to non-infected bats¹⁵³ and suffer wing damage¹⁵⁴ that affects migration and foraging activities. WNS-affected females that survive migration to their summer habitat must partition energy resources among the demands of healing, foraging, keeping warm, successful pregnancy, and pup-rearing.

The disease has significantly reduced the species' redundancy and overall resiliency to withstand other cumulative threats. For example, a 2016 study modeled the interaction of WNS and wind turbine mortality and found that the combined effects resulted in larger population impacts than when considering the effects of either stressor alone.¹⁵⁵

IBAT, NLEB and TCB populations have experienced severe declines following the arrival of WNS. One recent meta-analysis of data from 27 states and 2 provinces concluded that WNS was estimated to have caused NLEB population declines of 97–100 percent across 79 percent of the species range.¹⁵⁶ Impacts to IBATs are most severe to date in areas with the longest exposure to

¹⁵³ Reeder et al. 2012; Warnecke et al. 2012

¹⁵⁴ Meteyer et al. 2009; Reichard and Kunz 2009

¹⁵⁵ Erickson et al. 2016

¹⁵⁶ Service 2022a

WNS (e.g., 75-99 percent declines in NY, PA, and WV). Similarly, tricolored bat populations have declined an estimated 90-100 percent across 59 percent of their range.¹⁵⁷

3.0 Participating in the Conservation Program

This GCP streamlines project review and Permit issuance in part by relying on a uniform set of eligibility requirements and CMs. This approach allows for a landscape-level assessment of both the expected impacts from multiple project types and anticipated conservation benefits.

The following section describes how the Service will determine Applicant eligibility, the project types and activities covered by this GCP, and discusses the availability of the GCP and the duration of individually issued Permits.

To take advantage of the streamlining aspects of this GCP, a Project Proponent will coordinate with their local field office to verify that:

1. they are eligible to participate (section 3.1);
2. their projects are eligible (section 3.4);
3. they have all associated compliance documents (appendix C); and
4. that any other project-specific requirements are met (section 4.6).

A “GCP Eligibility Key,” found in appendix B, guides Project Proponent project-specific information to verify that a project is eligible to adopt conservation plan component of their application for a Permit. Project Proponent encouraged to contact their local field office (see appendix A) as early in the process as possible to request technical assistance.

Author rough questions on the GCP as the
Comment on page 112
in the initial planning

3.1 Project Proponents, Applicants, and Permittees

For the purposes of this plan, a Project Proponent is any person¹⁵⁸ planning to engage in activities within the GCP Plan Area that may result in take of Covered Species.

If a Project Proponent chooses to apply for a Permit through the GCP process and meets the eligibility requirements outlined in chapter 3, and they submit a complete application as determined by the Service, they are referred to as an “Applicant.” An Applicant must have the legal authority to execute their proposed project on lands within the Plan Area and sufficient legal control to implement the requirements of the GCP. Legal control may be in the form of ownership of property in fee simple, an easement, a lease agreement that grants authority for the proposed project, or a similar type of legal authority to conduct the proposed activities.¹⁵⁹ The Service’s standard application form through ePermits¹⁶⁰ requires that Applicants affirm their authority to conduct their proposed activities including, without limitation, any mitigation.

¹⁵⁷ Cheng et al. 2021

¹⁵⁸ See definition in ESA section 3(13).

¹⁵⁹ 50 CFR 402.02; 17.22(b)(2)(i)(F); 17.32(b)(2)(i)(F)

¹⁶⁰ https://fwsepermits.servicenowservices.com/nav_to.do?uri=%2Fhome_splash.do%3Fsysparm_direct%3Dtrue

The Applicant must also certify that they have read and understand the regulations that apply to the Permit and that all information included in their application is true to the best of their knowledge. The Service's general Permit regulations are codified at 50 CFR part 13, and ITP regulations for endangered and threatened wildlife are found at 50 CFR 17.22(b)(1), and 50 CFR 17.32(b)(1), respectively. Factors that disqualify a person from seeking or holding a Permit are found at 50 CFR 13.21.

Following issuance of a Permit as described below, an Applicant becomes a "Permittee."

3.2 Incidental Take Permits Specific to this GCP

This GCP streamlines several steps typically completed during the standard HCP processes (appendix G). In this GCP, Project Proponents will coordinate with the local field office to determine whether take of the Covered Species is reasonably certain to occur and whether the project is eligible to use the GCP. If a Project Proponent concludes that incidental take is reasonably certain to occur and elects to pursue a Permit, and the Service determines the project is eligible to use the GCP, the GCP process will be complete upon the Applicant's submission of their application package adopting this GCP. This GCP is a conservation plan as required by ESA Section 10(a)(2)(A) for issuance of a Permit and submission of a complete package satisfies the Applicant's obligation to provide such a plan. This GCP further streamlines the process by providing a single approved NEPA document, Findings Statement, and Biological Opinion for all actions covered under this GCP for the proposed 10-year duration of the plan (see section 1.4). The GCP Permit structure provides the Service with the opportunity to review and verify that each *individual project plan* (IPP) meets Permit issuance criteria and is within the NEPA evaluation conducted.

This GCP is available for adoption and use by eligible Applicants that demonstrate a commitment to implement the measures spelled out in this conservation plan. Once the GCP is finalized, the issuance of Permits is expected to become formulaic, eliminating the need for lengthy review of each application.

The decision to pursue an application for incidental take authorization is voluntary. However, once the Applicant makes this decision, it triggers specific requirements. A Section 10(a)(1)(B) Permit may be issued upon a determination by the Service that all requirements for permit issuance have been met. To utilize this GCP and receive a Permit through this streamlined process, an Applicant must:

1. follow Permit issuance criteria found at 50 CFR 13 and 17;¹⁶¹
2. document that their project meets eligible project types (see section 3.4);

¹⁶¹ Permit issuance criteria are the following: 1) the taking will be incidental; 2) the Applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such takings; 3) the Applicant will ensure that adequate funding for the HCP and procedures to deal with unforeseen circumstances will be provided; 4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; 5) the Applicant has met the measures, if any, required by the Director of the Service as being necessary or appropriate for the purposes of the plan; and 6) the Director of the Service has received such other assurances, as he or she may require, that the plan will be implemented.

3. implement CMs, as applicable, described in this GCP and describe additional measures to further reduce the impact of the taking of a Covered Species (see section 4.4);
4. implement mitigation and monitoring, and provide funding assurances described in this document (see sections 4.5, 4.6 and 5.0);
5. meet the minimization and mitigation requirements as calculated by the methods described in this document (see section 4.6); and
6. comply with the terms and conditions in the resulting Permit.

This GCP analyzes and establishes minimization and mitigation requirements for Covered Activities whose impacts are permanent (e.g., removal of habitat) or temporary but non-recurring (e.g., construction noise, vibrations). There are certain effects that are not analyzed by or eligible for this GCP (see section 4.2); and therefore, are not analyzed by or eligible for this GCP (see section 4.2). Projects precluded from participation through the GCP process include the following:

- Other federally listed wildlife or adverse effects to federally listed species
- Areas outside of the GCP Plan Area
- Covered Species hibernacula (at any time of year)
- Suitable documented roosts used by the Covered Species, and those documented roosts (any time of year)
- Documented Covered Species summer travel/commuting habitat (roosting/foraging habitat) unless there are alternative travel corridors (any time of year)
- More than 25 total acres of non-linear suitable summer habitat surveyed using current Service protocols¹⁶³
- More than 200 acres of occupied habitat for the Covered Species
- IBATs, NLEBs or TCBs:
 - while in hibernation
 - during the fall swarming or spring staging periods around known or assumed occupied hibernacula
 - during the maternity period between April 1 and August 15 within documented or assumed occupied suitable habitat
- Projects that raise any road/rail profile above the tree canopy within 1,000 feet of suitable habitat within known or assumed occupied habitat¹⁶⁴
- Projects that only result in take from noise/vibration (i.e., noise/vibration that is not associated with tree removal)

Projects whose effects are beyond the scope of the GCP, as listed above, can apply for a separate ITP through ESA Section 10(a)(1)(B).

¹⁶² Service 2016

¹⁶³ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

¹⁶⁴ Projects that raise the road/rail profile above the tree canopy within 1,000 feet of suitable habitat within known or assumed occupied habitat should use the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Authority (FTA) Programmatic Consultation for Transportation Projects determination key in the Service's Information, Planning and Consultation (IPaC) program.

3.3 Non-Covered Activities/Examples of Ineligible Project Types

Some project types, though they may include actions described in this plan as Covered Activities, are not eligible to adopt this GCP for various reasons such as the potential for unanalyzed project effects or complexities requiring additional NEPA analysis. Ultimately, the Service will determine if a project is eligible for participation in this GCP.

Ineligible project types include, but are not limited to:

- Dam-related projects
- New electric transmission line construction or expansion
- Pump storage projects
- Nuclear energy facilities
- Coal mining/abandoned mine land reclamation
- Coal or gas power plants
- Wind energy projects
- Concentrating solar power projects¹⁶⁵
- Communication towers
- New mines/quarries and associated facilities
- Oil and natural gas projects (e.g., wells, well pads, pipelines, high pressure gas mains conveying renewable natural gas, associated access roads, associated waterlines)
- Injection wells
- Landfills
- New road construction (except access roads for other projects covered by the GCP or private internal roads such as those associated with residential subdivisions)
- Emergency situations such as spills and spill responses
- Forestry activities (e.g., prescribed fire, timber harvests, early successional management)
- Aerial application or other large-scale application of pesticides
- Airplane and helicopter surveys

Project types that are ineligible for this GCP can apply for a separate ITP through ESA Section 10(a)(1)(B).

3.3.1 Options for Projects Not Eligible to Participate

Eligible projects that also include take of non-covered listed species will require additional coverage under the ESA. Nevertheless, Project Proponents may be able to use all or parts of this GCP and can consider the following options:

- 1) Project Proponents can use components of this GCP to develop a separate HCP and apply for an ITP for both covered and non-covered species, or

¹⁶⁵ Concentrating solar power systems generate solar power by using mirrors or lenses to concentrate a large area of sunlight onto a receiver.

Author: [redacted]
No fast tracking of forest management under this tool.
ITP through ESA Section

- 2) Project Proponents and/or Federal agencies (see appendix F) can use an existing incidental take statement (such as a programmatic Biological Opinion) for the non-covered species and can use the GCP in its entirety for the Covered Species, or
- 3) Project Proponents can use the GCP in its entirety if the project has the Covered Species, and can develop a separate HCP and apply for and obtain an ITP for the non-covered species

Project Proponents are encouraged to coordinate with their local field office (appendix A) to determine how to meet conservation goals and ESA compliance requirements for projects with take of non-covered listed species.

3.4 Covered Activities/Examples of Eligible Project Types

Project Proponents should refer to appendix B and discuss with the Service, as necessary, to determine if their project is eligible to adopt this GCP as part of an application for a Permit. All Covered Activities must be constructed, maintained, and operated in accordance with all relevant Federal, State, and local regulations.

This GCP provides for several different types of projects. Because the resulting effects of some projects are similar, some project types are grouped into general categories for the purposes of this plan. The following section provides a general description of categories and examples of Covered Activities that may be eligible to adopt this GCP in support of an application for a Permit. This list is not intended to be exhaustive; however, eligible activities under this GCP are only those for which the impacts have been analyzed and addressed in this Plan. This list provides current information from local field office experience on the most frequently encountered project types anticipated to seek coverage through the GCP.

Not every project in these categories will result in take of the Covered Species. Individual project details such as location, and time of year when certain activities are expected to take place, must be provided to determine if take of the Covered Species is reasonably certain to occur. Projects must meet the described eligibility requirements. Additionally, resulting project effects must be among those described, analyzed, and addressed in the Biological Opinion and the NEPA analysis that describes the effects of the Federal action of approving the GCP and issuing subsequent Permits.

Permits issued under this GCP only provide incidental take coverage for the IBAT, NLEB and TCB. If the Service determines that a project is reasonably certain to result in take of any other federally listed wildlife species or has adverse effects to federally listed plants, the Project Proponent may modify the project to avoid take, apply for take coverage using all or parts of the GCP (see section 3.3.1 above and contact your local field office) or proceed at your own risk.

The Service recommends that Project Proponents that choose to develop a separate permitted mechanism (section 3.3.1) to address multiple species should consider incorporating the measures contained within this GCP for the covered bat species to help ensure consistent species recovery-focused conservation outcomes, gain the benefits of the existing regional conservation strategy and mitigation framework, and dedicate time and resources to develop CMs for the other federally listed species.

The following general project types are eligible when entirely within the GCP Plan Area:

- **Residential/Commercial/Other Development.** This category includes new construction, modifications, and operations and maintenance activities. This category is associated with:
 - Single- or multi-family residential construction or subdivisions
 - Commercial facilities
 - Community facilities (e.g., schools, libraries, and churches)
 - Public works projects (e.g., wastewater treatment plants) and
 - Recreational trails and facilities (e.g., campgrounds, fairgrounds, and playgrounds)
- **Transportation.**¹⁶⁶ This includes activities associated with:
 - Operations and maintenance or expansion of existing roadways/railways where there is no Federal funding or oversight by the FHWA, FTA, or FRA
 - Operations and maintenance, replacement or removal of associated structures, bridges, or culverts where there is no Federal funding or oversight such as that of the FHWA, FTA, or FRA access road construction, operation and maintenance, and use in conjunction with other project types covered by this GCP
 - Construction, operations and maintenance of internal private roads such as those associated with residential subdivisions
- **Utilities.** This includes activities associated with:
 - New construction, modifications, operations and maintenance activities associated with:
 - Water lines
 - Sewer lines
 - Underground or overhead cable/internet lines¹⁶⁷
 - Underground or overhead electrical distribution lines¹⁶⁷
 - Electrical substations
 - Photovoltaic (PV) solar power projects

¹⁶⁶ An existing rangewide consultation is available for FHWA, FRA, and FTA projects (see <http://www.fws.gov/sites/default/files/documents/programmatic-biological-opinion-for-transportation-projects-2018-02-05.pdf>). Applicants with other Federal agency (i.e., U.S. Army corps of Engineers [USACE] permitting) involvement may use the GCP to demonstrate compliance with the ESA. Please see GCP appendix F for the process for project sponsors with a federal nexus.

¹⁶⁷ New transmission lines are not included (section 3.3). Transmission lines carry electric energy from one point to another in an electric power system. They can carry alternating current or direct current or a system can be a combination of both. Also, electric current can be carried by either overhead or underground lines. The main characteristics that distinguish transmission lines from distribution lines are that they are operated at relatively high voltages, they transmit large quantities of power and they transmit the power over large distances. Distribution lines are low voltage lines that carry electricity from the substations to the end users for residential and commercial use. <https://www.osha.gov/etools/electric-power/illustrated-glossary/transmission-lines> (Accessed 7/21/2022).

- Operation and maintenance or modification of existing lines within existing footprints. Expansion of existing t covered.

Because individual projects may include activities within several categories, potential Applicants should describe and discuss all aspects of their proposed projects with the local field office to ensure appropriate coverage.

Operations activities that result in ongoing or recurring take are not covered by this GCR project. Proponents should consult with the local field office for projects expected to result in recurring effects.

3.4.1 Activities Common to Multiple Project Types

As discussed previously, certain effects may be caused by different project components. In this section, the Service provides a summary of project components that may result in similar or common effects to the Covered Species or their habitats. Effects to the 3 covered bat species are anticipated to be similar in nature given their similar life history and habitat needs.

Activities that may be common to multiple project types, but which are expected to result in the same effects to the Covered Species include:

- Surveys and site preparation
- Project staging areas
- Vegetation clearing
- Land preparation (e.g., grading, trenching, excavation)
- Stormwater and sedimentation control measures
- Project lighting
- Structure/infrastructure construction or replacement
- Access roads
- Wetland fill or waterbody crossing
- Wetland or waterbody restoration or mitigation
- Site restoration/planting
- Operations and maintenance activities

Surveys and Site Preparation

Site preparation activities include, but are not limited to geotechnical site investigations, surveys, and the marking of trees for removal or retention. Subsurface sampling and testing to determine soil characteristics are often an important step in the engineering design process. Subsurface sampling is typically accomplished by drilling test holes up to 300 feet deep or digging soil pits up to 8 feet deep. Drilling rigs can be mounted or transported by a variety of transportation vehicles including trucks, tractors, skids, and barges. When drilling is done off of roadways, impacts can be minimized through the selection of an appropriate sized and mounted drill rig, and limited vegetation removal. Subsurface sampling for hazardous materials may also be necessary. Durations will vary for these activities depending on number of bore holes and

Author: [redacted]
Central Hudson et al could apply through this

Author: [redacted]
the local field office to

Author: [redacted]
No continuing mortality covered
(vehicle/rail/building collision?)

Author: [redacted]
project components. In this
may result in similar or

substrate composition. Typically, one to several bore holes can be drilled in a day and most sampling is accomplished within a week.

Geotechnical investigations may also use ground-penetrating radar and seismic refraction surveys. This involves generating seismic waves and measuring their reflectance through differing geologic features. These seismic waves may be initiated by detonating explosives or through a process known as “land vibroseis.” Seismic companies often design sound generation points to avoid sensitive habitats and hazards that are identified and still collect meaningful data. Thumper trucks, heavy equipment, subterranean explosives, and blasting may be used during seismic refraction surveys.

Surveys may include property boundary identification or may be needed to identify biological or cultural resources, specific site features or hazards. Surveys may be conducted on foot or with the use of vehicles or drones. Airplane and helicopter surveys are not Cultural resource surveys may involve varying levels of ground disturbance with minor vegetation removal or blasting (see Land Preparation below). Areas generally demarcated (e.g., paint, flagging, fencing, stakes). Trees slated for removal remaining are demarcated as well.

Author

Eagle surveys by helicopter or plane not covered

Project Staging Areas

Some projects require the construction and use of staging areas or “contractor yards.” Staging area development can include cutting and/or removing vegetation, grading soils, graveling the workspace, and installing silt and/or safety fencing. Trailers at staging areas may require the use of portable generators, temporary drainage diversions, portable lighting equipment, and security fencing.

Vegetation Clearing

This may include removal of trees (including tree topping), limbing and trimming of trees, shrubs, or herbaceous vegetation. Methods may include hand tools (e.g., chainsaw) or heavy equipment (e.g., excavators and bulldozers).

Land Preparation

Vegetation or construction debris cleared from designated areas may be disposed of on or offsite in a manner compliant with local, State, and Federal rules and regulations. Chipping and mulching is the preferred means of onsite disposal of debris piles (see Summer CM 8 in GCP section 4.4.1.3).

Some projects may require the use of blasting and/or drilling to remove rock. The scale of blasting operations can vary from breaking up a single boulder or trimming an unstable overhang, to large-scale removal operations. The size and spacing of charges are largely dependent on the work objectives and the geologic structure of the rock. There are two general types of blasting: production and controlled. Production blasting uses widely spaced, large explosive charges that are designed to fragment a large amount of burden (the rock that lies between the existing slope face and blasthole). Controlled blasting uses more tightly spaced and smaller explosive charges to remove smaller amounts of burden. This technique can remove

material along the final slope face, or it can be used prior to production blasting to create an artificial fracture along the final cut slope.

Holes are drilled into the rock to set explosives. Drilling may be done with hand equipment by workers suspended on ropes to crane-supported drill platforms. Blasting mats or anchored wire mesh may be required to contain flying rock, especially when blasting occurs adjacent to sensitive areas such as aquatic systems. Temporary earthen or rock berms are also commonly used to contain rolling debris or minimize movement of blasted material. These structures are typically placed at the toe of landslides and are located to avoid impacts to stream or wetlands and designed to keep debris out of sensitive areas.

Land preparation may also involve the demolition and removal of structures (e.g., barns) or other obstacles.

In order to perform some construction operations, surface and groundwater may need to be diverted from the work site. This can include:

1. Constructing, installing, and maintaining all necessary temporary water containment facilities, channels, and diversions
2. Furnishing, installing, and operating all necessary pumps, piping, and other facilities and equipment
3. Removing all such temporary works and equipment after their intended function is no longer required

Cofferdams are often installed to create an isolated work area that can be dewatered for various projects (e.g., bridge maintenance). Cofferdams may consist of large casings (hollow cylinders) or sheet piles. The majority of cofferdam installations are completed with vibratory hammers. In some cases, other construction methods are used, such as stacked Jersey barriers with an impermeable liner or sandbag/impermeable liner barriers. These are accomplished typically by using a crane or excavator (Jersey barrier) or placed by hand (sandbags).

In general, sites are graded using earth-moving machinery to achieve desired contours. During grading, topsoil may be stripped and stockpiled separately from the subsoil. The segregated topsoil is typically returned to any temporary work area locations or used in other locations at the site. For example, for pipelines, topsoil would be restored immediately following installation of the pipe and backfill of the trench to reduce erosion and preserve native seed stock.

Following grading, areas may be stabilized by vegetating (e.g., seeding, sodding). Fertilizer, inoculant, lime, and other soil amendments may be applied; and anchoring mesh, mulch, and/or netting may be used in designated areas. Irrigation is sometimes used during this process. Water may also be needed for other pre-construction and construction operations, such as dust abatement, earthen-fill, and concrete mixing.

Additional materials may be needed to meet desired contours. This material is typically obtained from designated borrow areas.

Soils may need to be compacted in certain areas. Tamping, rolling, and vibration are types of techniques employed to compact soil layers.

Excavation work may be needed for structure foundation/basements or as part of trenching for utility/pipeline installation. Heavy equipment is used to remove, and side cast or dispose of excess soil. The type of machinery employed for excavation is based on the type of materials being excavated, the distance that material needs to be transported, soil site ability to carry load, and site accessibility. Excavation can occur in upland or wetland areas.

Stormwater and Sedimentation Control Measures

There may be Federal, State, or local requirements regarding the control of erosion and water pollution at a site. These practices can include silt fencing, hay bales, mulching, or the construction of runoff and sedimentation control structures (e.g., berms, drainage ditches, culverts, and/or stormwater management basins).

Permanent stormwater management systems (e.g., drainage swales, storm drainpipes and outfalls, detention and retention basins) are frequently required. Geotextiles (sometimes with riprap overlay) may be used for the purposes of slope protection, subsurface drains, and the stabilization of soils. Flexible membrane or geosynthetic clay liners may be used in liquid containment systems to control seepage.

Project Lighting

Lighting during construction activities is typically temporary and only needed until the construction activity concludes. Lighting may be required to ensure safe working conditions and/or allow for safe travel by vehicle operators. Lights are often mounted on mobile poles, towers or vehicles. New facilities (e.g., roads, sidewalks, residential or commercial development) often include permanent lighting. The light color, mounting methods, position, and styles vary significantly. Most land disturbance is small and associated with installation of individual poles.

Structure/Infrastructure Construction or Replacement

Structure foundations are typically laid using a combination of cementitious materials, aggregates, and metallic reinforcements. Pressure relief wells may be required in the foundations of some structures. Pile driving may be used in some projects. Piles are typically made from steel, wood, precast concrete, or concrete poured into shells that are driven to the required bearing and left in place. Gravity hammers, steam or air hammers, or diesel hammers are all types of equipment typically used to drive piles.

Construction of the associated infrastructure (e.g., parking and curb structures) is also carried out during the main construction phase. Septic systems and utilities (e.g., power lines, subterranean wells, and in-ground pipes and cable) may also be installed. Riprap or other materials may be used to stabilize slopes.

Access Roads

If there are no existing access roads, temporary or permanent access roads are constructed. Access roads are generally non-public or otherwise non-traditional roads that are utilized and maintained for access to existing or proposed facilities. Access roads may be utilized under a lease/agreement with other landowners. They are typically 10 to 25-feet wide, and may be dirt,

gravel, or paved. Access roads may need to cross wetlands or water bodies (see Wetland Fill or Water Body Crossing below). If a road is no longer needed, surface material is removed, and native vegetation is typically restored by seeding. Temporary roads may be restored with native vegetation following construction and do not require any operation and maintenance activities. Operation and maintenance of permanent access roads includes adding additional surface material (i.e., gravel, dirt) to the road and maintaining bar ditches. To minimize dust, water may be applied to roads. Additional details about road construction and maintenance can be found in GCP section 3.4.2.

Wetland Fill or Water Body Crossing

Whenever possible, project components should be located away from wetlands and water bodies to avoid filling or altering these features. However, avoidance is not always feasible and wetlands or other water bodies may be temporarily or permanently filled. Streams may be filled, piped, or relocated. Impacts to water bodies that are under the jurisdiction of the USACE or State permitting agency require separate permits and often include mitigation projects.

Culverts and Bridges

Avoiding impacts to wetlands and water bodies can be especially challenging with linear projects (e.g., roads, utilities). In some cases, these water features can be crossed using culverts or bridges. Culverts include small concrete and box girders that do not qualify as bridges due to their size. Typically bridges less than 20-feet wide are referred to as culverts. Conventional culverts include, but are not limited to, concrete, corrugated metal, timber, and PVC piping. A culvert may be installed or replaced as part of many Covered Activities in this GCP. Proper culvert sizing is determined by consulting hydraulics manuals and fish passage guidance. Culvert replacements typically require less than one month to complete. Typical culvert replacements involve removing vegetation at the outlet and inlet area, removing existing pavement and roadbed to extract the existing culvert, placing the new culvert, backfilling, and replacing the pavement, installing armoring and headwalls, re-vegetating if necessary, and if flow is present, dewatering the work area and establishing a flow bypass prior to initiating work. In-water construction typically occurs during low-flow months or during dry periods. Bridges are generally associated with transportation projects and are discussed further below.

Trenchless Crossing

Conventional or directional boring, or horizontal directional drilling (HDD) can be used to help minimize impacts to water bodies (or other features such as roads, railroads). Conventional “road boring” requires excavation of a pit on either side of the feature, the placement of boring equipment in the pit, and boring under the feature. HDD is a trenchless crossing method that is typically carried out in three stages:

1. directional drilling of a small diameter pilot hole;
2. enlarging the pilot hole to a sufficient diameter to accommodate the pipeline; and
3. pulling the prefabricated pipeline into the enlarged bore hole.

Open Cut Crossing

Wetlands or water bodies may also be crossed using open cut methods such as:

- Flume construction method – diversion of streamflow through flume pipes and placement of dams to exclude water flow from trench area
- Dam-and-pump construction method – diversion of stream flow using pumps and hoses and placement of dams to exclude water flow from the trench area
- Cofferdam method – installation of a temporary diversion structure from the bank of the waterbody to the approximate midpoint of the waterbody crossing to isolate that section of the stream from the remainder of the waterbody, creating discrete dry sections around which water flows unimpeded

Wetland or Water Body Restoration or Mitigation

When wetlands or water bodies are impacted from temporary project components (e.g., temporary access roads), these water features are restored (fill removed) onsite. Any temporary fill such as access bridges are removed, and the wetland is graded to original contours and reseeded. Completed open-cut stream crossings are stabilized before returning flow to the channel. Original streambed and bank contours are reestablished, and mulch, jute thatching, or bonded fiber blankets are installed on the stream banks. Seeding of disturbed stream approaches is completed immediately after final grading. Where necessary, slope breakers are installed adjacent to stream banks to minimize the potential for erosion.

Mitigation may be required for temporary and permanent impacts to wetlands and water bodies through State or Federal permitting processes. Mitigation projects may include Permittee responsible wetland restoration, protection, or creation, and may be on or offsite or may include use of wetland banks or in-lieu fee (ILF) funds. Mitigation projects may also be designed to benefit Covered Species.

Site Restoration/Planting

Restoration and cleanup activities commence as soon as practicable following completion of backfilling and regrading. These activities include seeding, fertilizer and mulching to restore ground cover and minimize erosion and cleaning up/removing construction facilities and debris.

Operations and Maintenance Activities

A variety of operations and maintenance activities are common to the Covered Activities. These may include human presence (e.g., walking, use of vehicles or equipment), lighting (see Project Lighting above), facility/equipment repair and replacement, and vegetation maintenance.

Repair of geotechnical slides (i.e., landslides known as “slips”) associated with existing infrastructure, construction activities, or weather events (e.g., flooding, storms, rainfall), typically commences as soon as practicable following report of an incident. Slip repair may include tree trimming or removal (to gain access to remote sites) and site stabilization (e.g., grading, contouring, filling, and revegetation) activities.

Vegetation maintenance may include mowing, brush cutting, tree trimming or removal, or herbicide application. Herbicides are generally applied to green or growing tissue and prior to seed production but may be applied during fall regrowth periods. Herbicides used for invasive plant species control at mitigation sites are often used in conjunction with mechanical and biological control. These control methods are also used near plantings to reduce competition from surrounding vegetation. The herbicide is typically applied directly to plant roots and foliage by wicking, spraying from a backpack sprayer, injecting, or by applying to cut stumps. Only application of herbicides occurring in accordance with the U.S. Environmental Protection Agency product label requirements are covered by this GCP. Aerial (e.g., aircraft or other broadcast spraying methods) herbicide application is not covered by this GCP.

Author: [redacted]
 Aerial restrictions also apply to herbicides.

3.4.2 Activities Common to Transportation Projects

Transportation projects¹⁶⁸ eligible to adopt this GCP as part of the application for a Permit include:

- Operations and maintenance or expansion of existing roadways/railways where there is no federal funding or oversight by the FHWA, FTA, or FRA
- Operations and maintenance, replacement or removal of associated structures, bridges, or culverts where there is no federal funding or oversight by the FHWA, FTA, or FRA
- Access road construction, operations and maintenance, and use in conjunction with other project types covered by this GCP (discussed above)
- Construction and operation/maintenance of private internal roads such as those associated with residential subdivisions

Recreational trails (e.g., bike trails) are not considered transportation projects for the purposes of this GCP and can be included without regard to their distance from existing roads/rails.

General land clearing, construction and restoration methods associated with transportation projects are described above (GCP section 3.4.1).

There are several project components unique to transportation projects discussed below.

Roadway and Associated Structure Construction

The scope and scale of projects that include Covered Activities can range from small projects such as reconstructing existing interchanges, minor realignments, and new sidewalks to those with large footprints such as new interchanges, new general-purpose lanes, realignments, new road corridors, and bypass routes. Public transportation projects include, but are not limited to, parking lots, transit centers, parking garages, and vehicle maintenance and/or storage facilities.

¹⁶⁸ An existing rangewide consultation is available for FHWA, FRA, and FTA projects (see <http://www.fws.gov/sites/default/files/documents/programmatic-biological-opinion-for-transportation-projects-2018-02-05.pdf>). Applicants with other Federal agency (i.e., USACE permitting) involvement may use the GCP to demonstrate compliance with the ESA. Please see GCP appendix F for the process for project sponsors with a federal nexus.

Construction of private internal roads such as residential subdivisions is also included in the GCP. Unique features may include paving, guardrails, and noise walls.

Roadway Maintenance

Roads require periodic maintenance to correct washouts or other deterioration. Maintenance can broadly be described as drainage system repair and maintenance, pavement preservation, facilities preservation, slide abatement, and bank stabilization and flood damage repair.

Drainage System Repair and Maintenance

Drainage System Repair and Maintenance activities include all work necessary to maintain roadside ditches and channels, cross culverts and pipes, catch basins and inlets, and detention/retention basins. Where necessary, culverts and ditches may be installed to facilitate drainage away from the road. Drainage facilities are cleaned periodically to permit free flow and to avoid erosion and damage to roads and other infrastructure.

Drainage system repair and maintenance work may occur throughout the year depending on the weather and the specific project; however, most work is scheduled to occur during the summer, during low-water flow or dry conditions.

Pavement Preservation

Pavement preservation consists of patching, repairing, and replacing roadway surfaces and pavement. If the existing pavement is in good condition, it may be covered over with a new layer of asphalt. Repair of badly deteriorated pavement could require grinding of existing pavement or replacement of the road foundation material prior to repaving.

Most paving occurs during May through September. Activities may occur 7 days a week and any time of day, depending on traffic volumes. Paving may result in a slightly higher road surface; therefore, manholes, inlets, and guardrails, etc. may need to be raised or replaced. Culverts may also require extension, repair, or installation as part of pavement preservation projects. For more information, see GCP section 3.4.1.

Installation of roadside signs, guideposts, and raised pavement markers; guardrail improvements, fence installation and repair; and paint striping may also be included in a paving project. For most projects, installation of road signs, guideposts, and fencing involves minor amounts of excavation and vegetation removal. Trenching may also be required to run utilities from existing sources to lighted signs.

Facilities Preservation

Facilities preservation is the preservation, maintenance, and expansion of weigh stations, rest areas, and road maintenance facilities. Activities at these facilities may include expansion of buildings and parking areas; septic system expansion or alteration; paving, painting, striping, and signage; vegetation alteration and removal; and erosion and sediment control practices. Improvements to existing roadway facilities occur year-round depending on the weather, and rarely involve expanding the building footprint.

Slide Abatement, Bank Stabilization, and Flood Damage Repair

Sites may need to be restored after rockslides, flood damage, or other types of damage. Activities may include removal of debris, tree removal, recontouring of the bank, and stabilization. Streambank stabilization practices to protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries to reduce erosion and may include placement of rock or wood features and vegetation planting.

Bridge Construction and Removal

Bridge construction may be a component of a larger roadway project or a stand-alone project. There are multiple types of bridges including, but not limited to, concrete slab, concrete arch, concrete box girder, concrete T beam, steel beam, pre-tensioned concrete beam, post-tensioned concrete beam, steel truss and timber trestle. Bridges can span wetlands, streams, and other water bodies as well as roadways and other transportation infrastructure. Some bridges span the stream systems they are crossing, while others have piers in the channel. Most new bridges are designed to span as much of the system as possible, and to provide the least amount of constriction that is practicable on the system.

Bridge replacements tend to be long-term projects requiring one or more years to complete. Installation of new bridges may require construction of a detour bridge. Occasionally, half of the new bridge is constructed adjacent to the old bridge and acts as the detour bridge while the original is removed and replaced. Most bridge replacements use the same alignment or are constructed near the old alignment. Temporary bridges may be built as construction platforms. Often, in-water work is generally timed to minimize impacts to sensitive aquatic species. Some sedimentation of the waterway may occur during pile driving and removal. Bridge removal can also result in sediment and small concrete chunks entering the water.

Bridge construction and removal projects include:

- excavation for new bridge abutments;
- construction of bridge columns/piers/abutments;
- pile installation and removal;
- bridge removal/replacement; and
- riprap placement.

Excavation, construction and use of riprap are described in Land Preparation and Structure/Infrastructure Construction or Replacement (GCP section 3.4.1).

Pile Installation and Removal

Piles are installed using several different methods. Pile driving involves the use of an impact pile driving hammer or vibratory hammer. To remove piles, the hammer is engaged and slowly lifted with the aid of a crane, extracting the piling from the sediment.

Bridge Removal/Replacement

Bridges can be removed using several methods, including:

1. dismantled over water from adjacent bridge deck or approach;
2. dismantled over the water and lowered onto a barge and barged out to a dismantling site;
3. dismantled over water and sections removed by crane; and
4. falsework (temporary structures) can be built under and around the bridge, and the bridge dismantled by sections.

Bridge removal methods are selected based on a number of factors, including the structure of the bridge, the size of the bridge and river, the location within the system, the topography, and the amount of access to the bridge and the banks. Since many older bridges have bridge piers in the system, these also need to be removed. Concrete piers can be removed by demolition using a hoe ram (as long as pieces do not enter the water) or removed by a vibratory hammer; they can be cut off two feet below the ground level, or a temporary cofferdam can be constructed, and the material can be hydraulically removed. The bridge demolition method will be determined by site and project-specific conditions.

Isolation of the work area and stream is often required on bridge replacement projects and may require the use of cofferdams, sandbag berms, temporary culverts or flumes depending on site conditions. Bridge replacement projects often require column construction within stream channels, which typically involves the isolation of the column location through the use of a large diameter steel sleeve that is driven into the stream substrate. All work, including excavation for the footing, placement of forms, and pouring of the concrete, would then be completed within the sleeve at each column location. This technique helps minimize construction impacts by isolating the work from the stream.

Bridge replacements may require more than one construction season, due to multiple factors such as project complexity or if the in-water work may be limited to certain periods to minimize impacts to sensitive aquatic species. Often, work on the out-of-water portions or behind cofferdams will occur year-round.

Bridge Repair, Retrofit, and Maintenance

Bridge repair, retrofit, and maintenance activities are implemented to prolong the use and function of bridges, ensure motorist safety, and protect the environment. Whether a bridge is repaired, rehabilitated, or replaced depends on the age of a bridge and damage that may occur to a bridge (e.g., from a storm event, earthquake, or vehicle or boat collision). The length of stream and/or wetland potentially affected by bridge repair and maintenance depends upon the scale of the bridge project and the required actions.

Seismic retrofit activities are not temperature and/or time sensitive and may occur anytime throughout the year, while joint replacement and bridge deck replacement are temperature-dependent activities, limited to the warmer months. Bridge scour repair work tends to occur during low-water times of year, and bridge painting may only occur late spring through fall when temperatures are high enough to allow the paint to dry properly. Bridge maintenance projects can be long-term, lasting more than one construction season.

Bridge repair, retrofit and maintenance projects include:

- scour repair;
- seismic retrofit; and
- deck repair and replacement; and maintenance.

Scour Repair

Scour at bridge piers can become a major safety issue for some bridges. Repair of scoured bridge piers can include construction of temporary cofferdams around affected piers to isolate work areas; concrete or gabion repair to footing, columns or abutments; placement of riprap at scour locations; placement of concrete mattresses along bridge piers; or installation of concrete armor tetrapods (four-legged, interlocking concrete structures). A-JACKS are also used for direct bridge scour repair, especially where there is a low bridge with a limited hydraulic opening and when hauling rock is cost prohibitive.

Concrete mattresses consist of flat, continuous blocks of cured concrete (closed cell) or contain voids in which stream gravel can be placed (open cell). The concrete blocks are linked together with steel or synthetic cable. To install a concrete mattress, the streambed must be excavated at the leading and trailing edges to avoid undermining of the device. The mattress is placed on geotextile or filter fabric with an excavator, and earth anchors are often used to secure it. The A-JACKS system is composed of cured concrete pieces resembling “jacks” that are assembled into a continuous, interlocking, yet flexible matrix. This matrix provides protection against high-velocity flow. The use of A-JACKS is an alternative to riprap placement and may avoid the need for streambed excavation. A-JACKS are typically secured together with steel cable. Placement typically requires an excavator which is operated from the stream bank whenever possible. Concrete armor tetrapods are similar in function but differ in shape.

Construction of temporary access fills may be required to provide a working platform for machinery. Working platforms are usually constructed of light, loose riprap matched to the material necessary for the repair. The platform material is then repositioned as the machinery backs away from the work site. Installation methods vary on a site-specific basis. In navigable waters, access from a barge may be required. Whenever possible, equipment, such as excavators, will operate from stream banks, bridges, or temporary work platforms to avoid in-channel operation. If in-channel equipment operation is necessary, aquatic spider excavators are often used, especially if access to the site is difficult, as they are small, relatively light, and have rubber tires to minimize substrate disturbance. Aquatic spiders are typically used in small streams, because the size of rock they can pick up is limited. Sometimes materials can be placed directly on the streambed with little to no excavation; in other instances, excavation is necessary to key in materials. Often, stream flow and anticipated erosion will determine specific aspects of design such as anchoring.

Seismic Retrofit

Seismic retrofits can involve any of the following depending on the structure:

1. removing and replacing bolts and or rivets with high-strength connections;

2. installation of concrete catcher blocks at piers (not typically pre-cast, but constructed using steel-reinforced forms filled with concrete poured on site);
3. installation of pier sleeves (collars) to the depth of the spread footing; and
4. installation of longitudinal restrainers, transverse girder restrainers, and/or transverse deck restrainers which are typically installed under the bridge as looped steel cables or bolts. No fill or pile driving is required for their installation. Longitudinal restrainers prevent abutting spans from being pulled apart during an earthquake. Transverse restrainers pin abutting spans together, preventing them from being sheared apart vertically or laterally during an earthquake.

Deck Repair and Replacement

Removal may involve traditional mechanical methods such as jackhammers, concrete saws, and cold-milling (grinding), or hydro-demolition (hydro-milling). Hydro-demolition uses a high-pressure water jet stream to remove unsound concrete. Concrete debris is contained and then removed with vacuum equipment. Deck repair can involve either partial-depth or full-depth patching. Partial-depth replacement repairs surficial damage to the travel surface by cleaning and filling voids with a suitable material (e.g., concrete, asphalt). In general, when full-depth patching occurs, a temporary form is held against the underside of the deck and material fills the void from above. Longer bridges have finger joints that must be repaired and replaced as needed.

Maintenance

Bridge maintenance activities may include washing, painting, debris removal from bridge piers, guardrail repairs, lighting and signage repairs, and structural rehabilitation. Such activities generally include work such as repairing damage or deterioration in various bridge components; cleaning out drains; repairing expansion joints; cleaning and repairing structural steel; sealing concrete surfaces; concrete patching; and sanding and painting. Bridge painting involves washing the bridge with highly pressurized water, abrasive sand blasting to remove all corrosion, and then applying a minimum number of coats of paint. Steel bridges also require rivet replacement and crack stabilization. These activities are often completed during bridge painting operations. Debris removal can be accomplished in a variety of ways depending on the type and quantity of debris, and the size and configuration of the bridge. Hand removal is possible in some instances, although the use of mechanical aids, such as chainsaws, winches, and heavy equipment, are often necessary. Structural rehabilitation may include replacement or repair of degraded steel superstructure, repair to bridge approaches, or repair or replacement of bridge rail. Work is typically conducted in a stepwise fashion, moving from one section of the structure to the next, rather than on the entire structure at once.

3.4.3 Activities Common to Utility Projects

Utilities, as defined in this GCP, include:

- new construction, modifications, or maintenance activities associated with:
 - water lines,
 - sewer lines,
 - cable/internet (buried or aboveground),
 - electrical distribution lines (buried or aboveground);

- electrical substations;
- photovoltaic (PV) solar power projects; and
- maintenance or modification (not expansion) of existing electrical transmission lines within existing footprints.

Other project types included as Covered Activities (e.g., residential development) also may involve utilities. Most utility projects are linear in nature. These projects are typically narrow and placed in road rights-of-way (ROWs). While electrical substations are not linear, they generally occupy small parcels of land (less than 10 acres).

Construction/Installation

Land clearing, construction, and restoration methods associated with utility projects are described above (GCP section 3.4.1). Utility projects frequently involve trenching and burial of a variety of pipes and lines. Most electrical distribution projects also involve the overhead lines and poles, similar in many ways to construction of lighting projects. Most disturbance is small for installation of poles and stringing of lines is done from vehicles in cleared ROWs or on roads. Utility projects may require the construction and maintenance of access roads. Substations are typically surrounded by fencing.

Operations and Maintenance

Operation and maintenance of utilities may include replacement of poles or other structures, grounding improvements, reconductoring/thermal upgrades, pole inspections and repairs, painting of poles and towers, and replacing/repairing lines. Substations may need maintenance, upgrades, or expansions.

Most individual replacement or repair locations require less than one acre of disturbance. Utility line ROWs are generally kept clear of trees to provide for line maintenance and prevent roots from impacting pipes or branches from hitting lines.

Decommissioning of above-ground electric distribution lines may involve removal of poles and distribution lines. Buried electric lines are typically left in place once disconnected from power sources.

4.0 Conservation Program

The conservation program of this GCP is based on the biological and ecological needs of the Covered Species and defines the conservation goals the plan is intended to accomplish. This section describes the goals and objectives of this GCP, CMs intended to avoid or minimize the amount of take, mitigation measures to offset unavoidable take, monitoring and adaptive management strategies to ensure that the plan's conservation goals are achieved, and procedures to address changed or unforeseen circumstances that may occur over the duration of the plan and the associated Permits.

Because life histories, habitat needs, and threats faced by the IBAT, NLEB and TCB are mostly similar (see chapter 2), this GCP provides a single conservation program with consistent measures intended to benefit all three species.

The conservation program outlined here is based on information and concepts described in several key documents, including rulemakings;¹⁶⁹ the draft recovery plan for the IBAT;¹⁷⁰ IBAT 5-year reviews;¹⁷¹ the Species Status Assessments for the NLEB¹⁷² and TCB;¹⁷³ and the Regional IBAT Conservation Strategy that steps-down rangewide guidance into a consistent approach guiding conservation actions throughout the Service Region.¹⁷⁴ This GCP further defines specific biological goals, objectives, and actions within the three-State GCP Plan Area.

4.1 Conservation Strategy

Conserving the Covered Species will require maintaining remaining populations representing each species' ecological, behavioral, and genetic characteristics; providing redundancy and resiliency by protecting remaining populations of each species across its' current range; and managing threats acting upon the species. Four key conservation needs to improve the status of these species include:

1. managing the effects of WNS by reducing its impacts and conserving the survivors;
2. conserving and managing winter colonies, hibernacula, and surrounding spring staging/fall swarming habitat;
3. conserving and managing maternity colonies and their habitat; and
4. conserving migrating Covered Species.¹⁷⁵

All biological goals, objectives, and CMs described in this plan are intended to avoid and/or minimize impacts to bats, and to restore and/or protect populations affected by WNS. Measures to conserve and manage winter roosts (hibernacula) and maternity colonies are expected to aid in managing the effects of WNS. Protection of populations that appear to be more resilient to the effects of the disease (i.e., "the survivors") is emphasized.

When suitable habitat for a listed species is present and the project may affect listed species, the Service recommends species surveys to either refute the assumption of presence and the need for additional technical assistance, or to enable accurate, fact-specific analyses of effects and adoption of appropriate CMs. In some situations, rather than conduct habitat and/or species surveys, a Project Proponent may choose to assume presence of the species. Assuming presence, however, usually makes the analysis of effects significantly more difficult and time consuming

because the specific nature of the species' presence (e.g., number of individuals present) is crucial to the analysis and must still be determined using the information. Also, assuming presence can lead to the need for conservation actions that otherwise would not be needed if surveys were to be conducted and either not present or take is not reasonably certain to occur as a result. Therefore, we have incorporated surveys as part of our conservation strategy

Author

Sounds like a good IBAT reference...

populations representing

Author

This is unlikely to be provided by implementing the recommended survey protocol - acoustics cannot determine this.

¹⁶⁹ 80 FR 17974; 81 FR 1900

¹⁷⁰ Service 2007

¹⁷¹ Service 2009; 2019

¹⁷² Service 2022a

¹⁷³ Service 2021a

¹⁷⁴ Service 2018

¹⁷⁵ Service 2018

ack current presence/probable absence (P/A) information. For example, for projects proposing non-linear projects with greater than 25 acres of tree removal (topping, pruning, and/or limbing) must undertake P/A surveys to be covered by the GCP. In addition, we have included the ability of the Applicant to identify and enhance potential hibernacula and roosts as mitigation measures.

The specific biological goals and objectives of this GCP; therefore, for Covered Species' remaining conservation needs in NY, PA, and WV.

4.2 Biological Goals of this GCP

The biological goals for this GCP broadly describe the desired future conditions of the Covered Species or their habitat(s). Each goal is supported by one or more objectives that define how those future conditions will be achieved.

Because this conservation plan relies on habitat as a surrogate for population, and because Covered Species, the goals of the plan are also described in terms of habitat quality. The key biological goals of this plan apply to all Covered Species and their habitat.

Biological Goal 1 – Hibernacula sites will be identified, protected, restored, and maintained to ensure that these essential overwinter sheltering habitat remain available for the Covered Species in the Plan Area.

Biological Goal 2 – *Spring staging areas* will be protected and enhanced (as needed) to ensure that these essential feeding and sheltering areas remain available for the Covered Species in the Plan Area.

Biological Goal 3 – Maternity colonies and summer habitat will be identified, protected, restored (as needed), and maintained to ensure that essential breeding, feeding, and sheltering areas are available for the Covered Species in the Plan Area.

Biological Goal 4 – Fall swarming areas will be protected and enhanced (as needed) to ensure that these essential breeding, feeding, and sheltering areas remain available for the Covered Species in the Plan Area.

4.3 Objectives

Objectives describe the incremental steps taken to achieve a goal. Objectives describe what will be achieved and contain measurable elements that can be monitored to determine success or failure. This GCP identifies the following specific biological objectives for the Covered Species in the three-State Plan Area:

Objective 1 – Hibernacula will be protected and managed to maintain the amount and quality of suitable overwintering habitat for the Covered Species within the Plan Area. Supports GCP biological goal 1.

Author

25 acre limitation without surveys to promote surveys, but applies in areas without known data - so not occupied????? it, meaning there is none except within the season it is found

us on the Covered

Author

Should explain why this is being done, especially since habitat is not limiting for these species and protecting active season habitat does nothing to address the primary threat to these species (WNS).

as needed)

Objective 2 – Degraded hibernacula will be restored or enhanced to increase the amount and quality of suitable overwintering habitat for the Covered Species within the Plan Area. Supports GCP biological goal 1.

Objective 3 – Surveys will be conducted to locate currently unknown hibernacula locations; and newly discovered hibernacula within the Plan Area will be restored (as needed) and protected. Supports GCP biological goal 1.

Objective 4 – Spring staging/fall swarming areas will be protected and managed to maintain the amount and quality of these essential feeding, breeding and sheltering areas for the Covered Species within the Plan Area. Supports GCP biological goals 2 and 4.

Objective 5 – Degraded spring staging/fall swarming areas will be restored or enhanced (as needed) to increase the amount and quality of these essential feeding, breeding and sheltering areas within the Plan Area. Supports GCP biological goal 2 and 4.

Objective 6 – Maternity colonies and their summer habitat will be protected and managed to maintain the amount and quality of these essential breeding, feeding, and sheltering areas for the Covered Species within the Plan Area. Supports GCP biological goal 3.

Objective 7 – Surveys will be conducted to locate currently unknown maternity colonies, and their summer habitat and sites within the Plan Area will be restored (as needed) and protected. Supports GCP biological goal 3.

Objective 8 – Degraded summer habitat will be restored or enhanced (as needed) to increase the amount and quality of these essential breeding, feeding, and sheltering areas within the Plan Area. Supports GCP biological goal 3.

Objective 9 – Maternity colonies utilizing artificial roost structures and the surrounding habitat will be protected and managed to maintain the amount and quality of these essential feeding and sheltering areas for the Covered Species within the Plan Area. Supports GCP biological goal 3.

4.4 Avoidance, Minimization, and Mitigation

ESA section 10 requires that conservation plans “minimize and mitigate to the maximum extent practicable” the impacts of take authorized by a Permit, and that issuance of the Permit will not “appreciably reduce the likelihood of the survival and recovery of the species in the wild.” This GCP adopts best practices for conservation of the Covered Species; therefore, certain avoidance measures are required in order to obtain a Permit under this GCP. Including avoidance measures for participation in the GCP results in fewer impacts from project activities, reducing the Applicant’s need to implement other minimization and mitigation measures. In general, conservation plans should include mitigation programs that are based on sound biological rationale and are practicable and commensurate with the impacts of the project on species for which take authorization is requested. If the proposed project is expected to result in permanent habitat loss, then the mitigation strategy must include compensatory measures for the permanent preservation of suitable habitat or similar measures. Applicant must provide mitigation for impacts to the IBAT, NLEB and/or TCB associated with removal of occupied or assumed occupied habitat (including impacts from noise and vibrations).

Author

Habitat loss mitigated with habitat preservation
(including impacts from noise and vibrations).

The conservation program of this GCP is intended to ensure that the impacts of Covered Activities on the IBAT, NLEB and TCB are fully minimized and mitigated. Required CMs (GCP section 4.4.1) and mitigation measures (GCP section 4.5) are provided below.

4.4.1 Conservation Measures that Avoid or Minimize Incidental Take

The CMs described below are designed to achieve plan objectives by further defining measurable elements, specifying end results, and indicating when they will be achieved. CMs describe specific actions a Permittee will implement to achieve objectives that support conservation plan goals. The CMs are based on the biological and ecological needs of the Covered Species and are intended to be practicable and commensurate with project impacts to the species and their habitats.

Permittees must commit to implement all CMs that pertain to their project. The GCP also includes optional measures, which are identified in *italics* below, that may help further reduce impacts or contribute to our understanding of the biology or ecology of the Covered Species. Each CM and optional measure may support multiple GCP biological objectives.

An Applicant's IPP submitted as part of the GCP application process will identify which of the following CMs apply to the proposed project. Implementation of applicable avoidance and minimization CMs will be required in the terms and conditions of issued Permits. The Applicant is responsible for ensuring that operators, employees, and contractors are made aware of and follow the required CMs associated with this GCP.

4.4.1.1 Conservation Measures that Support All Biological Objectives

The following measures apply to all proposed projects and support all biological objectives of this GCP. In these CMs, tree removal includes whole tree removal, trimming, topping, pruning, and/or limbing.

GENERAL CM 1. All survey efforts must follow the most recent Service decontamination protocols regarding WNS, which can be found at: <https://www.whitenosesyndrome.org/static-page/decontamination-information>

GENERAL MEASURE (OPTIONAL) CM 2. Develop and implement a restoration plan to plant and restore native trees on disturbed sites and temporary construction areas.

GENERAL MEASURE CM 3. Implement best management practices to ensure water quality by minimizing the introduction of sediment into waterways that provide foraging habitat for the Covered Species within the Permit Area.

4.4.1.2 Conservation Measures that Conserve and Manage Winter Colonies, Hibernacula, and Fall Swarming/Spring Staging Areas

The following CMs support GCP objectives 1 and 4.

For projects within 0.5 mile of known or assumed occupied hibernacula, implement HIB CM 1(A or B) and FALL/SPRING CM 1¹⁷⁶

HIB CM 1A. Modify project activity locations to ensure they are more than 0.5 mile away from known or assumed occupied hibernacula openings or underground features. Note: in some cases, mapping of underground passages may be required to achieve this measure.

OR

HIB CM 1B. Avoid all take from project activities within 0.5 mile of known or assumed occupied hibernacula openings or underground features. In order to avoid take, projects within 0.5 mile shall not cause any stressors that:

- disturb bats (during inactive season: noise, vibration, smoke, increased entry by humans; leading to shorter torpor bouts and more frequent arousals and starvation);
- kill bats (during inactive season: filling hibernacula openings, crushing, flooding hibernacula, collapse of hibernacula, increased entry by humans);
- negatively impact water quality for bats that wake up at cave (during inactive season); and
- negatively alter, damage or destroy hibernacula (any time)
 - directly or unintentionally fill or otherwise alter hibernacula, thus altering air flow (via soil erosion, slumps, debris disposal, etc.);
 - create new hibernacula openings that alter air flow,
 - alter water levels,
 - alter humidity,
 - collapse hibernacula from vibration, digging, etc.

Author

Both filling hibernacula openings and collapse of hibernacula from vibrations should be completely avoided regardless of time of year, as this would likely alter the hibernacula environment and/or prevent bats from accessing the hibernacula.

Author

This should include partial collapses within hibernacula. coordination (e.g., planning and technical habitat vegetation removal). office (e.g., location, consider activities within

Activities associated with potential projects that would not cause take from known or assumed hibernacula may occur within identified 0.5-mile buffer. Projects within the 0.5-mile buffer should be reviewed by the local field office (e.g., bridge/structure bat assessments, survey studies, property inspections, property sales, painting, non-suitable habitat removal). Project Proponents shall provide project descriptions to the local field office (e.g., location, timing, duration, methods). The local field office project review will consider activities within 0.5 mile of openings or underground features associated with known or assumed hibernacula and assess impacts to determine if project activities are anticipated to cause any of the stressors listed above.

FALL/SPRING CM 1. Avoid destruction or alteration of suitable spring staging or fall swarming areas from project activities within 0.5 mile of known or assumed occupied hibernacula openings or underground features. In order to avoid take, project activities within 0.5 mile shall not cause any stressors that:

¹⁷⁶ Areas within a 0.5-mile buffer around known or assumed hibernacula are excluded from the GCP Plan Area and no take of Covered Species will be authorized within those areas.

- disturb bats (during spring staging or fall swarming season or fall swarming season); and
- kill or harm bats (e.g., cutting trees while bats are in torpor or fall swarming season).

Many activities associated with potential projects will not be reasonably certain to cause take of the Covered Species and may; therefore, occur within identified 0.5-mile buffers after coordination with the local field office (e.g., bridge/structure bat assessments, surveys, planning and technical studies, property inspections, property sales, painting, non-vegetation removal). Project Proponents shall provide the project description (e.g., location, timing, duration, methods) to the local field office. This information shall be used to determine if the project is likely to cause take of the Covered Species within 0.5 mile of known or assumed occupied spring staging or fall staging areas. An assessment of impacts that demonstrates the relevant project activities will not cause any of the stressors listed above.

For projects more than 0.5 mile from hibernacula, but within known or assumed occupied spring staging/fall swarming areas (up to 20 miles depending on species and hibernacula population numbers¹⁷⁷), follow FALL/SPRING CMs 2-8.

FALL/SPRING CM 2. Site project activities to avoid damaging or removing documented roost trees for the Covered Species (unless no longer suitable for roosting) and avoid disturbing documented roosts any time of year.

FALL/SPRING CM 3. Reduce project footprints and arrange project activities to minimize tree removal or impacts to streams and wetlands within fall swarming/spring staging areas.

FALL/SPRING CM 4. Conduct any tree removal (suitable habitat) within fall swarming/spring staging areas when bats are unlikely to be present.

- If summer presence is known or assumed, conduct tree removal while bats are in hibernation (contact local field office for tree cutting dates).
- If summer presence is unknown and Project Proponent is not assuming summer presence, conduct summer P/A surveys.
- If bats are unlikely to occur in summer per any prior information or survey results, avoid tree removal during fall swarming periods.

FALL/SPRING CM 5. Use only pesticides that are approved for use in karst areas (e.g., sinkholes) or within/near aquatic features (e.g., streams, ponds, lakes, wetlands).

FALL/SPRING CM 6. Locate staging areas for equipment, fuel, materials, and personnel at least 100 feet (or greater if local or State rules require more) from wetlands, streams and waterbodies (including drainage ditches), and water supply wells, to reduce the potential for

¹⁷⁷ See: <https://www.fws.gov/media/indiana-bat-section-7-and-section-10-guidance-wind-energy-projects>.

Applicants should coordinate with their local field office to determine if their proposed project is located within known occupied spring staging/fall swarming areas.

sediment and hazardous spills entering these areas. If sufficient space is not available, coordinate with the local field office to determine if alternate measures (i.e., spill plan) can avoid contamination of foraging habitat and drinking water.

FALL/SPRING CM 7. Direct temporary lighting away from suitable season.

Author _____
 How is this quantified?
 permanent lights, use for replacement lighting); or the Illuminating with a priority of "uplight"

FALL/SPRING CM 8. When installing new or replacing existing per downward-facing, full cut-off lens lights (with same intensity or less for those transportation agencies using the BUG system developed by Engineering Society, the goal is to be as close to 0 for all three ratings of 0 and "backlight" as low as practicable.

4.4.1.3 Conservation Measures that Conserve and Manage Maternity Colonies and their Habitat

All projects within known or assumed occupied suitable summer habitat follow SUMMER CM 1-15. The following CMs support GCP objectives 6 and 7.

SUMMER CM 1. Site project activities to avoid all damage to or removal of NLEB or TCB roosts (unless no longer suitable for roosting) and trees documented roosts any time of year.

Author _____
 This was formerly the only regulated activity, and now it is being precluded from a take permit...
 ing or removing suitable

SUMMER CM 2. Site project activities to minimize damaging, degradation of roosts or foraging habitat in known or assumed occupied summer habitat.

Author _____

SUMMER CM 3. Site project activities to avoid all removal of documented habitat any time of year.

Author _____
 This makes "commuting habitat" the most

SUMMER CM 4. Site project activities to minimize removing potential habitat in known or assumed occupied summer habitat.

Author _____
 Clarify TOY restrictions

SUMMER CM 5. Conduct P/A surveys for projects with more than 2 suitable (but not documented) summer habitat removal.

Author _____
 Unless these are mist net surveys, no data will be accumulated that addresses the need raised above about needing sex and numbers for more detailed guidance.

SUMMER CM 6A. To avoid lethal impacts associated with tree removal of suitable habitat (including suitable roosts and surrounding trees that may be suitable roosts) within the known or assumed occupied summer habitat.

OR

SUMMER CM 6B. If avoidance of the entire active season is not possible, avoid removing any suitable habitat (including suitable roosts) within occupied summer habitat between April 1 and August 15.¹⁷⁸

Author _____
A similar caveat could/should be given for fall/spring habitat, including the footnote.

SUMMER CM 7. Avoid all raising of any road/rail profile above the feet of known or assumed occupied summer habitat.

tree canopy within 1,000

SUMMER CM 8. During the active season, avoid all burning of debris piles (brush piles) for vegetation removal within known or assumed occupied summer habitat. Methods such as chipping and mulching are preferred.

Methods such as chipping and mulching are preferred.

SUMMER CM 9. Coordinate with the local field office for projects that may have existing traffic/background levels and/or vibrations (e.g., blasting) with respect to captures, or detections. Avoid conducting those activities during the active season. Measures to dampen sound/vibration levels.

Author _____
A similar caveat could/should be given for fall/spring habitat

SUMMER CM 10. Direct temporary lighting away from known or assumed occupied summer habitat during the active season.

Author _____
How is this quantified?

SUMMER CM 11. When installing new or replacing existing permanent lighting, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lights); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

When installing new or replacing existing permanent lighting, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lights); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

SUMMER CM 12. Use only pesticides that are approved for use in and around wetlands.

Author _____
Even if project area is entirely dry? Seems unnecessary.

SUMMER CM 13. Locate staging areas for equipment, fuel, materials, and personnel at least 100 feet (or greater if local or State rules require more) from wetlands, streams and waterbodies (including drainage ditches), and water supply wells, to reduce the potential for sediment and hazardous spills entering these areas. If sufficient space is not available, coordinate with the local field office to determine if alternate measures (i.e., spill plan) can avoid contamination of foraging habitat and drinking water.

Locate staging areas for equipment, fuel, materials, and personnel at least 100 feet (or greater if local or State rules require more) from wetlands, streams and waterbodies (including drainage ditches), and water supply wells, to reduce the potential for sediment and hazardous spills entering these areas. If sufficient space is not available, coordinate with the local field office to determine if alternate measures (i.e., spill plan) can avoid contamination of foraging habitat and drinking water.

SUMMER MEASURE (OPTIONAL) 14A. Minimize to the maximum extent practicable or consider alternatives to the number of stream crossings and acres of wetland fill within known or assumed occupied summer habitat.

SUMMER MEASURE (OPTIONAL) 14B. If stream or wetland mitigation is required as part of State, local or Federal permitting processes for the project, where practicable, site those efforts close to known Covered Species roosting or foraging habitat.

¹⁷⁸ Unless fewer than 10 trees will be removed, and a visual emergence survey that did not record any presence has been completed.

SUMMER CM 15A. To avoid lethal impacts, conduct any tree removal, topping, limb trimming, or pruning for operation and maintenance activities within documented summer habitat during the inactive season.

OR

SUMMER CM 15B. If avoidance of the entire active season is not possible (Summer CM15A), avoid conducting any tree removal, topping, limb trimming, or pruning for operation and maintenance activities within documented summer habitat between April 1 and August 15.¹⁷⁹

4.4.1.4 Conservation Measures that Conserve and Manage Artificial (Man-Made) Roosting Habitat

All projects within known or assumed occupied structures follow STRUCTURE CM 1-2.

The following CMs support GCP objective 9.

STRUCTURE CM 1A. Perform any structure replacement and/or maintenance work during the winter hibernation period unless a hibernating colony of bats is present.¹⁸⁰ Note: Structure CM 1A is an avoidance measure for directly affecting roosting bats; the full implementation of which may not always be practicable. If structure replacement, and/or maintenance work must be performed when bats are present, then follow Structure CM 1B.

OR

STRUCTURE CM 1B. If work is conducted when bats are present, avoid all disturbance of bats. For example, the following types of bridge work can generally be conducted when bats are present:

- Above deck work where construction equipment or materials do not extend to the underside of deck where bats may be located (e.g., materials that may drip down to underside of deck) or does not include percussives (vibration) or noise levels above general traffic (e.g., road line painting, wing-wall work)
- Below deck work that is not conducted immediately below roosting bats and does not involve percussives or noise level above general traffic (e.g., wing-wall work, some abutment, beam end, scour, or pier repair)

STRUCTURE CM 2. Avoid removing or altering roosting potential of structures with signs of roosting bats (e.g., signs of stains, guano, or vocalization).

Author

Structures or bridges

This seems to indicate that exclusion of bats can no longer occur in artificial roosting structures- seems overly onerous for DOT.

¹⁷⁹ Unless fewer than 10 trees will be removed, and a visual emergence survey that did not record any presence has been completed.

¹⁸⁰ Coordinate with local field office to determine if overwintering bats are present.

4.5 Anticipated Type and Amount of Take

Service regulations provide that the amount or extent of anticipated take may be expressed using surrogate metrics, provided that the Biological Opinion or incidental take statement documenting the conclusion of required intra-Service consultation under ESA section 7:

1. Describes the causal link between the surrogate and take of the listed species.
2. Describes why it is not practical to express the amount of anticipated take or to monitor take-related impacts in terms of individuals of the listed species; and
3. Sets a clear standard for determining when the amount or extent of the taking has been exceeded.¹⁸¹

The Service applies the same rationale for use of surrogates in Permits. For this GCP, acres of suitable habitat are used as a surrogate for take of individual IBATs, NLEBs, and TCBs. The ESA directs the Service to rely upon the best available scientific and commercial data to inform decisions. Therefore, in the absence of precise, empirical data, the Service must make science-based assumptions in its decision-making process.

It is not practical or possible to quantify the amount of anticipated incidental take in terms of individual bats for this GCP. While it may be possible to estimate a range of individuals that would be adversely affected by any individual project, it is not possible to predict the number of individuals affected for an unknown number of projects at unknown specific locations over the duration of the GCP.

Though overwintering bats can be counted when individuals congregating in mines and caves that serve as hibernacula sites are under a state of torpor, it is not feasible to count IBATs, NLEBs, or TCBs during the active season. When active, individual bats are highly mobile, utilize multiple trees that constitute a single colony's roost site, and typically redistribute among the colony's multiple roost trees every 2-3 days.

Though maternity colony sizes have been estimated, projections of the number of unknown colonies within the GCP Plan Area vary widely. Colonies could be located anywhere throughout the GCP Plan Area where suitable habitat is present. By some estimates, the locations of fewer than 10 percent of all IBAT maternity colonies¹⁸² within the Plan Area are known.

It is also not practical to monitor take in terms of individual IBATs, NLEBs, or TCBs because:

1. all three species are small and inconspicuous in color, which makes locating dead or injured individuals unlikely;
2. any dead or injured bats of either species may be eaten or scavenged;
3. all three species typically occupy forested areas during the active season where they are difficult to observe;
4. all three species spend a substantial portion of their lifespan in a state of torpor in hibernacula where they are difficult to locate;

¹⁸¹ 50 CFR 402.14(i)(1)(i)

¹⁸² Service 2018

5. because bats are highly mobile, delayed mortality from project related injuries may occur some distance from the project site;
6. project-related starvation or failure to reproduce cannot be detected; and
7. project-caused losses may be masked by fluctuations in numbers associated with other stressors such as WNS.

Existing survey techniques are limited to determining the presence or absence of bats in a particular area. Currently available field methods are unable to track individual bats that are exposed to lethal or sublethal take from ongoing activities. Monitoring is not practical to monitor take-related impacts in terms of individuals. The impact of the take solely as a function of directly impacted individuals does not account for impacts to the colony or population that result from take (e.g., decrease in fecundity).

Author

So again, why the statement above about the service needing to know life stages and numbers present?

Tree-clearing during the *inactive season* may result in effects that rise when the bats return to the area in subsequent active seasons. For example, bats may require additional energy to locate new suitable summer habitat. It is not possible to measure such project-caused take in real time. Furthermore, there are challenges to track and monitor individuals. The use of acres of tree removal (i.e., primary take authorized by this GCP) as a surrogate for take allows the Service to estimate take (i.e., the numbers of acres for determining when the level of anticipated take has been exceeded). In addition, because the location, timing, and acreage of habitat impact are measured, and monitored, habitat is the most reasonable surrogate for expressing the amount of anticipated take, monitoring take, and detecting when the anticipated level of take has been exceeded. Therefore, this GCP relies on the acreage of affected habitat as a surrogate for expressing amount and extent of anticipated take.

Author

While the logic to use habitat as a surrogate for take is clear, it doesn't make sense to hold the same level of scrutiny for take assessment for a surrogate as there is for the resource. Take of individuals is much more clear in assessing take (LAA vs NLAA), whereas I would think using habitat as a surrogate would almost always result in

All forms of take are not anticipated from each project given the CMs included, as well as the location of projects and scope/scale of tree removal. In addition to assessing impacts from the loss of roosts, the Service anticipates impacts from the loss or fragmentation of forested areas that serve as roosting, foraging, or commuting habitat (travel corridors between roosting and foraging habitat).

Similar to impacts associated with loss/fragmentation of summer habitat, the likelihood of take occurring within spring staging/fall swarming areas depends on the location and extent of tree removal, the landscape context (amount of remaining suitable habitat), and the fitness of the individual bat.

4.5.1 Anticipated Type of Take

An IPP submitted as part of an application for a Permit must describe the effects likely to result from the taking of the species.¹⁸³ This section addresses the effects of Covered Activities on IBATs, NLEBs and TCBs.

¹⁸³ 50 CFR 17.22(b)(1) and 17.32(b)(1)

In general, incidental take of the Covered Species from the Covered Activities is anticipated to be associated with:

- tree removal (including trimming, topping, pruning, and/or limbing)
- noise/vibration associated with active season habitat modification

Take from tree removal and noise/vibration will be estimated in acres of habitat. Projects that result in ongoing or recurring take are not covered by this GCP. Project Proponents should consult with the local field office for projects expected to generate ongoing or recurring effects.

Finally, no incidental take of the Covered Species is anticipated from mitigation projects such as gating of hibernacula, protecting summer habitat, etc. Intentional take resulting from capture and handling (e.g., netting, radio transmitter attachment) that may be part of mitigation or monitoring will be addressed separately through recovery permitting mechanisms (i.e., 10(a)(1)(A) permit).

4.5.1.1 Tree Removal

Tree removal can result in the loss of documented and unknown maternity colony roosts, foraging habitat, travel corridors, and spring staging/fall swarming areas. Given the CMs and eligibility requirements of this GCP, we do not anticipate that every individual project will result in each form of take described below.

Death or injury from trees felled while bats are present

As stated previously in GCP section 2.2.2, the Covered Species form colonies in the summer, and IBATs and NLEBs also exhibit fission-fusion behavior where members frequently coalesce to form a group (fusion), but composition of the group is in flux, with individuals frequently departing to be solitary or to form smaller groups (fission) before returning to the main unit.¹⁸⁴ As part of this behavior, these species show roost site/area fidelity, but switch roosts often, typically every 2–3 days.¹⁸⁵ Bats switch roosts for a variety of reasons, including for temperature regulation, precipitation, predation, parasitism, and to make use of ephemeral roost sites.¹⁸⁶ The need to investigate new potential roost trees prior to their current roost tree becoming uninhabitable (e.g., tree falls over), may be the most likely scenario.¹⁸⁷

The exact number of roosts an IBAT, NLEB or TCB colony uses at any given time (or across the season) is not known, because:

1. not every bat in a colony can be tracked;
2. not all bats can be tracked simultaneously;
3. bats are generally tracked for a short period; and
4. the number of trees used by a bat is correlated with number of days it is radio-tracked.¹⁸⁸

¹⁸⁴ Barclay and Kurta 2007; Garroway and Broders 2007.

¹⁸⁵ Foster and Kurta 1999; Owen et al. 2002; Kurta et al. 2002; Kurta 2005; Carter and Feldhamer 2005; Quinn and Broders 2007

¹⁸⁶ Carter and Feldhamer 2005

¹⁸⁷ Kurta et al. 2002; Carter and Feldhamer 2005; Timpone et al. 2010

¹⁸⁸ Gumbert et al. 2002; Kurta et al. 2002

Depending on the bat species, maternity colonies of the Covered Species can use a minimum of 1–33 different roost trees in one season.¹⁸⁹ Therefore, bats associated with a maternity colony are spread out across these multiple trees on any given day. A colony is often dispersed among numerous trees, with IBATs and NLEBs, in particular, occupying one or more primary roosts, while individuals and small groups reside in different alternate roosts.¹⁹⁰ However, 1–3 primary roosts are used by the majority of IBATs for some or all of the summer.¹⁹¹ NLEBs have a similar roost tree dynamic, though primary roosts for this species are referred to as central-nodes.¹⁹² TCBs may also have a similar roost tree dynamic.

While some bats can flee during tree removal, removal of occupied roosts may result in injury or mortality to some percentage of bats, particularly nonvolant pups. If a bat is in the tree and a tree is cut down, the bat may either stay in the tree and potentially be crushed or fly out during the day.  The Covered Species may also use up energy reserves searching

Individual NLEB home ranges have been minimally estimated at 148. While using up energy reserves is a large concern for the covered species during the inactive period, this is unlikely to have any significant impacts on individuals or populations of the covered species. Prey are readily available to replenish energy preserves throughout the active season, as are alternate roosts. colony home ranges being larger. Average home range sizes of individual hundred acres in size¹⁹⁴ (e.g., 357.5 acres¹⁹⁵ and 205 acres,¹⁹⁶ and can acres¹⁹⁷). Limited home range research has been conducted on the TCB found that two lactating TCB females in Wisconsin had a 170 ha (420 acres), respectively.¹⁹⁸ For all species, core roosting areas are smaller roosts often clustered in space. Size of both foraging and core roosting areas likely varies depending on habitat quality. For example, larger home ranges may be necessary to meet a bat's needs in less suitable habitat.

In most cases, the Service does not have sufficient information to map core roosting and foraging areas or documented travel routes for known maternity colonies for each species. However, data from the Service's *Indiana Bat Section 7 and Section 10 Guidance for Wind Energy Projects*¹⁹⁹ summarizes the home range of IBAT maternity colonies at a broad scale. Data for the home range of NLEBs and TCBs can be found in *Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines*.²⁰⁰ We assume that the larger the individual project or the higher the frequency of smaller projects in a given area, the greater the likelihood of projects intersecting with home ranges for roosting, foraging, or travel habitat, resulting in exposure of individual or multiple bats to stressors associated with those projects.  Therefore, the linear projects along existing roadways/railways are less likely to intersect

¹⁸⁹ Callahan et al. 1997; Kurta et al. 2002; Silvis et al. 2015; Perry and Thill 2007; Perry and Kurta 2005

¹⁹⁰ Kurta 2005

¹⁹¹ Callahan et al. 1997

¹⁹² Silvis et al. 2015

¹⁹³ Owen et al. 2003; Lacki et al. 2009

¹⁹⁴ Menzel et al. 2005; Sparks et al. 2005; Watrous et al. 2006; Jachowski et al. 2014; Kniewski and Gehrt 2014; Divoll and O'Keefe 2018

¹⁹⁵ Menzel et al. 2005

¹⁹⁶ Watrous et al. 2006

¹⁹⁷ Service 2011

¹⁹⁸ Wisconsin DNR 2018

¹⁹⁹ See: <https://www.fws.gov/media/indiana-bat-section-7-and-section-10-guidance-wind-energy-projects>.

²⁰⁰ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

Author

While using up energy reserves is a large concern for the covered species during the inactive period, this is unlikely to have any significant impacts on individuals or populations of the covered species. Prey are readily available to replenish energy preserves throughout the active season, as are alternate roosts.

Author

This does not follow from the previous statement. Hedge rows and tree lines, including forest edges, are most likely to be encountered along the boundaries of existing ROWs - all important habitats for foraging and traveling per species habitat descriptions above.

Impacts to bats from tree removal is anticipated to vary depending on the location, extent, and timing of removal. The location with greatest likelihood of cutting a roost or suitable trees in close proximity to known maternity colony roost or suitable trees in close proximity to known maternity colony roosts. Permits issued under this GCP will not result in the removal of roosts (that remain suitable for roosting) or trees within 150 feet of the roosts. Therefore, projects will avoid the potential for this particular impact.

Author

This seems somewhat counter intuitive. The greatest likelihood of take is exactly this situation when bats are present, but when they are not, why is this a high likelihood of take? And what is the point of a take permit if it cannot apply to situations where a take is likely? The GCP seems to only cover low probability impacts, which should not require

For IBATs and NLEBs, the next greatest likelihood of removing occupied roosts is a one mile of documented roosts.²⁰¹ In addition, based on previous survey results, suitable habitat for all Covered Species, the Service anticipates that there are undocumented roosting and foraging areas present throughout the Plan Area. The larger the area of tree removal, the greater the likelihood of intersecting an occupied roost tree. In assumed occupied summer habitat, Project Proponents can choose to assume presence in certain situations (linear projects or non-linear projects with less than 25 total acres of suitable habitat impacts) or conduct P/A summer surveys. Since the Service does not have sufficient survey information for most summer habitat, we assume an equal risk of this occupancy throughout all documented habitat (outside of 150 feet of roosts) and assumed occupied habitat. Therefore, the assumptions above may be applicable to tree clearing outside of 150 feet from roosts if a roost is within known or assumed occupied habitat.

Author

Does this mean that any suitable roost tree within assumed occupied summer habitat is assumed to be a roost tree and therefore clearing cannot occur within 150ft? This seems overly onerous. The greatest likelihood of take is exactly this situation when bats are present, but when they are not, why is this a high likelihood of take? And what is the point of a take permit if it cannot apply to situations where a take is likely? The GCP seems to only cover low probability impacts, which should not require

The likelihood of potential roost trees containing larger number of bats during pregnancy and lactation with exit counts falling dramatically after this time as bats migrate out of maternity habitat in late summer. For example, two studies of certain trees appears to be highest in spring, when females were pregnant and apparently splintered into smaller groups before parturition.²⁰² IBAT colonies also break up over time with smaller exit counts later in the summer.²⁰³ For TCBs, as the maternity season progresses, colony sizes begin to fluctuate, females begin to disband soon after young became volant, and postlactating females roost singly for the remainder of the summer (Veilluex and Veilluex 2004).

The greatest risk of take is during the period when colonies are largest (most concentrated) and pups cannot fly. The risk is also greater to adults during cooler weather when bats periodically enter torpor and are unable to arouse quickly enough to respond. Neither of these situations is anticipated because this GCP limits the months of active season tree removal to within known occupied or assumed occupied maternity colony habitat.

Author

So the GCP does not allow take. These are essentially avoidance measures.

Once IBATs and NLEBs migrate back to their hibernacula, lethal impacts are not certain to occur from tree removal because the GCP does not authorize

Author

This seems counter to the restrictions on tree clearing during the inactive season (i.e., Summer CM 1), as well as the language in the following section regarding harm from loss of roosts.

²⁰¹ At a site with less abundant potential roosts, Kurta et al. (1996) observed bats moving between roosts, ranging from 4 m to 5.8 km. On Fort Drum Military Installation, within approximately 2,200 acres (U.S. Army 2011). Two colonies in KY, with roosting areas of approximately 2,400 to 3,200 acres (M. Armstrong, Service, email to R. Niver, Service, April 4, 2019). These distances/acreages are similar to a 1-mile radius circle.

²⁰² Foster and Kurta 1999; Sasse and Pekins 1996

²⁰³ Barclay and Kurta 2007

the active season within known or assumed occupied spring staging/fall swarming areas (up to 20 miles depending on species and hibernacula population numbers).

Harm from loss of individual roosts

Because the Covered Species rely on previously established roosts (fission-fusion dynamics of their maternity colonies through colony fragmentation) regardless of whether it occurs during the active or inactive (winter) season, the loss of a roost is a significant impact. These bats must deal with regularly, the loss of multiple roosts due to a tree removal stresses individual bats, as well as the social structure of the colony.²⁰⁴ These bats typically formed by bats coming from multiple hibernacula. These bats must reassemble with each other in the spring when they return so that they can find established roosting and foraging areas no longer exist, it will be more difficult to form colonies. Colonies may fragment (split into multiple colonies) to find a primary roost or multiple alternate roosts.²⁰⁵ Although TCBs exhibit fission-fusion dynamics, they are adapted to shifting and reforming maternity colonies because of the nature of their roosting habitat (i.e., tree foliage), and the small size of colonies (i.e., range of 1–8 bats).²⁰⁶

As stated previously in GCP section 2.3.1.1, although loss of a roost is a significant impact that bats must deal with regularly, the loss of multiple roosts due to a tree removal stresses individual bats, as well as the social structure of the colony.²⁰⁴ These bats typically formed by bats coming from multiple hibernacula. These bats must reassemble with each other in the spring when they return so that they can find established roosting and foraging areas no longer exist, it will be more difficult to form colonies. Colonies may fragment (split into multiple colonies) to find a primary roost or multiple alternate roosts.²⁰⁵ Although TCBs exhibit fission-fusion dynamics, they are adapted to shifting and reforming maternity colonies because of the nature of their roosting habitat (i.e., tree foliage), and the small size of colonies (i.e., range of 1–8 bats).²⁰⁶

Because their colonial (fission/fusion) behavior contributes to reproduction, fragmentation is expected to result in reduced thermoregulatory benefits, increased energy expenditures or increased use of torpor resulting in: 1) reduced adult survival, 2) reduced pup survival, and 3) reduced adult survival. It is unknown for TCBs given that some maternity colonies consist of a single female and her two pups.

Smaller colonies may be expected to provide less thermoregulatory benefits to nonvolant pups in cool spring temperatures. Female bats have tight energy budgets in spring need to have sufficient energy to keep warm, forage, and sustain flight distances or smaller colonies are expected to result in some percentage of reduced pregnancy success, and/or reduced pup survival. Again, this is a concern given their small colony size.

In areas with WNS, there are additional energetic demands for the Covered Species. For example, WNS-affected bats have less fat reserves than non-WNS-affected bats when they emerge from hibernation²⁰⁷ and have wing damage²⁰⁸ that makes migration more challenging. Females that survive the migration to their summer habitat must partition energy between foraging, keeping warm, successful pregnancy and

emerge from hibernation²⁰⁷ and have wing damage²⁰⁸ that makes migration more challenging. Females that survive the migration to their summer habitat must partition energy between foraging, keeping warm, successful pregnancy and

As stated previously, impacts to bats from tree removal are anticipated based on the location, extent, and timing of removal, but is greatest within one mile of known maternity roost

Author

These species live in landscapes that have been completely deforested/converted to agriculture/reforested/developed. This landscape scale habitat alteration did not result in their listing. Bat populations in the midwest did not go extinct with the advance

Author

Many colony sites are ephemeral. Rural woodlots have been logged repeatedly over their history. They have managed to maintain colony cohesion through the largest/fastest landscape change over the last 150 years. colonies

Author

No reference here. Indicates this is based on speculation alone. Even take that can't be quantified is ineligible for coverage?

Author

Main source of smaller colonies is WNS mortality reducing the number of breeding adults. If this were true, there would be a feedback loop on the landscape that would continue to depress populations even in the absence of WNS. If the argument is that colony size hasn't decreased because the bats find each other on the landscape and

Author

Again, the GCP is not allowing take when it is likely to occur, the whole purpose an entity would have for obtaining a permit. of known maternity roost

²⁰⁴ Service 2007

²⁰⁵ Sparks 2003; Silvis et al. 2014a; Silvis et al. 2014b

²⁰⁶ Veilluex and Veilluex 2004

²⁰⁷ Reeder et al. 2012; Warnecke et al. 2012

²⁰⁸ Reichard and Kunz 2009; Meteyer et al. 2009

trees. Therefore, we assume the closer the tree removal activity is to a known maternity roost tree, the greater chance that a maternity colony could be negatively affected.

Permits issued under this GCP will not result in the removal of any known, documented roosts (that remain suitable for roosting) or trees within 150 feet of those roosts because there are more roosts on the landscape than the Service has identified. If the loss of unknown roosts are reasonably certain to occur, the Service anticipates impacts from the associated effects in this GCP.

Author

The loss of unknown roosts are reasonably certain to occur, but not the impacts if they occur when bats are not present.

Harm from loss/fragmentation of roosting habitat, foraging habitat, and commuting habitat

In addition to assessing impacts from the loss of roosts, the Service anticipates impacts from the loss or fragmentation of forested areas that serve as roosting, foraging, or commuting habitat.

The IBAT requires forested areas for foraging and roosting; however, at a landscape level, IBAT maternity colonies occupy habitats ranging from completely forested to areas of highly fragmented forest.²⁰⁹

The minimum size of a forest patch that will sustain IBAT, NLEB or TCB maternity colonies has not been established. However, it is assumed that the likelihood of a particular forest patch increases with the size and connectivity of that patch.

Author

We know this is not true in NY, where Ibats have access to local landscapes that range from 10% - 95% forested - they do not select heavily forested habitats. So this assumption is known to be incorrect at least for one of the three species.

It is difficult to determine space requirements for bats because they are not uniformly distributed and have a relatively patchy use of habitat (and use of linear landscape features), which has some clear advantages (e.g., aid orientation, attract insects, provide refuge from predators).²¹⁰ In addition, bats' energetic constraints may preclude the use of highly fragmented habitats.²¹¹ Kniowski and Gehrt (2014) suggest longer or more frequent flights are required by IBATs in highly fragmented landscapes, with smaller, more distant suitable habitat patches, to obtain similar resources compared to landscapes with larger, more abundant habitat patches. In Michigan, IBATs did not fly over open fields but traveled along wooded corridors, even though use of these corridors increased commuting distance by over 55 percent.²¹²

It is assumed that commuting bouts will be longer in fragmented landscapes.

The impact of shifting flight patterns and foraging areas on individual bats may be slower as a result of the stress of hibernation and migration may be slower as a result of the searching for new roosting/foraging habitat especially in an already fragmented landscape. **forested habitat is limited.** Pregnant females displaced from preferred roosting areas will have to expend additional energy to search for alternative habitat, which may result in reduced reproductive success (failure to carry to full term or premature birth, or pup mortality) for some females.²¹⁴ Females that do give birth may have pups with lower birth weights given the increased energy demands associated with longer flights, or delayed development.²¹⁵ These longer flights would also be experienced by pups once they

Author

Forest habitat is not limiting throughout the Plan area (NY, PA and WV are majority forest states!) which would likely result in failure to raise pup to full term or premature birth with lower birth weights their pups may experience

²⁰⁹ Service 2007

²¹⁰ Racey and Entwistle 2003

²¹¹ Patterson et al. 2003

²¹² Murray and Kurta 2004

²¹³ Gardner and Cook 2002; Kurta and Murray 2002

²¹⁴ Humphrey 1975; Frick et al. 2010

²¹⁵ Humphrey 1975; Murray and Kurta 2004; Frick et al. 2010

become volant, which could affect the survival of these pups as they enter hibernation with potentially reduced fat reserves. Overall, the effect of the loss of roosting/foraging habitat on individual bats from the maternity colonies may range from no effect to death of juveniles. The effect on the colonies could be reduced reproduction for that year.

certainty to occur but are anticipated to be relatively short-lived as IBATs are anticipated to acclimate to the altered landscape. To a lesser extent this is true if they are adapted to shifting and reforming maternity colonies due to the loss of their roosting habitat (i.e., tree foliage).

To address harm from the loss/fragmentation of roosting habitat, foraging habitat, commuting habitat, this GCP does not cover projects that impact more than 25 acres of assumed occupied habitat or projects that impact more than 25 acres of assumed

Harm from loss/fragmentation of spring staging/fall swarming habitat

Impacts to IBATs, NLEBs, and TCBs from loss or fragmentation of spring staging habitat are not well understood. It is assumed that exposure or risk of harm from loss of this habitat type is greater the closer the removal is to a hibernaculum, but this has not been well established. This habitat must support the foraging and commuting of bats during the fall swarming period. After arriving at a given hibernaculum, bats build up fat reserves. In addition, bats congregate for breeding near hibernacula. For example, at a cave in KY, over 2,000 TCBs were banded in two weeks during the swarming period, but far less were banded in the same area they breed within. For some bats this may result in reduced overwintering survival. Similar to impacts associated with loss/fragmentation of summer habitat, the likelihood of take depends on the location and extent of tree removal within spring staging habitat, the landscape context (amount of remaining suitable habitat), and the individual bat.

The GCP does not cover any impacts to bats within 0.5 miles of hibernacula. The GCP does consider impacts associated with loss or fragmentation of habitat further from hibernacula.

4.5.1.2 Noise/Vibration Associated with Active Season Habitat Modification

In addition to actual loss of known or assumed occupied habitat, this GCP contemplates the reasonable certainty of take of the Covered Species due to harm from noise or vibration (excluding areas within 0.5 mile of known or assumed occupied hibernacula). Information regarding impacts from noise/vibration is limited for the Covered Species, but some information for the IBAT is available as follows:

Bats may be exposed to noise/vibration from activities near their roosting, foraging, or spring staging/fall swarming areas. Significant changes in noise levels in an area may result in temporary or permanent alteration of bat behaviors. For example, IBATs abandoned a primary

Author

This explanation of bats' resilience to an altered landscape completely undermines the use of habitat as a surrogate for take. Landscapes - so why is this included as a take issue?

Author

This is overly protective of assumed (a.k.a. unknown) occupied habitat and not protective enough for known occupied habitat.

Author

Again, this exemplifies why the level of take assessed for habitat should not be equivalent to that of individuals.

Author

If bats are not present at time of tree removal, there is no direct link between # of

Author

Again, the take permit does not cover take that is reasonably certain to occur.

Modification

GCP contemplates the noise or vibration

²¹⁶ Barbour and Davis 1969; Mumford and Whitaker 1982

roost when a bulldozer cleared brush adjacent to the tree.²¹⁷ The novelty of these noises and their relative volume levels will likely dictate the range of responses from individuals or colonies of bats. At low noise levels (or farther distances), bats initially may be startled, but are anticipated to habituate to the low background noise levels. For example, IBATs associated with a maternity colony along I-81 in Jefferson County, NY did not appear to be affected by noise from travelling vehicles.²¹⁸ Additionally, IBATs have been documented roosting within approximately 984 feet of a busy state route adjacent to Fort Drum and immediately adjacent to housing areas on Fort Drum.²¹⁹ At closer range and louder noise levels, bats could be startled to the point of fleeing from their day-time roosts. For projects with noise or vibration levels greater than levels usually experienced by bats, and that continue for multiple days, the bats roosting within or close to these areas are likely to shift their focal roosting areas further away or may temporarily abandon these roosting areas.

It is not definitive that IBATs, NLEBs, or TCBs will shift or abandon their roosts as a result of any adjacent disturbances. While noise and disturbance can cause adjacent remaining forest habitat to be less suitable until the bats become accustomed or shift their home ranges, the primary stressor of concern is the actual loss of available habitat. Summer CMs minimize the likelihood that noise/vibration will result in take in most instances. Projects that only result in take from noise/vibration (i.e., noise/vibration that is not associated with tree removal) are not covered by this GCP.

4.5.2 Anticipated Amount of Take

When determining the impacts of the taking for this GCP, the Service considered the eligibility requirements, the conservation program, and the short-term nature of the impacts associated with this GCP.

For example, the GCP authorizes no impacts to hibernating bats or hit suitable documented roosts or trees within 150 feet of those roosts any exposure of bats to impacts during the active season as tree removal c August 15-March 31 in suitable summer habitat, and no active season April 1 and November 15 within known or assumed occupied spring s

Author

Does this mean that no suitable roosts anywhere can be removed, or no suitable roosts within 150ft of a known roost can be removed?

For linear projects (that are covered in this GCP), there are no caps on assumed occupied habitat removal for individual projects because the portion of a Covered Species home range and multiple roosts within it is lower with this project type.

acreage of known or risk of removing a large

For non-linear projects with more than 25 acres of tree removal, the GCP will require surveys because assuming presence everywhere is not consistent with the conservation strategy for the Covered Species. The larger the potential impact, the greater the number of assumptions and more challenging the analyses will be. Furthermore, assuming impacts and working through the GCP process when the species are not present results in unnecessary expenditure of resources by both the Service and Applicants. The application of this approach will minimize the likelihood of

²¹⁷ Callahan 1993

²¹⁸ Service 2008

²¹⁹ U.S. Army 2014

impacting unknown maternity colonies, because projects with greater than 25 total acres of suitable summer habitat removal will incorporate P/A surveys. Following this approach, if bats are successfully captured and tracked to roosts, any roosts located have the opportunity to be protected and projects can be designed to further minimize take.

For non-linear projects within known occupied habitat (spring/fall or summer), take of the Covered Species associated with up to 200 acres of habitat removal is covered under this GCP. Projects with greater than 200 acres of non-linear known occupied habitat removal are not eligible to use this GCP. The Service's prior Biological Opinions for ESA section 7 projects with less than 200 acres of proposed tree clearing in the GCP Plan Area have concluded that the activities would not jeopardize the continued existence of the IBAT or NLEB. Thus, the acreage cap adopted in this GCP is consistent with the Service's prior determinations²²⁰.

Based on the Service's experiences with past projects (within the GCP Plan Area), and their associated forest loss, this GCP authorizes a maximum acreage of impact for IBAT, NLEB and TCB known or assumed occupied habitat/year within each State. In places where the species overlap, the Service will subtract acres for each species from the totals, just as in places where all species occur for mitigation, the Service will apply the benefits for each species (e.g., one mitigation project can benefit all three species). Over the 10-year life amount of take permitted will be up to 180,000 acres (with habitat as bats, as explained previously), depending on species overlap.

Table 4.0 The maximum permitted acreage-impacts within the GCP Permit

State	IBAT acres/year	NLEB acres/year	TCB acres/year	IBAT acres/duration of GCP (10 years)	acres (10 years)	acres (10 years)
NY	2,000	2,000	2,000	20,000	20,000	20,000
PA	2,000	2,000	2,000	20,000	20,000	20,000
WV	2,000	2,000	2,000	20,000	20,000	20,000
Total	6,000	6,000	6,000	60,000	60,000	60,000

As discussed above, the Service can reasonably anticipate impacts to individual bats associated with this habitat removal. The Service can also reasonably anticipate impacts to populations (maternity colonies and associated hibernating colonies) through the reduction of a colony's reproduction in a given year. However, these impacts will be short term.

²²⁰ Service 2014; Service 2017; Service 2022b; Service 2021b

Author

Explain how this level of take of habitat avoids jeopardy for the covered species. It is not clear how this level of take of habitat is calculated and what proportion of available habitat this constitutes within the covered area. It is not clear if the maximum amount of take permitted is for a single GCP across the covered area, or all GCPs across the covered area. It is also not clear if the figures provided in this table for the each state are meant to highlight maximum amount of take permitted for each state per year or 10 years, or if this simply serves to highlight

Author

If acoustic surveys are not and only mist net surveys are done, how the results then interpreted? species, but follow-up mist net surveys do not capture covered species?

66

Service does not anticipate any impacts to IBATs at the recovery unit level or species level, impacts to the NLEB at the species level or impacts to the TCB at the species level.²²¹

Overall, the GCP will provide better conservation for the Covered Species than the current project-by-project review approach. Unlike the current approach, all projects using the GCP must comply with certain CMs, which in turn will result in expedited review procedures. The CMs include mitigation that will restore, enhance and/or permanently protect important IBAT, NLEB, and/or TCB habitat. The Service anticipates no losses of entire core roosting or foraging areas and no effects to hibernacula for the Covered Species. This is a short Permit duration, and the Service can apply an adaptive process and amend or terminate the GCP at any time, as described below in section 6.0.

4.6 Conservation Measures that Mitigate Unavoidable Incidental Take

ESA Section 10(a)(2)(A)(ii) stipulates that Applicants seeking incidental take authorization must identify the steps they will take to minimize and mitigate impacts of the taking and identify the funding available to implement those measures. GCP Mitigation measures are intended to offset impacts that remain after avoidance and minimization measures are implemented. Though no single project is expected to achieve recovery of the Covered Species, the coordinated and cumulative mitigation efforts of this GCP are intended to support the Service's recovery goals for the Covered Species.

This GCP provides multiple mitigation pathways intended to maintain or restore and enhance priority habitat locations for the listed species. Project mitigation requirements are calculated by considering the timing, location, and amount of habitat impacted.

An Applicant's IPP submitted as part of the GCP application process will identify which mitigation option they select to offset the impacts of their project(s). The Applicant will provide proof of mitigation to the Service prior to the onset of any activities that have the potential to result in take.

The mitigation measures in this GCP are based on the biological and ecological needs of the Covered Species and are intended to be practicable and commensurate with project impacts to the species and their habitats. Projects that result in permanent loss of occupied habitat, for example, will be offset with similarly permanent protection of occupied habitat. Implementation of mitigation measures selected by an Applicant and identified in their IPP application are required by the terms and conditions of issued Permits.

4.6.1 Mitigation Pathways and Associated Funding Requirements

One of the purposes of this GCP is to promote strategic conservation efforts while streamlining the Permit issuance process for non-Federal projects. To that end, this GCP facilitates the use of uniform metrics for calculating mitigation needs across the range of eligible project types and facilitates the use of efficient pathways to secure required mitigation offsets.

²²¹ The Service does not have designated recovery units for the NLEB or TCB at this time.

GCP Applicants may select from several potential mitigation pathways, including purchasing credits from Service-approved conservation banks, participation through Service-approved ILF programs, creation of local conservation areas for which the Permittee remains responsible, or mitigation surveys that find new Covered Species maternity colonies or hibernacula. Mitigation options are prioritized to meet the conservation and recovery needs for the Covered Species as defined by the biological goals and objectives of this GCP.

4.6.1.1 Service-Approved Conservation Banks

Conservation banks protect and manage permanently conserved lands to provide ecological functions and services in accordance with legally binding conservation bank instruments. These conserved lands are established to restore, enhance, or create habitat to protect biological and ecological values for species and their habitats in perpetuity. Because conservation banks function to offset adverse impacts to species or their habitat that occur on other lands, they are sometimes referred to as offsite mitigation options.

In exchange for providing permanent habitat protection and management, the Service defines the number of credits that conservation *bank sponsors* can sell to offset adverse impacts occurring elsewhere. Credits consist of defined units representing the accrual or attainment of ecological functions or services at a bank site. An acre of occupied high-quality habitat, for example, might be defined in a *conservation banking* instrument as one credit for the conserved species. Conservation bank credits are qualified by confirming that they meet Service-approved performance criteria described in the conservation banking instrument to ensure that they provide the expected ongoing ecological benefit for the species.

GCP Applicants that need to offset unavoidable project impacts to Covered Species may purchase credits from Service-approved conservation banks to satisfy their mitigation needs. The GCP specifies a consistent method for determining the number of acres that a project will need to offset adverse impacts, described in section 4.6.4.

Because conservation banks can provide mitigation credits representing qualified conserved habitat before project impacts occur, this option streamlines Permit processing and is also most beneficial for affected species. Conservation bank sponsors are obligated by the conditions of their banking instrument to provide ongoing management, monitoring, adaptive responses to changed circumstances, and reporting to ensure that the ecological values of conserved lands are maintained in perpetuity. Use of conservation banks as a mitigation tool can streamline and simplify the mitigation process for Project Proponents.

GCP Applicants within a Service-approved conservation bank's service area may purchase credits for the Covered Species to meet their mitigation obligations either prior to Permit issuance or prior to the onset of any activities that have the potential to result in take of the Covered Species. There are Service-approved conservation banks with service areas within the GCP Plan Area that provide credits for IBATs, and others have been proposed.²²² Currently, there are no approved conservation banks within the GCP Plan Area that provide mitigation credits for NLEBs or TCBs. GCP Applicants should contact their local field office or review

²²² Applicants are encouraged to confirm with the Service prior to credit purchase that their intended conservation bank is approved for use as mitigation under this GCP.

information about available conservation banks on the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) website (<https://ribits.ops.usace.army.mil/>).

Landowners interested in establishing conservation banks on their lands should contact their local field office for more information.

4.6.1.2 In Lieu Fee Programs

ILF programs collect funds to support conservation efforts (e.g., preserve, restore, enhance, or establish habitat, or conduct surveys that promote the recovery of the species) for a particular species, and remain responsible for the completion and success of the compensatory mitigation associated with Permits that provide funds to the program. ILF Program Sponsors may be governmental or nonprofit natural resource management entities authorized to collect and disburse funds to purchase land or perform specific habitat management or enhancement activities prescribed in a legally binding ILF instrument that governs the program operation. Under this approach, a Service-approved ILF Program Sponsor collects funds from Project Proponents that need to provide compensatory mitigation to offset the impacts of their project(s). The sponsor aggregates and directs funds to projects authorized by the ILF instrument to satisfy the Permittees' mitigation obligations. A failure of the sponsor to carry out the Permittee's mitigation obligations is attributed to the Permittee.

Service-approved ILF Programs can be used to satisfy mitigation requirements for impacts to specified species or habitat. The ILF approach alleviates time constraints associated with traditional mitigation approaches such as the development and approval of mitigation proposals on a project-by-project basis and can accrue funds from multiple projects to acquire or support mitigation efforts of greater conservation value on behalf of ILF mitigation participants.

GCP Applicants may mitigate through Service-approved rangewide, regional, or local ILF Programs for the IBAT, NLEB, and/or TCB. Currently there is one rangewide Service-approved ILF mitigation program available for IBATs and NLEBs.²²³ ILF funds for GCP mitigation will only be expended within the state where the funds originated unless the local field office agrees to the use of funds for out-of-state mitigation projects. This ensures that ILF Program actions most directly support the bat populations impacted by projects funding the offsets.

GCP Applicants choosing to mitigate through ILF Programs may contribute fees prior to Permit issuance or prior to the onset of any activities that have the potential to result in take of the Covered Species. Ongoing effectiveness monitoring, adaptive management, and responses to changed circumstances are implemented by the ILF Program Sponsor.

GCP Applicants interested in pursuing ILF mitigation options should contact their local field office (see appendix A) or review information about ILF Program availability on the RIBITS website at <https://ribits.ops.usace.army.mil/>.

²²³ See: <https://www.fws.gov/program/endangered-species/bat-consultation-conservation-strategy>

4.6.1.3 Permittee-Responsible Mitigation

Permittee-responsible mitigation (PRM) is a common mitigation approach to offset the impacts of the taking from certain project activities. Under PRM approaches, Project Proponents typically identify, protect, and retain ongoing responsibility for ensuring that required mitigation actions are successfully completed. Alternatively, Project Proponents may provide funding to a Service-approved conservation entity (e.g., land trust or other nongovernmental organization) to conduct these activities on their behalf. In either case, Permittees remain responsible for ongoing monitoring and management, adaptive responses to changed circumstances, and reporting to ensure that expected benefits are achieved and maintained. PRM projects may occur on a proposed project site or offsite, but within the Permit Area of the GCP.

By establishing PRM standards, consistent priority project locations, and priority conservation actions, this GCP articulates requirements to help facilitate approval of mitigation for Applicants that cannot access conservation banks or ILF Programs.

Through this GCP, permanent impacts, including removal of trees or other permanent adverse effects to habitat, are required to be offset with similarly permanent mitigation. Project Proponents pursuing permanent conservation of spring staging, maternity roost and summer habitat, fall swarming, or overwintering habitat shall purchase or otherwise acquire fee title interest in one or more land parcels that meet the intents and priorities spelled out in this GCP Conservation Program and secure the land(s) through dedication of a perpetual conservation easement and land management agreement on the parcel(s). Alternately, Project Proponents may secure perpetual conservation easements and associated land management agreements on one or more parcels that meet the intents and priorities spelled out in this GCP Conservation Program that they do not own by entering into a legally binding agreement with the landowner to ensure ongoing management to the mitigation standards required in this GCP.

Habitat Protection

Conservation easements that secure PRM lands must be held by a Service-approved third-party. Acceptable conservation easement holders must meet applicable State requirements and, generally, may be nongovernmental entities dedicated to the protection of natural resources, land trusts, or other entities acceptable to the Service. The Service may require that third party easement holders responsible for managing mitigation in connection with a Permit meet certain financial transparency and accountability standards as established in Departmental regulations or policies.

Conservation easement terms must stipulate that any subsequent holder(s) of the instrument must meet all financial transparency and accountability standards and be bound to manage the property to achieve the ecological benefits for which the easement was established. Lands that are proposed to meet mitigation requirements as part of this GCP are subject to review and approval by the Service.

For hibernacula gating projects, with agreement of the landowner, gates may be installed on hibernacula owned by private entities, township, county, State, or Tribal governments, provided such gating is not already planned for by the entity, or the ownership terms do not already

provide equivalent protection to the overwintering site. Mitigation must provide a measurable conservation benefit to the Covered Species that exceeds current site conditions (benefits that are planned or otherwise already exist) to meet GCP biological goals and

Author

This runs counter to previous statements regarding mitigation requirements. Clarify if mitigation is achieved simply by protecting existing habitat, or if habitat improvement is needed as well. Example: "Projects that result in permanent loss of occupied habitat, for example, will be offset with similarly

Lands conserved as PRM, whether acquired in fee title or through conservation easements, must be secure unencumbered surface, air, and subsurface (e.g., mineral) rights to the maximum extent possible, and conflicting interests that cannot otherwise be cleared should be resolved. Permittees that cannot acquire, clear, or subordinate potentially-conflicting interests may be required to provide additional assurances (financial or otherwise) to ensure that if such rights are exercised the biological and ecological values for which the mitigation was established will be maintained or replaced in a manner suitable to the Service. The Service retains the right to reject a PRM site for which conflicting rights cannot be acceptably resolved. Project Proponents are responsible for all fees and/or other costs associated with title work, recording, transferring, surveying, and/or acquiring of properties and easements, and other requirements to secure the mitigation land and ensure that the biological and ecological values are managed and maintained. Third parties often require funding commitments that may include an endowment or irrevocable trust to provide for the perpetual management of the habitat and associated ecological values. Third parties may seek funding commitments for overhead costs (e.g., invasive species management, fencing, trash removal, monitoring and reporting costs) as a condition to accept title or easement management responsibilities for a mitigation property. Project Proponents pursuing PRM are responsible for fully vetting the financial commitments and other requirements of third parties to ensure that they meet all applicable requirements.

Habitat Restoration and Enhancement

Habitat restoration and enhancement activities can also occur as part of PRM. See Priority actions in GCP section 4.6.3 below for examples. Project proponents are responsible for developing habitat restoration and enhancement projects, which must be approved by the Service, and for all fees associated with the projects. To be considered toward GCP recovery-focused conservation goals, restoration and enhancement mitigation must provide a measurable conservation benefit to the Covered Species that exceeds current site conditions (benefits that are planned or otherwise already exist).

GCP Applicants that seek to develop their own PRM options should contact their local field office to determine the steps necessary to secure mitigation commitments that meet GCP requirements.

4.6.2 Priority Project Locations

Each State within the GCP Plan Area includes Conservation Focus Areas (CFA), also known as priority areas, for the Covered Species. The CFAs represent the best scientific and commercial distribution information currently available for the species. The goal of the CFAs is to focus conservation efforts where the species are documented to occur to provide greater ecological benefits for the Covered Species.

Each ILF Program or conservation bank has a defined service area where they are authorized to sell credits or the owner may collect fees. The Service determines service areas based on

physical and ecological attributes such as watersheds, soil types, species recovery units, and/or species and population distributions. Service area maps are available for each approved conservation bank or ILF Program. For example, the currently available rangewide IBAT and NLEB FHWA ILF Program has a state-by-state service area. PRM projects can occur in any CFA within the state of impact. Project Proponents will coordinate with the local field office to determine what mitigation options are available and what service areas may apply.

Examples of CFAs in the Plan Area include hibernacula, areas within spring staging/fall swarming habitat, maternity roosts and maternity colony home ranges. In particular, areas within maternity colony home ranges, that are associated with documented captures/detections, roosts, and/or foraging locations for the Covered Species, are being prioritized for protection.

4.6.3 Priority Mitigation Projects

This GCP prioritizes mitigation and conservation actions based on the anticipated effects of Covered Activities on the Covered Species and their conservation needs, and on actions that best support regional recovery-focused goals. Protecting remaining WNS survivors is generally prioritized below, though the Service may prioritize measures that provide a higher conservation value for IBATs, NLEBs, or TCBs in a particular circumstance.

Priority 1 Actions

Action: Permanently protect maternity roosts and associated summer habitat via a Service-approved mitigation mechanism (conservation bank, ILF Program, or PRM) (addresses objectives 6 and 9).

- Protect habitat used for roosting and foraging, and associated travel corridors.
- Maternity roost and associated summer habitat protection should prioritize larger blocks of occupied habitat, associated buffer areas, and connecting corridors. Small parcels may be prioritized if they are adjacent to or will expand on existing areas protected and managed for the benefit of the Covered Species. Key parcels of high ecological importance that may serve as core conservation areas may be appropriate mitigation sites in some instances.
- Summer habitat protection should prioritize lands where IBAT, NLEB, or TCB occupancy has been documented post WNS.²²⁴
- Mitigation for IBAT impacts requires protection of IBAT habitat. Mitigation for NLEB impacts requires protection of NLEB habitat. Mitigation for TCB impacts requires protection of TCB habitat. Lands occupied by all three Covered Species can provide mitigation for all three Covered Species.
- Maternity roost and summer habitat protection prioritizes forest within or adjacent to lands with recent documented captures, roosts, telemetry, or acoustic detections.
- Maternity roost and summer habitat protection actions should prioritize lands most threatened by development.

²²⁴ Talk to your local field office (appendix A) to determine post WNS date.

Action: Restore and/or enhance permanently protected maternity roosts and associated summer habitat (addresses objective 8).

- Restoration of maternity roosts and associated summer habitat may be considered when the local field office determines it is important (e.g., the forest cover within the maternity colony's anticipated home range is less than 50 percent).
- Restoration efforts can include enhancement or expansion of protected travel corridors between forest patches.
- Restoration of forested habitat prioritizes enhancing (e.g., girdling trees, erecting artificial roost structures) and expanding (i.e., planting) forest patches within maternity colony home ranges verified with recent documented captures, roosts, telemetry or acoustic detections.
 - Restoration or enhancement of roosting or foraging habitat should prioritize planting native tree species with characteristics expected to provide future bat roosting opportunities (e.g., shagbark hickory [*Carya ovata*] for IBAT, oak species for TCBs).
 - To benefit IBATs and NLEBs, artificial roosting structures (e.g., bat houses, rocket boxes) may be installed to enhance bat roosting opportunities until newly planted trees are mature enough to provide roosting habitat.

Priority 2 Actions

Action: Permanently protect hibernacula and associated spring staging areas (addresses objectives 1 and 4).

- Conservation actions may include protection of hibernacula (e.g., their associated underground features, roosting habitat, foraging habitat, and travel corridors) via Service-approved mechanism and/or gating projects.
- Protection should prioritize land with recent confirmed IBAT, NLEB, and/or TCB presence based on Service or State agency information or Applicant-conducted surveys. The probability of continued presence, and benefits from protecting land, is higher if demonstrated records of presence after WNS declines were documented in that region.
- Conservation actions can occur at any occupied hibernaculum within the state of impact subject to a known, existing threat (contact local field office). A known, existing threat is defined as the occurrence of one or more un-gated entrances, an entrance which is unstable and in danger of collapse, or other threats (e.g., contaminants, commercialization, vandalism) that can be successfully alleviated.
- Gating projects shall be conducted by experienced qualified contractors subject to review and approval by the Service.
- Spring staging and fall swarming area protection should focus on larger blocks of occupied habitat, associated buffer areas, and connecting corridors.
- Protection of suitable forested habitat should prioritize areas within 5 miles of hibernacula openings.

Author

Since WNS is the primary threat to the covered species, protecting hibernacula (where the species are most vulnerable to the disease) should be considered Priority 1.

NLEB, and/or TCB
Applicant-conducted surveys.

- The conservation value of a particular hibernaculum proposed for protection depends on circumstances applicable to that particular parcel of land; therefore, standard multipliers are not provided and must be determined on a case-by-case basis. Factors that influence the value of a particular protection land include but are not limited to:
 1. the relative significance of the land to the conservation and recovery of the Covered Species;
 2. the quality of the habitat;
 3. the level of protection afforded; and
 4. the degree of risk to the land without the proposed mitigation measure.
- The Service and/or local State agency shall have future access for bat monitoring.

Action: Restore and/or enhance permanently protected roosting and foraging habitat within known fall swarming or spring staging areas (addresses objective 5).

- Restoration or enhancement of fall swarming or spring staging area habitat may contribute to mitigation when prioritized by the local field office (e.g., the forest cover within 5 miles of hibernacula is less than 50 percent).
- Restoration should include travel corridors between forest patches where appropriate.
- Restoration should focus on enhancing (e.g., girdling trees, installing artificial roost structures) and expanding (i.e., planting) forest patches within fall swarming or spring staging areas.
 - Restore or enhance currently unsuitable roosting or foraging habitat by planting native tree species (e.g., shagbark hickory for IBAT, oak species for TCBs) expected to provide future bat roosting opportunities.
 - To benefit IBATs and NLEBs, install artificial roosting structures (e.g., bat houses, rocket boxes) to enhance roosting habitat opportunities while planted trees are too young to provide roosting habitat.

Priority 3 Actions

Action: Restore hibernacula (addresses objective 2).

- Restore air flow, water quality, microclimate, and/or structural potentially suitable hibernacula that the Service identifies as being (e.g., historical evidence of hibernating bats).
- Monitoring that documents occupancy by the Covered Species required as a condition of credit generation for restored hibernacula sites.

Author

Since WNS is the primary threat to the covered species, protecting hibernacula (where the species are most vulnerable to the disease) should be considered Priority 1. after restoration is

Action: Search for and identify previously undocumented IBAT, NLEB, or TCB hibernacula (addresses objective 3).²²⁵

- Conduct late summer/fall telemetry surveys (including aerial support) at maternity colonies to identify new hibernacula.
- Conduct fall or spring acoustic and/or netting/trapping surveys in targeted areas identified by local field offices to identify new hibernacula. Follow Service/State guidance for portal/cave surveys.²²⁶

Action: Search for and identify previously undocumented IBAT, NLEB, and TCB maternity colony roosts or identify roosts in prior colonies where only acoustics or netting previously occurred (addresses objective 7).²²⁷

- Conduct early spring telemetry surveys (including aerial support) at hibernacula to help identify new colonies.
- Conduct summer P/A surveys in targeted areas identified by local field offices to help identify new maternity colonies. Acoustic surveys can be used to identify areas with high bat activity; however, follow-up netting and radio telemetry must be conducted in order to find new roost trees.

4.6.4 Calculating Mitigation Offsets

Uniform mitigation offsets are calculated based on location, percent forest cover within the county of impact, and timing of proposed clearing activities (table 4.1). Actions that result in greater impacts to the Covered Species and their important habitats are associated with similarly greater mitigation requirements. The uniform offset calculation ratios define the quality and quantity of summer or spring staging/fall swarming habitat to mitigate the impacts of incidental take. Mitigation does not have to be “in-kind” (e.g., impacts resulting from removal of summer habitat does not require offsets of summer habitat) because this GCP prioritizes the recovery-focused conservation needs for each of the Covered Species.

²²⁵ Newly identified hibernacula within the proposed project Permit Area will be subject to the avoidance measures described in HIB CM 1. If the Applicant cannot implement HIB CM 1 the project is not eligible to be covered by this GCP.

²²⁶ See: <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>

²²⁷ Newly identified maternity roosts within the proposed Permit Area will be subject to SUMMER CM 1. If the Applicant cannot implement SUMMER CM 1 the project is not eligible to be covered by this GCP.

Table 4.1. Mitigation ratios for tree clearing (regardless of whether one or all Covered Species are impacted).

Location of Proposed Tree Clearing (For <u>linear</u> and <u>non-linear</u> Covered Activities)				County-Wide Forest Cover < 50%		County Wide Forest Cover ≥ 50%	
				What time of year will clearing occur?		What time of year will clearing occur?	
				Active season*	Inactive season*	Active season*	Inactive*
Entirely within 0-100 feet edge of active road/rail, <i>Project site has not been surveyed but contains suitable summer or spring staging/fall swarming habitat around unsurveyed portals</i>				1.5	0**	1.25	0**
Entirely within 0-100 feet edge of active road/rail, <i>within known home range >1 mile from documented roosts</i>				1.75	1.25	1.5	1
Entirely within 0-100 feet edge of active road/rail, <i><1 mile from documented roosts</i>				2	1.5	1.75	1.25
>100 feet edge of active road/rail, <i>Within known home range >1 mile from documented roosts²²⁸ OR summer habitat (unsurveyed suitable habitat or anywhere in buffers of captures/detection)</i>				2	1.5	1.75	1.25
>100 feet edge of active road/rail, <i><1 mile from documented roosts</i>				2.25	1.75	2	1.5
>100 feet edge of active road/rail, <i>documented spring staging/fall swarming habitat</i>				NA	1.5	NA	1.25

* Coordinate with the local field office for active/inactive season tree removal dates.

** Incidental take is not reasonably certain to occur; therefore, no take is authorized and no mitigation is needed.

²²⁸ Coordinate with local field office to determine extent of known home range.

Table 4.2. Mitigation, monitoring, and adaptive management requirements.

Mitigation Measure	Mitigation Amount	Monitoring/Adaptive Management (Section 4.7)
<u>Conservation Bank</u> credit purchase or <u>ILF Program</u>	(acres of impact) (ratio from table 4.1) = Total offset in acres* Credit costs are determined by the third-party Conservation Bank Sponsor or ILF Program Sponsor and are the responsibility of the Permittee	Monitoring and adaptive management are implemented by the approved conservation bank entity or ILF Program Sponsor in accordance with the terms of those agreements. ²²⁹
<u>PRM</u> for spring, summer, fall habitat protection (or restoration and protection)	(acres of impact) (ratio from table 4.1) = Total offset in acres* Costs are responsibility of Permittee	Monitoring and adaptive management remain the responsibility of the Permittee.

*To calculate the total offset needed in acres to complete mitigation, multiply the number of acres of impact by the mitigation ratio from table 4.1.

No uniform ratios are prescribed for alternative mitigation strategies, including installation of cave gates; restoration, enhancement, or protection of hibernacula; or surveys that result in the identification of new hibernacula or roost trees for the species that are identified as Covered Species in the IPP. For instance, depending on the amount of tree removal within spring staging/fall swarming habitat, impacts could be offset with gating of a hibernacula. Applicants wishing to pursue those activities should coordinate with the local field office to determine if these CMs are appropriate for their project type and location, and what monitoring and adaptive management requirements may apply.

Timing and Additional Considerations for PRM Post Permit Conservation Actions

Mitigation that does not secure complete biological and ecological offsets for the impacts of the taking prior to project impacts may require additional Service review and approval of a site-specific mitigation and restoration plan and additional funding assurances. Tables 4.3a-d outline considerations related to timing and other requirements that apply to PRM proposals that are expected to increase or accrue ecological or habitat values after Permit issuance to meet GCP mitigation standards. Refer to GCP section 4.6.3 above for specific details on Service priority mitigation projects.

²²⁹ The Service must confirm the use of a particular Conservation Bank or ILF Program is applicable to the mitigation obligation of a given project. Consult with the Service prior to purchasing credits from either type of third-party mitigation provider.

Table 4.3a. Timing and considerations for PRM for habitat protection, restoration, and enhancement.

Timing	Actions
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	The property intended to provide mitigation through habitat protection/restoration must be identified and approved by the Service as an acceptable mitigation site for the project.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	If not owned or controlled by the Applicant, the Applicant will provide the Service with a legally binding and enforceable written agreement to purchase, or an option to purchase, the fee title to or a permanent conservation easement on the property to demonstrate the Applicant's right and ability to implement the mitigation.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Funding assurances are in place for any restoration, management, and monitoring.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	If ownership of the approved site will differ during or after the term of the permit, circumstances must be discussed with the Service in advance.
<u>Prior to or concurrent with</u> issuance of the Permit	An approved third-party easement holder shall be agreed upon.
<u>Prior to or concurrent with</u> issuance of the Permit	The terms of the proposed easement shall be settled and approved.
<u>Prior to or concurrent with</u> issuance of the Permit	Any applicable restoration/long-term management and monitoring plans shall be finalized and approved.
<u>Within 90 days of Permit issuance</u> and prior to any take of the Covered Species	Completion of the property transaction and/or recording the easement shall be completed within 90 days of Permit issuance. ²³⁰ This allows for various State and local requirements and timeframes associated with the purchase and protection of land. In all cases, however, finalization of the transaction and recording must occur prior to any take of the Covered Species.
<u>After</u> Permit issuance	Any restoration/long-term management and monitoring activities shall occur according to the Service-approved plan.

Note: The authorization of incidental take shall be automatically suspended by operation of the Permit conditions until the transaction and recording have been completed, and at any time required activities (e.g., restoration or long-term management and monitoring) or other obligations (e.g., financial assurances) are not undertaken or provided in accordance with the Service-approved plan.

²³⁰ Unless an extension has been previously agreed to by the Service. Additional assurances may be required where extensions are requested.

Table 4.3b. Timing and considerations for PRM for restoration/enhancement of known or potentially suitable hibernacula. *Only one Permittee will be credited mitigation for a hibernacula project, and it will only count as mitigation for one impact project.*

Timing	Actions
<u>Prior to or concurrent with</u> Permit issuance	Service-approved restoration/enhancement plans, and contractors/contracts shall be in place.
<u>Prior to or concurrent with</u> Permit issuance	Funding assurances are in place for initial restoration, ongoing monitoring and adaptive management.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Hibernacula restoration/enhancement activities shall be implemented no later than the first bat active season after Permit issuance. This allows for Permit issuance during winter when projects cannot be conducted without disturbing bats.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Monitoring that documents occupancy by the Covered Species at hibernacula sites. If IPP Covered Species are used for monitoring, conservation banks, ILF or another mechanism must be designated in the IPP as a follow-up to the monitoring occur prior to any activities that have the potential to result in take of the Covered Species.
<u>After</u> Permit issuance	Additional monitoring and adaptive management activities shall occur according to the Service-approved plan.

Author _____

This condition is not applied to active season habitat restoration. The burden of proving bat use of inactive habitat may keep applicants from pursuing this potentially very beneficial mitigation measure. Instead, it would make more sense to require applications to prove that the mitigation actions take to restore/enhance hibernacula.

Table 4.3c. Timing and considerations for PRM for cave gating. *Only one Permittee will be credited mitigation for a hibernaculum gating project, and it will only count as mitigation for one impact project.*

Timing	Actions
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Service-approved plans and contractors/contracts shall be in place.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Generally, additional funding assurances are required as the contracts will be in place prior to the onset of any activities. However, funding assurances are required for monitoring and adaptive management and may be needed with respect to the monitoring circumstances.
<u>Prior to or after</u> Permit issuance	Gates shall be installed no later than the first bat active season after Permit issuance. This allows for Permit issuance during winter when gating projects cannot be conducted without disturbing bats.
<u>After</u> Permit issuance	Monitoring and adaptive management activities shall occur according to the Service-approved plan.

Author _____

Financial assurances would be beneficial in case the gate is tampered with after it is built.

Table 4.3d. Timing and considerations for PRM surveys²³¹ to find new hibernacula or roosts.

Timing	Actions
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	All surveys shall be conducted prior to any take occurring and (e.g., summer P/A, hibernacula surveys) in accordance with the most recent Service-issued survey guidance. ²³²
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	No funding assurances are needed given the timing of the action.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Surveys can be conducted within the broad Permit Area as well as directly within the Permit Area.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Results of any surveys conducted within the Permit Area will inform the final project design. Results must be shared with the Service.
<u>Prior</u> to the onset of any activities that have the potential to result in take of the Covered Species	Surveys can only be credited as mitigation if new hibernacula/roosts for the Covered Species are identified. These areas could then be targeted for priority protection in the future. If IPP Covered Species are not captured/detected during surveys, conservation banks, ILF or other PRM mitigation option must be designated in the IPP as a follow-on measure and will need to occur prior to any impacts.
<u>After</u> Permit issuance	No additional monitoring or adaptive management is needed.

Author

This insinuates that surveys can be conducted across state borders.

Permit Area will inform with the Service.

if new hibernacula/roosts for

4.7 Monitoring and Adaptive Management

4.7.1 Monitoring

Regulation requires monitoring as a component of the Permit process and serves to document project effects on Covered Species, Permittee compliance with Permit terms and conditions, and the effectiveness of CMs in achieving GCP goals. Monitoring results will be included in an annual report(s) submitted to the Service.

4.7.1.1 Effects Monitoring

Effects monitoring documents the project's effects on Covered Species, including the amount of take that occurred during that monitoring period and cumulatively from project initiation.

4.7.1.2 Compliance Monitoring

²³¹ Species surveys are a first step in identifying, assessing, protecting and enhancing potential hibernacula or maternity colonies.

²³² See section 4.6.3 Priority Action 3. Approval of survey plans by the Service is required.

Compliance monitoring documents implementation of the terms and conditions for each individually issued Permit. Compliance monitoring also documents that all minimization and mitigation measures, and other Permittee commitments, are completed as planned. All Permittees will document compliance monitoring results as required in the terms and conditions of their Permits.

4.7.1.3 Effectiveness Monitoring

Effectiveness monitoring documents whether the results of the GCP conservation program are consistent with the assumptions and predictions made when the GCP was developed and approved. Effectiveness monitoring provides the data needed for the Service to evaluate whether the biological goals and objectives of the GCP are being achieved.

Effectiveness monitoring assesses the ecological success of the Permit. Specifically, it evaluates progress towards meeting biological goals and objectives, assessing whether the conservation strategy is effective at minimizing and mitigating effects, and the need to modify or adjust the conservation strategy to achieve GCP goals.

Effectiveness monitoring and reporting for conservation banks and ILF Programs are implemented by the conservation bank entity or ILF sponsor as outlined in the Service-approved and legally binding agreements that establish and authorize these mitigation sites. Permittees that choose to mitigate by purchasing credits from an approved conservation bank or paying into an approved ILF Program²³³ are relieved of individual effectiveness monitoring and reporting requirements because these obligations are assumed by the relevant bank and program sponsors; however, a Permittee remains responsible for meeting the goals and objectives of the ITP.

Permittees that choose PRM programs retain responsibility for effectiveness monitoring and reporting. The specific effectiveness monitoring and annual reporting requirements for individual PRM programs will be described in the Applicant's IPP and implementation will be a condition of issued Permits that choose this mitigation pathway. Financial assurances to ensure implementation of monitoring and reporting may also be necessary. PRM monitoring programs will be designed to collect data and articulate thresholds that trigger specified adaptive management actions intended to improve management of the species and their habitat. Permittees agree to allow Service staff, or other persons designated by the Service, to access the Permit Area and any mitigation properties for the purpose of monitoring plan implementation or the Covered Species.²³⁴

4.7.2 Adaptive Management

Service policy defines adaptive management as a formal, structured approach for addressing the uncertainty inherent in all natural systems. It involves examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation, management, monitoring, or mitigation actions based upon what is learned. Adaptive management plans are required for conservation plans where there is substantial

²³³ The Service must confirm in advance that the selected bank or ILF program may be used to mitigate the project.

²³⁴ 50 CFR 13.47

uncertainty regarding the effects of the action on the Covered Species or the efficacy of minimization and mitigation measures.

Adaptive management strategies identify the range of possible operating conservation program adjustments that could be implemented as new information or data are obtained. This range defines the limits of what resource commitments may be required of the Permittee. The adaptive management strategy should also identify specific thresholds that trigger implementation of a particular adaptive management strategy or open reassessment of an adopted strategy. The application should identify specific actions that must be taken, not merely provide a general review of strategies. Prior to Permit issuance, there must be a clear understanding and agreement between the Service and the Applicant as to the range of adjustments to the management actions that might be required as a result of any adaptive management provisions. This process will enable the Applicant to assess the potential economic impacts of adjustments before agreeing to the GCP.

Adaptive management for this GCP is focused on the uncertainty of ongoing management of Covered Species threatened by several factors, most notably the fungus that causes WNS, and on the management of mitigation sites.

4.7.2.1 In Lieu Fee or Conservation Banks

Conservation banks and ILF Program Sponsors are responsible for monitoring and implementing adaptive management programs as outlined in the Service-approved and legally binding agreements that establish and authorize these mitigation sites. Permittees that choose to mitigate by purchasing credits from an approved conservation bank or paying into an approved ILF Program²³⁵ are relieved of individual adaptive management requirements because monitoring and management of these mitigation sites are an ongoing obligation of the bank and ILF Program sponsors, but the Permittee is still responsible for meeting the goals and objectives of the ITP.

4.7.2.2 Permittee Responsible Mitigation

Management of PRM sites requires monitoring to test whether systems are responding to management actions and implementing adaptive management procedures to maintain or improve the ecological values that the mitigation sites are intended to protect. Adaptive management triggers and responses will be developed by Applicants in cooperation with the Service and documented in a monitoring and adaptive management plan for each PRM site.

Tables 4.4a-c provides recommended mitigation monitoring and adaptive management responses and may be modified to best address specific mitigation site needs, recorded as part of an Applicant's IPP, and approved by the Service prior to Permit issuance. This list is not intended to be exhaustive and serves to demonstrate the type of mitigation-focused management triggers and responses that should be developed by an Applicant with the technical assistance of the Service as part of any PRM proposal.

²³⁵ The Service must confirm in advance that the selected bank or ILF program may be used to mitigate the project.

Table 4.4a. Recommended PRM for hibernacula gating monitoring, adaptive management triggers, and responses. *Note: gates require long-term maintenance (i.e., in perpetuity) to ensure the gate is functioning properly and bats are able to fly freely through the opening and to ensure the gates are not damaged or destroyed by vandalism or blocked by debris.*

Monitoring	Trigger	Response
Monitor gate during first fall season after installation to ensure bats can fly freely through the gate. Monitor for at least two nights (bat activity must be observed at the gate) to ensure bat flight is not impeded and bats are entering and exiting hibernacula freely.	Bats do not fly freely through gate.	Permittee modifies gate design immediately and follows up with monitoring again during the first fall season after modification. If bats do not fly freely through gate after the modification, subsequent monitoring shall occur during the following fall season. Monitoring may need to continue in subsequent spring/fall seasons until bats are flying freely.
Monitor gate periodically (i.e., biennially) to ensure it is functioning properly.	Gate is no longer functioning properly (e.g., damaged or destroyed, or blocked by debris).	Permittee repairs/restores gate, removes debris. Follow up with monitoring to determine if bats are flying freely through gate. Monitoring may need to continue in subsequent spring/fall seasons until bats are flying freely.

Table 4.4b. Recommended PRM for hibernacula restoration adaptive management triggers and responses.

Trigger	Response
Unanticipated change in hibernacula microclimate after initially achieving desired results.	Identify source of change and implement restoration techniques (e.g., manipulate openings to achieve desired air flow).

Table 4.4c. Recommended PRM for summer and/or spring staging/fall swarming habitat restoration adaptive management triggers and responses. *Note: details of adaptive management and monitoring will be built into a site-specific management plan. The Service has identified likely triggers and responses; however, actual percentages/triggers will be developed within the site-specific plan.*

Likely Trigger	Response
Poor tree planting success (i.e., less than 80 percent of desired tree plantings survive after 10 years).	Replant vegetation, with different native tree species and/or planting techniques, if appropriate.
Targeted invasive plant species exceed identified maximum extent of permissible areal coverage.	Manage invasive plant species to reduce percent areal cover of undesirable vegetation below maximum permissible extent, including use of different management methods if appropriate.
Artificial roost is no longer usable (e.g., fell over, vandalized, insect damage).	Repair/restore roost, remove insect hives/nests.

4.7.3 Reporting

Permittees will submit an annual report through their individual secure ePermits portal. The report will include all information specified in GCP appendix H. The due date of annual report is automatically defined by the ePermits system and will be listed on each Permit.

4.8 Changed and Unforeseen Circumstances

The “No Surprises Rule”²³⁶ provides assurances to Permittees that, as long as the Permittee is properly implementing the GCP, no additional commitment of resources including financial compensation will be required with respect to Covered Species, and no restrictions on the use of resources will be imposed beyond those specified in the GCP without the consent of the Permittee. Generally, the “No Surprises” provisions are addressed through two components, changed circumstances and unforeseen circumstances.

4.8.1 Changed Circumstances

Changed circumstances are defined in the No Surprises Rule as “changes in circumstances affecting a species or geographic area covered by [an HCP] that can reasonably be anticipated by [plan] developers and the Service and that can be planned for (e.g., the listing of new species, or a fire or other natural catastrophic event in areas prone to such events).”²³⁷ If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances, and such measures were provided for in the GCP, the Permittee will be required to implement such measures.²³⁸

²³⁶ 63 FR 8859; codified at 50 CFR 17.3, 17.22(b)(5), 17.32(b)(5)

²³⁷ 50 CFR 17.3

²³⁸ 50 CFR 17.22(b)(5)(i), 17.32(b)(5)(i)

The GCP identifies two potential changed circumstances and responses that will apply to all projects permitted under this GCP. In doing so, reasonably anticipated potential changes have been identified and specific strategies or protocols for dealing with them have been incorporated, thus facilitating adjustments to the conservation program without requiring amendment of the GCP. If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances, and such measures were not provided for in the IPP, the Service will not require any additional measures beyond those provided for in the IPP without the consent of the Permittee, provided the IPP is being properly implemented.²³⁹

4.8.1.1 GCP Changed Circumstances

Given the permit term associated with this GCP, the Service has identified the following reasonably foreseeable changed circumstances that warrant funding and planning considerations for participating projects in tables 4.5a-c:

Table 4.5a. Change in active season, hibernation, or migration dates within the GCP Plan Area.

Trigger	Response
The Service notifies a Permittee that we have determined that Covered Species phenology (e.g., Covered Species emerge in spring earlier in the year) has changed resulting in altering the timing of CMs (e.g., tree clearing time of year restrictions).	Following such notification, the Permittee will implement the revised CMs if they are given at least 6 months prior notification to the start of the next permissible tree clearing window. For example, if tree clearing was originally proposed to start after August 15 and the core maternity season window has changed, the Service must give notification by February 15 for this to be considered a changed circumstance for which Permittee must implement the response action.

Table 4.5b. New species listings within the GCP Plan Area.

Trigger	Response
The Service notifies a Permittee that a non-Covered Species that is reasonably certain to be subjected to take resulting from their permitted activities, has been proposed for listing, or is listed as threatened or endangered under the ESA.	Following such notification, the Permittee will implement CMs to avoid take of that species due to project impacts. Applicants that cannot avoid incidental take of a newly proposed or listed species should contact their local field office (see appendix A) to seek technical assistance and consider whether incidental take coverage is needed.

²³⁹ 50 CFR 17.22(b)(5)(ii), 17.32(b)(5)(ii)

Table 4.5c. New mitigation strategies within the GCP Plan Area.

Trigger	Response
The Service notifies a Permittee that a new mitigation method has been developed, particularly specific to addressing threats from WNS (research/vaccines) that could further the recovery of the species.	Following such notification, the Permittee can consider this mitigation option which can be used to offset the impacts of the taking.

4.8.2 Unforeseen Circumstances

Unforeseen circumstances are defined as changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by plan developers and the Service at the time of the negotiation and development of the plan and that result in a substantial and adverse change in the status of the Covered Species.²⁴⁰

The Service bears the burden of demonstrating that unforeseen circumstances exist using the best available scientific and commercial data available while considering certain factors.²⁴¹ In deciding whether unforeseen circumstances exist, the Service shall consider, but not be limited to, the following factors:

1. the size of the current range of the affected species;
2. the percentage of the range adversely affected by the Covered Activities;
3. the percentage of the range that has been conserved by the conservation plan;
4. the ecological significance of that portion of the range affected by the conservation plan;
5. the level of knowledge about the affected species and the degree of specificity of the conservation program for that species under the conservation plan; and
6. whether failure to adopt additional CMs would appreciably reduce the likelihood of survival and recovery of the species in the wild.

If unforeseen circumstances arise, the Service will not require the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water or other natural resources otherwise available for development or use under the original terms of the conservation plan and beyond the level otherwise agreed upon for the species covered by the conservation plan without the consent of the Permittee.²⁴² If additional conservation and mitigation measures are deemed necessary to respond to unforeseen circumstances, the Service may require additional measures of the Permittee where the conservation plan is being properly implemented only if such measures are limited to modifications within conserved habitat areas, if any, or to the operating conservation program for the affected species and maintain the original terms of the plan to the maximum extent possible.²⁴³ Additional conservation and mitigation measures will not involve the commitment of additional land, water, or financial compensation

²⁴⁰ 50 CFR 17.3

²⁴¹ 50 CFR 17.22(b)(5)(iii)(C)

²⁴² 50 CFR 17.22(b)(5)(iii)(A)

²⁴³ 50 CFR 17.22(b)(5)(iii)(B)

or additional restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan without the consent of the Permittee.

Notwithstanding these assurances, nothing in the No Surprises Rule will be construed to limit or constrain the Service, any Federal agency, or a private entity, from taking additional actions, at its own expense, to protect or conserve a species included in a conservation plan.²⁴⁴

5.0 Funding

ESA Section 10(a)(2)(A)(ii) requires that funding will be available to implement actions that will be enacted to minimize and mitigate the specified impacts of the taking. The ESA also requires that the Service must find that “the Applicant will ensure that adequate funding for the plan will be provided” (Section 10(a)(2)(B)(iii)).

Therefore, Applicants must demonstrate adequate funding sources to fully implement the actions described in this GCP and their IPP. Expenses related to these activities are the sole responsibility of the Permittee. Failure to commit appropriate funding prior to approval are grounds for denial. If funding obligations are not met after the Permit is issued, the Service may revoke or suspend an existing Permit, and this action will weigh in any decision to issue a Permit to the Permittee for any future project. Permittees unable to meet the financial requirements described here may not meet qualifications for approval of IPPs and should contact the local field office for additional guidance or potential approval of alternative funding mechanisms.

Applicants must ensure that adequate funding sources for implementing minimization and mitigation measures, monitoring and adaptive management, actions to be taken for changed circumstances and unforeseen events, alternatives to the proposed project, and other measures are included in their IPP (chapter 4). Funding for mitigation obligations is directly related to the mitigation option(s) selected by the Applicant. If an Applicant chooses to fulfill mitigation requirements through the purchase of credits from a Service-approved conservation bank, the conservation bank will be responsible for the management of the mitigation lands secured through the purchase of bank credits and the credit purchase agreement will govern the Permittee’s mitigation-related funding obligations. For mitigation associated with conservation banks, documentation of credit purchase must be provided to the Service prior to initiation of impacts. If an Applicant chooses to fulfill mitigation requirements from a Service-approved ILF program, the ILF Program Sponsor will be responsible for the management of the mitigation lands secured. If PRM mitigation lands are the selected mitigation method, these lands must be acquired, have completed management plans and perpetual protection (for example, a conservation easement), and be approved by the Service prior to the initiation of impacts. Applicants must submit their plans for mitigation (type, location, and status) in their IPP.

Any mitigation which will occur after Permit issuance requires appropriate financial assurances be in place prior to or concurrent with Permit issuance. Details regarding the required timing of mitigation are described in chapter 4.

²⁴⁴ 50 CFR 17.22(b)(6)

6.0 GCP Administration

It may be necessary during the duration of the GCP for the Service or Permittees to clarify specific provisions or to address issues that may arise with respect to administration of the processes or the precise meaning or intent of the language within the GCP and the associated documents. This section describes processes to address administrative changes, amendments, renewal of the GCP or individual Permits, steps for transferring Permits, and issues related to Permit suspension, revocation, termination, abandonment, or relinquishment.

6.1 Administrative Changes to Individual Project Plans and/or the GCP

Administrative changes consist of revisions of a minor or technical nature such that the net impacts on Covered Species and resulting levels of take are not increased over those analyzed and described in the GCP and the Service's associated decision documents. Administrative changes generally consist of clarifications, interpretations, corrections, or provision of missing details. Such administrative changes do not change the substantive provisions of any of the documents; rather, they explain and make more precise the intent of existing provisions. Examples include, but are not limited to:

- corrections of typographical, grammatical, or similar editing errors that do not change the intended meaning;
- corrections to maps or exhibits to correct errors in mapping;
- minor revisions to monitoring or reporting procedures; and
- minor modifications to Covered Activities in response to evolving technologies (provided that impacts associated with such activities will not exceed the authorized level of take and are compliant with other local and State laws and regulations).

Permittees may propose an administrative change or clarification to their IPP by providing written notice to the local field office. Such notice should include a statement of the reason for the proposed change and an analysis of environmental effects, if any, including any effects of Covered Activities, effects to Covered Species, and any other information required by law.

The Service cannot approve administrative changes or clarifications that result in take not analyzed in the GCP and associated compliance documents or that would result in adverse effects on the environment. Administrative changes will be memorialized in writing and archived in the GCP project files. Administrative changes and clarifications do not require additional public review and comment.

6.2 Amendments to Individual Project Plans and/or the GCP

Any GCP changes that result in impacts to the Covered Species not previously analyzed, adding a newly listed species as a Covered Species to the GCP, expansion of the GCP Plan Area to cover additional states, or the addition of Covered Activities, will be processed as an amendment in accordance with the provisions of the ESA and regulations at 50 CFR Parts 13 and 17. These types of substantive amendments will be subject to appropriate environmental review under the provisions of the NEPA, including public comment. Amendments to the GCP may be implemented by the Service following publication of the approved, amended GCP. Following

completion of an amendment to the GCP, all future Permits would contain the modifications contained within the amendment. Previously issued Permits will not be required to incorporate any changes caused by an amendment, unless a Permittee voluntarily chooses to modify their Permit.

6.2.1 Amendments to Individual Project Plans and/or Permits

To propose an amendment to an IPP without amending their Permit, Permittees must submit to the local field office, in writing, a description of:

1. the proposed amendment;
2. an explanation of why the amendment is necessary or desirable; and
3. an explanation of why the Permittee believes the effects of the proposal are not different from those described in the original IPP and authorized by the Permit.

If the Service concurs with the proposed amendment, then it will authorize the amendment in writing, and the amendment will be considered effective upon the date of the written authorization from the Service.

Amendments to individual Permits may be required in some circumstances. For example, an amendment would be required for any modification of the Covered Activities that is expected to cause take of the Covered Species not analyzed or authorized in the original Permit or if the authorized amount of take is insufficient for the Permittee's need. To propose an amendment to an IPP and amend their Permit, Permittees must submit to the Service, in writing, a description of the proposed amendment and an explanation of why the amendment is necessary or desirable. These amendments must be completed prior to the activities causing take.

If a Permittee needs to expand the Permit Area for new projects, or unanticipated phasing of a project, that results in take of the Covered Species not considered by this GCP, the project no longer meets the GCP framework of eligibility requirements. Therefore, the Service recommends that Permittees apply for a separate Permit and develop a separate HCP in those circumstances (see appendix G).

6.3 GCP Renewal

Upon approval, this GCP will be available for adoption and use by eligible Project Proponents for a period of 10 years, unless amended or renewed. If the Service chooses to renew the GCP, the plan will be updated as needed to ensure that all applicable statutory and regulatory requirements in force at the time of the renewal are addressed. Analyses, including those in the GCP, the NEPA document, and the intra-Service section 7 consultation will be revised as needed to incorporate any new information. Renewal will require public notification, review, and comment period prior to approval.

6.4 Permit Renewal

Permits issued through the streamlined GCP process may be authorized for up to 5 years. Therefore, Project Proponents will have up to 5 years to complete their projects, even if the Permit is issued in the final year (i.e., year 10) of the GCP.

If a Project Proponent is unable to complete their Covered Activities during the duration of their Permit, they can request a Permit renewal (for up to 5 additional years) from the Service as long as the GCP remains in effect. Permit renewals require the Permittee and the Service to satisfy all the requirements pertaining to Permit renewals and applications.²⁴⁵

To renew a Permit issued under this plan, the Permittee will submit to the local field office, in writing:

- a request to renew the Permit with reference to the original Permit number;
- certification that all statements and information provided in the original IPP, together with any approved amendments, are still true and correct, and inclusion of a list of changes;
- a description of any take that has occurred under the existing Permit; and
- a description of any portions of the project still to be completed, if applicable, or what activities under the original Permit the renewal is intended to cover.

If the Service concurs with the information provided in the request, it will renew the Permit consistent with required regulatory procedures.²⁴⁶ If the Service receives a renewal request at least 30 days prior to the original Permit expiration date, the Permit will remain valid while the renewal is being processed. However, the Applicant may not take listed species beyond the quantity authorized by the original Permit. If the Applicant fails to file a renewal request within 30 days prior to the Permit expiration date, the Permit will become invalid upon expiration. The Applicant must have complied with all Permit terms and conditions including annual reporting requirements to qualify for a Permit renewal.

6.5 Permit Transfer

Permit transfers are usually the result of an exchange in ownership of the land covered by a Permit. A new owner that wishes to receive the benefits of the Permit will assume the responsibilities associated with implementing the terms and conditions of the Permit. An assumption agreement that outlines the roles and responsibilities of all the parties including the Service is a key component of a Permit transfer. An assumption agreement should address any outstanding obligations and specify how they will be completed. An assumption agreement, at its simplest, is a joint submittal by the transferor and transferee. The Service's Permit transfer regulations are found at 50 CFR 13.25.

A Permit transfer is a distinct action compared to an amendment or renewal. Nevertheless, the administrative process to transfer a Permit is effectively the same as for an amendment, but it does not require *Federal Register* notice until finalized. This is true even for partial transfers where a new Permit is issued to the new partial owner of the original project. In a complete transfer, an amended Permit is issued to the new owner. In a partial transfer, an amended Permit is issued to the original Permittee and a new Permit is issued to the new owner.

²⁴⁵ 50 CFR 13.12(a)(5); 50 CFR 13.21

²⁴⁶ 50 CFR 13.22

Any Permit issued as a result of a partial or full transfer will retain the expiration date of the original Permit. The transferee may request renewal to alter the expiration date.

To request a Permit transfer, the transferee establishes an account through the Service's online ePermits²⁴⁷ portal, submits an application requesting a transfer of a specific Permit, and submits copies of the executed assumption agreement. Transferees must meet all the qualifications required to receive a Permit, demonstrate the legal ability to perform the authorized project and the capacity to implement the Permit or the portion for which they are assuming responsibility, and provide funding assurances. There is no application fee for Permit transfer actions that rely on the application package submitted for the original Permit.

Service regulations authorize certain successors of an original Permittee to carry out a permitted activity for the remainder of the Permit term in cases of foreclosure, bankruptcy, inheritance by family members, etc.²⁴⁸ To obtain authorization, the successor must notify the Service within 90 days of the date the successor begins to carry out the permitted activity and obtain written endorsement from the Service. To authorize continuance of the Permit, the Service is required to determine that the successor meets the qualifications to hold the Permit, can implement the Permit, including all outstanding minimization and mitigation measures, has provided adequate assurances of funding, and has provided any other relevant information requested. Transfer of a Permit in accordance with 50 CFR 13.25 satisfies the "endorsement" requirement. There is no application fee for Permit transfer actions due to succession that rely on the application package submitted for the original Permit.

6.6 Permit Suspension, Revocation, or Termination

Permittees receive No Surprise Rule assurances if they implement the Permit and the GCP in accordance with their terms. Each Permit issued under the GCP will establish that any action inconsistent with the terms of the Permit and IPP and/or failure to carry out required obligations will result in automatic suspension of authorized incidental take by operation of its terms until such time as the deficiency is resolved. If a Permittee becomes aware of a deficiency in its performance, the Permittee shall notify the Service immediately and work diligently to remedy the deficiency. If the Service becomes aware of a deficiency in implementation, either of the project or the mitigation, of activities not covered by the Permit, or of take in excess of that authorized, the Service will notify the Permittee and the parties shall discuss potential avenues to resolve the concern.

If issues are not corrected, the Service will follow its standard protocols for escalating notice, administrative measures, law enforcement investigations, suspension, revocation, and civil or criminal processes, as appropriate.

A Permit may be suspended or revoked for noncompliance with Permit conditions or with any applicable laws or regulations governing the conduct of the permitted activity.²⁴⁹ Revocation can

²⁴⁷ https://fwsepermits.servicenowservices.com/nav_to.do?uri=%2Fhome_splash.do%3Fsysparm_direct%3Dtrue

²⁴⁸ 50 CFR 13.24

²⁴⁹ 50 CFR 13.27, 13.28

further disqualify an Applicant from receiving or exercising the privileges of a similar Permit for a period of 5 years from date of agency decision on the revocation.²⁵⁰

In addition to terms that are automatically operative as a Permit condition, criteria and processes for Permit suspension and revocation are found in general Permit regulations at 50 CFR 13.27 and 13.28, respectively. Specific criteria for revocation appear at 50 CFR 17.22(b)(8) and 17.32(b)(8).

6.7 Permit Abandonment or Relinquishment

Should a Permittee choose to terminate their Covered Activities and relinquish their Permit, the Service must meet with the Permittee to determine the appropriate courses of action. The Permittee must ensure that the mitigation required under the GCP for all the incidental take that has occurred is carried out, including any ongoing conservation funding and implementation assurances. The Service will only cancel a Permit upon determining that all outstanding minimization and mitigation measures for past take have been implemented.²⁵¹

²⁵⁰ 50 CFR 13.21(c)(2)

²⁵¹ 50 CFR 17.22(b)(7) and 17.32(b)(7)

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Appendix A. Contact Information for Local Field Offices

New York Ecological Services Field Office

3817 Luker Road

Cortland, New York 13045-9385

<https://www.fws.gov/office/new-york-ecological-services-field>
607-753-9334

Send project submissions to: *fw5es_nyfo@fws.gov*

Pennsylvania Ecological Services Field Office

110 Radnor Road, Suite 101

State College, Pennsylvania 16801-7987

<https://www.fws.gov/office/pennsylvania-ecological-services>
814-234-4090

Send project submissions to: *IR1_ESPenn@fws.gov*

West Virginia Ecological Services Field Office

6263 Appalachian Highway

Davis, West Virginia 26260-8061

<https://www.fws.gov/office/west-virginia-ecological-services>
304-866-3858

Send project submissions to: *fw5_wvfo@fws.gov*

Appendix B. GCP Eligibility Key

The following questionnaire/flowchart is provided to assist Project Proponents²⁵² in determining if their project is eligible to participate through the streamlined Multi-State Bat General Conservation Plan (GCP) process for the states of New York (NY), Pennsylvania (PA), and West Virginia (WV). This GCP and the associated eligibility key only includes the Covered Species in the Plan Area. The Covered Species are the federally listed Indiana bat (*Myotis sodalis*; Endangered; IBAT) and the northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered; TCB).

This questionnaire/flowchart does not supersede the need to coordinate with Federal, state, and local resource agencies that have authority or jurisdiction over a project. This eligibility key is provided to identify eligible proposed projects and identify those that may need further coordination with U.S. Fish and Wildlife Service (Service) local field offices²⁵³ in the aforementioned states to determine how best to address a Project Proponent's conservation and environmental compliance needs.

Please contact your local field office if there are questions about the application process or if you are unsure how to address the questions in this eligibility key/flowchart.

Project Proponents whose selections under this questionnaire/flowchart result in the conclusion that their project is not eligible to participate through the GCP should contact their local field office for technical assistance and direction on next steps. Some projects may be able to incorporate minor modifications that will allow participation, and others may require additional information or alternative approaches.

Common terminology used in this eligibility key is defined in the glossary at the beginning of the GCP.

Minor administrative changes may occur to this section and will be reflected on our GCP website.²⁵⁴

²⁵² The GCP defines a Project Proponent as “a potential Applicant. For the purposes of this plan, a Project Proponent is any person planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.”

“Person” is further defined in section 3(13) of the Endangered Species Act.

²⁵³ See: Appendix A for contact information.

²⁵⁴ See: <https://www.fws.gov/project/routine-development-gcp>

GCP Eligibility Key

- 1.0 Does the proposed project occur entirely within NY, PA, and/or WV (i.e., within the GCP Plan Area)?

Y= Go to 1.1.

N= This GCP provides incidental take coverage for projects entirely within the Plan Area consisting of NY, PA, and WV (except for Federal lands). Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance for projects that extend beyond the GCP Plan Area.

- 1.1 Is the proposed project one of the following: a residential/commercial/recreational development project, a transportation project, or a utility project described as an eligible project type in GCP section 3.4? (GCP section 3.4 provides a list of eligible project types and section 3.3 provides a list of ineligible project types)

Y= Go to 1.2.

N= This GCP provides incidental take coverage for certain specific project types. Other project types are not eligible to participate through this GCP. Please contact the local field office to request additional technical assistance.

- 1.2 Are the Covered Species the only federally listed species for which take is reasonably certain to occur as a result of the proposed project?

Y = Go to 1.3a.

N = This GCP only provides incidental take coverage for the Covered Species. Proposed projects that will result in take of other species federally listed as threatened or endangered will require additional authorization under the ESA.²⁵⁵ Please contact the local field office to request additional technical assistance.

- 1.3a Has the proposed project been run through the NLEB/TCB range-wide dkey in IPaC?

Y = Go to 1.3b

N = Input your project into the NLEB/TCB dkey before returning to this key.

- 1.3b Did you receive a LAA or reasonable certainty of take determination from the NLEB/TCB range-wide dkey?

²⁵⁵ Refer to your Information, Planning and Consultation (IPaC) Official Species List from the Service or Pennsylvania Conservation Explorer (PACE) Tool/Pennsylvania Natural Diversity Inventory (PNDI) receipt to determine what other species may be present within your project area and coordinate with your local field office to ensure that take of those non-covered listed species is not reasonably certain to occur.

Y = Go to 1.4a (resume key)

N = Project received a NLAA. Contact your local USFWS field office for additional Technical Assistance (see Appendix A for contact information).

- 1.4a Is the proposed project located within 0.5-mile of a hibernaculum known to be used by IBATs, NLEBs and/or TCBs?²⁵⁶

Y = Go to 1.4b.

N = Go to 1.5a.

- 1.4b Are impacts to known occupied hibernacula or take of Covered Species within 0.5 miles of known occupied hibernacula reasonably certain to occur? (GCP section 4.4.1.2 provides a list of potential stressors)

Y = This GCP does not cover impacts to hibernacula, hibernating bats, or to suitable spring staging/fall swarming habitat within 0.5-miles of hibernacula used by the Covered Species. Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 1.5a.

- 1.5a Are there any potential caves/portals present within your project area that are not documented hibernacula for the Covered Species?

Y = Go to 2.

N = Go to 1.5b.

- 1.5b Is your project within known occupied Covered Species habitat? (spring staging/fall swarming or summer maternity)

Y = Go to 1.7.

N = Go to 1.5c.

- 1.5c Were summer presence/probable absence (P/A) surveys (using the most recent version of the Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines²⁵⁷) conducted within the project area?

Y = Go to 3.0.

²⁵⁶ Please contact your local field office to determine if your proposed project is located within 0.5-mile of a known occupied hibernaculum.

²⁵⁷ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

N = Go to 1.5d.

1.5 d Is your project linear?²⁵⁸

Y = Go to 1.8.

N = Go to 1.6.

1.6 Does your project require the removal of more than 25 total acres of non-linear²⁵⁹ (e.g., residential development project, photovoltaic solar power project, wastewater treatment plant) suitable summer bat habitat that has not been surveyed for bat presence?

Y = This GCP does not cover projects that will remove more than 25 total acres of suitable summer habitat if the habitat has not been surveyed using current Service protocols.²⁶⁰ Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 1.8.

1.7 Does your project require the removal of more than 200 acres of non-linear occupied Covered Species habitat? (spring staging/fall swarming or summer maternity)

Y = This GCP does not cover projects that will remove more than 200 acres of occupied habitat for the Covered Species for non-linear projects. Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 1.8.

1.8 Will your project avoid raising any road/rail profile above the tree canopy within 1,000 feet of suitable habitat within known or assumed occupied habitat?²⁶¹

Y = Go to 1.9.

N = This GCP does not cover projects that raise road or rail profiles above tree canopy height within 1,000 feet of suitable habitat. Project is not eligible to participate through the GCP. Please use the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Authority (FTA) Programmatic Consultation for Transportation Projects determination key in IPaC²⁶² or contact the local field office to request additional technical assistance.

²⁵⁸ The Service defines projects as linear if they are greater than 1 km in length (e.g., pipelines, roadways).

²⁵⁹ Non-linear projects can also include projects that are less than 1 km in length.

²⁶⁰ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

²⁶¹ See: <http://www.fws.gov/sites/default/files/documents/programmatic-biological-opinion-for-transportation-projects-2018-02-05.pdf>

²⁶² See: <https://ipac.ecosphere.fws.gov/>

- 1.9 Will your project avoid all burning of debris piles (brush piles) for vegetation removal during the active season within known or assumed occupied habitat? [Active season: Apr. 1 to Nov. 14 (PA/WV), Mar. 1 to Nov. 31 (Long Island, NY) and Apr. 1 to Sept. 30 or Apr. 1 to Oct. 31 (rest of NY)]

Y = Go to 4.0.

N = This GCP does not cover projects that include burning of debris or brush for vegetation removal within habitat known or assumed to be occupied during the bats' active seasons. Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

Hibernacula Survey Questions

- 2.0 Does the hibernaculum meet the criteria designating a hibernaculum as suitable for use by the Covered Species in the Service's Potential Hibernaculum Survey Guidance?²⁶³

Y = Go to 2.1.

N = Go to 1.4b.

- 2.1 Were hibernacula or fall trapping²⁶⁴ surveys completed?

Y = Go to 2.2.

N = Go to 2.1a.

- 2.1 a Are project activities located within 0.5-mile of any hibernacula that were not surveyed resulting in an assumed occupied hibernaculum?

Y = Go to 2.1b.

N = Go to 1.4b.

- 2.1 b Are impacts to assumed occupied hibernaculum or take of the Covered Species reasonably certain to occur?

Y = This GCP does not cover impacts to hibernacula, hibernating bats, or to suitable spring staging/fall swarming habitat within 0.5-mile of an assumed occupied

²⁶³ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines> (appendix H)

²⁶⁴ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines> (appendix H)

hibernaculum. Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 1.4b.

2.2 Were the Covered Species captured/detected?

Y = Go to 2.2a.

N = Go to 1.4b.

2.2a Are project activities located within 0.5-mile of the caves or portals where Covered Species were captured/detected indicating the presence of an occupied hibernacula?

Y = Go to 2.2b.

N = Go to 1.6.

2.2b Are impacts to the occupied hibernacula or take of the Covered Species reasonably certain to occur?

Y = This GCP does not cover impacts to hibernacula or to the Covered Species within 0.5-mile of a hibernaculum. Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 1.6.

Presence/Probable Absence Survey Questions

3.0 Were any of the Covered Species detected/captured during surveys?

Y = Go to 1.6.



Take is not reasonably certain to occur.

Occupied/Assumed Occupied Habitat Removal Questions

4.0 Does the project involve any active season tree clearing, trimming, or limbing of occupied or assumed occupied spring staging/fall staging habitat? [Active season: Apr. 1 to Nov. 14 (PA/WV), Mar. 1 to Nov. 31 (Long Island, NY), and Apr. 1 to Sept. 30 or Apr. 1 to Oct 31 (rest of NY)]

Y = Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 4.1.

Author

Previously documented detections/captures at the site (at least post-WNS) should not be overruled by one year of surveys.

ing, topping, pruning, and fall swarming habitat? (Long Island, NY), and

- 4.1 Does the project involve any active season tree clearing, trimming, topping, pruning, and/or limbing of occupied or assumed occupied summer habitat? [Active season: Apr. 1 to Nov. 14 (PA/WV), Mar. 1 to Nov. 31 (Long Island, NY) and Apr. 1 to Sept. 30 or Apr. 1 to Oct. 31 (rest of NY)]

Y = Go to 4.2.

N = Go to 5.0.

- 4.2 Does the project propose to clear suitable documented roosts or trees within 150-feet of documented roosts?

Y = Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 4.3.

- 4.3 Will active season tree removal of occupied or assumed occupied summer habitat occur before August 15?

Y = Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Go to 4.4.

- 4.4 Will the project clear 10 or fewer trees?

Y = Go to 4.5.

N = Reasonable certainty of take, project is eligible for GCP.

- 4.5 Is the active season tree removal (after August 15) within 1-mile of a known roost?

Y = Reasonable certainty of take, project is eligible for GCP.

N = Go to 4.6.

- 4.6 Were emergence surveys²⁶⁵ conducted?

Y = Go to 4.7.

N = Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

²⁶⁵ See: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines> (appendix E)

4.7 Were any bats observed?

Y = Project is not eligible to participate through the GCP.²⁶⁶ Please contact the local field office to request additional technical assistance.

N = Take is not reasonably certain to occur.

Occupied or Assumed Occupied Habitat Removal Questions (Inactive Season)

5.0 Is inactive season tree removal proposed within 1-mile of a known roost(s)? [Inactive season: Nov. 15 to Mar. 31 (PA/WV), Dec. 1 to Feb. 28 (Long Island, NY) and Oct. 1 to Mar. 31 or Nov. 1 to Mar. 31²⁶⁷ (rest of NY)]

Y = Go to 5.1.

N = Go to 6.0.

5.1 Does the project propose to clear suitable documented roosts or trees within 150-feet of documented roosts?

Y = Reasonable certainty of take; however, the take associated with this project is not covered by the GCP.

N = Go to 5.2.

5.2 Are potential suitable roosts proposed for removal?

Y = Coordinate with local field office, determine if take is reasonably certain to occur, if yes, project is eligible for GCP.

N = Go to 6.0.

Documented Foraging Habitat Questions

6.0 Is there any known or documented foraging habitat (e.g., based on radio telemetry studies, acoustic surveys beyond P/A level of effort) proposed for removal?

²⁶⁶ Project sponsor may become eligible for the GCP if additional surveys confirm that the observed bats were not the Covered Species. Coordinate with your local field office to determine the appropriate type of survey (e.g., acoustic, mist-netting, telemetry studies) and level of effort for your particular project.

²⁶⁷ Time frames as stated in the Service's New York Field Office's "Indiana Bat Project Review Fact Sheet" (March 2018): 1) when > 10 miles from a Priority 3 (P3) or Priority 4 (P4) hibernaculum or > 20 miles from a Priority 1 (P1) or Priority 2 (P2) hibernaculum, but within the summer range of the Indiana bat, the clearing of potential roost trees, generally ≥ 4 inches DBH should occur from October 1 through March 31; and 2) when < 10 miles from a P3 or P4 hibernaculum or < 20 miles from a P1 or P2 hibernaculum, clearing should be conducted from November 1 to March 31. Tree removal on Long Island should be conducted from December 1 to February 28.

Y = Coordinate with local field office, determine if take is reasonably certain to occur, if yes, project is eligible for GCP.

N = Go to 7.0.

Documented Travel Habitat Questions

7.0 Will any known or documented commuting/travel corridors (e.g., hedgerows, riparian buffers etc. within summer foraging and roosting habitat) be removed or altered?

Y = Project is not eligible to participate through the GCP. Please contact the local field office to request additional technical assistance.

N = Coordinate with local field office, determine if take is reasonably certain to occur, if yes, project is eligible for GCP.

Appendix C. Individual Project Plan Application

To apply for a Permit²⁶⁸ under the Multi-State Bat General Conservation Plan (GCP) for the states of New York (NY), Pennsylvania (PA) and West Virginia (WV) for the Covered Species that includes the federally listed Indiana bat (*Myotis sodalis*; Endangered; IBAT) and northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered; TCB), Project Proponents²⁶⁹ must submit a complete individual project plan (IPP). This document describes the IPP process and provides information on the development and submission of the application package. All components listed below must be completed, reviewed, and processed by a U.S. Fish and Wildlife Service (Service) local field office (see How to Submit below for contact information), in the appropriate aforementioned state, before a permit can be issued. The local field office can be contacted at any point during this process if you need assistance.

Applicant/Federal Agency Information

1. Enter your IPaC Project Code²⁷⁰ here: _____ (e.g., 202X-XXXXXXX). **Include a copy of your Official Species List.**
2. ____ By checking this box, I confirm that I have reviewed the GCP²⁷¹, and all its appendices (A-H), and determined that my project is eligible to use this GCP. **Include a copy of your GCP Eligibility Key (appendix B) results as part of the final IPP submittal to verify eligibility.**
3. If IBAT and/or NLEB is identified on your IPaC Official Species List, **include the following IPaC-generated letters or PNDI receipts as part of the IPP submittal:**
 - A. If the IBAT is identified on your Official Species List:
 - a. For NY and WV only - the IPaC Northeast Endangered Species Determination Key²⁷² is applicable, **OR**
 - b. For PA only - a Pennsylvania Natural Diversity Inventory (PNDI) receipt from the Pennsylvania Conservation Explorer (PACE) Tool²⁷³ is applicable

²⁶⁸ A Permit refers to an incidental take permit under Section 10(a)(1)(B) of the Endangered Species Act (ESA).

²⁶⁹ The GCP defines a Project Proponent as “a potential Applicant. For the purposes of this plan, a Project Proponent is any person planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.” “Person” is further defined in ESA section 3(13).

²⁷⁰ An Official Species List can be obtained from the Service’s Information for Planning and Consultation (IPaC) program website at: <https://ipac.ecosphere.fws.gov>.

²⁷¹ The GCP and associated documents can be found here: <https://www.fws.gov/project/routine-development-gcp>

²⁷² This key is intended to streamline review of projects for potential effects to federally listed threatened and endangered species and designated critical habitat. This key covers many species in the Northeast Region.

²⁷³ The PACE tool is a one stop shop for conservation planning and environmental review. This tool provides conservation information on biological diversity, protected lands, streams and other natural resources for planning purposes and allows users to screen a project for potential impacts to state and federally listed threatened endangered and special concern species. The PACE tool may send you to IPaC, as appropriate.

B. If the NLEB is identified on your Official Species List:

- For NY, PA, and WV - the IPaC Northern Long-Eared Bat Rangewide Determination Key²⁷⁴ is applicable.

4. Is the action authorized, permitted, funded, or being carried out by a Federal agency in whole or in part? (e.g., USACE, HUD, USDA) (see GCP appendix F)?

____ Yes [which agency(ies)]: _____

____ No

5. Applicant's contact information:

Name (first and last name): _____

Company: _____

Phone: _____

Email address: _____

6. Project Name: _____

7. County/State: _____

Individual Project Plan Checklist

The following information is necessary for the Service to understand the Applicant's project and determine if all the GCP requirements are being fulfilled. Please provide as much detail as possible to assist the Service in this review. Failure to provide sufficient information may result in increased review times or the need for resubmission.

8. Provide a detailed description of the proposed Covered Activities, including any and all related construction activities, staging areas, temporary workspaces, access roads, etc. Specify the total amount of acreage or linear miles within the project area and the total number of acres of ground disturbance that will result from the project.
9. Provide a topographic or aerial map of the project location: include a large-scale map with context of the project within the surrounding area, a small-scale map specific to the project area, and outline the action area²⁷⁵ OR provide a shapefile that identifies the action area. Maps/shapefiles should include boundaries for all limits of disturbance.

²⁷⁴ This key is intended to be applied to the entire range of the northern long-eared bat to streamline review of projects for potential effects to this species.

²⁷⁵ The action area should include all areas to be affected directly or indirectly by the proposed action and not merely the immediate area involved in action.

10. Submit color digital images of the site taken prior to project impacts, the date the photograph was taken, and a map showing the location of established photograph points (latitude and longitude recorded in NAD83). There is no limit to the number of photographs that can be submitted, but at minimum, photographs must be taken in the four cardinal directions (North, South, East, and West) at the established photograph points (applicants can include photos that are historical and/or depict current conditions onsite, representative photos of vegetation onsite and habitat for Covered Species, etc.).
11. Provide an estimated project construction timeline. Also, include the proposed dates of tree clearing/trimming/limbing/pruning/topping.
12. Provide any applicable results based on the most recent Service bat survey guidance²⁷⁶ or notification that the presence of the Covered Species will be assumed based on the presence of suitable habitat.²⁷⁷
13. Provide a list of conservation measures²⁷⁸ being applied to the project (see GCP section 4.4.1.1).
14. Provide an estimate take using acres of suitable habitat as a surrogate, or number of individual trees removed. This estimate should include acreage of tree clearing/trimming/limbing/pruning/topping (see GCP section 4.5).
15. Indicate the type, amount, and timing of mitigation, including associated costs and calculations (see GCP section 4.6 and table 4.1).
16. Indicate the type of mitigation funding assurances that will be implemented by checking one of the boxes below (see GCP section 4.8.1.1 and 5.0).

_____ Conservation Bank. *Note:* Documentation of credit purchase must be provided to the Service prior to the onset of any activities that have the potential to result in take of the Covered Species.

_____ In-Lieu Fee (ILF). *Note:* The Applicant must provide documentation of the contribution of fees into the ILF prior to the onset of any activities that have the potential to result in take of the Covered Species.

_____ Permittee-Responsible Mitigation (PRM). *Note:* Lands must be acquired, permanent conservation easement established, endowments established,

²⁷⁶ <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>. In accordance with the survey guidance, it is recommended that surveys be approved by the Service prior to their start.

²⁷⁷ As a reminder, Project Proponents proposing non-linear projects with greater than 25 acres of tree removal (including trimming, topping, pruning, and/or limbing) must undertake P/A surveys to be considered eligible for this GCP.

²⁷⁸ Indicated as CMs in the GCP.

and management plan completed and be approved by the Service prior to the onset of any activities that have the potential to result in take of the Covered Species.

PRM Surveys. *Note:* All surveys shall be conducted prior to the onset of any activities that have the potential to result in take of the Covered Species. If surveys are negative for the presence of new Covered Species maternity colonies and/or hibernacula, another mitigation method must be chosen, and funding assurances secured. Please indicate the secondary mitigation option (see GCP table 4.3d):

Other PRM Option. *Note:* Approval by the Service must be received prior to moving forward with this option. Please indicate the alternative mitigation being considered and submit available details in a separate document:

17. Provide a copy of the Regional Cultural Resources Consultation form or documentation of the State Historic Preservation Office concurrence to confirm that the National Historic Preservation Act section 106 requirements have been fulfilled (see GCP appendix E).
18. Provide a copy of the IPaC consistency letters and/or PNDI receipts, as applicable (see #4 above).

How to Submit

Please email IPP submittals to the appropriate local field office email address below, as electronic submissions are preferred. Please do not email project information directly to individual staff biologists. If you are unable to submit the project electronically, the IPP application can also be submitted by U.S. mail (addresses below). Please do not submit the same project through both email and U.S. mail. Include the following in the email subject line for each IPP application: **GCP IPP Application Review Requested: [Project title] [IPaC Project Code] [State – NY, PA, or WV].**

Service Field Office Contacts:

New York Ecological Services Field Office

3817 Luker Rd.

Cortland, New York 13045-9385

607-753-9334

Email project submissions to: *fw5es_nyfo@fws.gov*

Pennsylvania Ecological Services Field Office

110 Radnor Rd., Suite 101

State College, Pennsylvania 16801-7987

814-234-4090

Email project submissions to: *IR1_ESPenn@fws.gov*

West Virginia Ecological Services Field Office

6263 Appalachian Highway

Davis, West Virginia 26260-8061

304-866-3858

Email project submissions to: *fw5_wvfo@fws.gov*

Next Steps

Following the receipt of a complete IPP, the Service will review the package for potential approval. The Service will notify Applicants via email if and when their IPP is approved. The Service will also correspond via email if the IPP is incomplete or has been denied for any reason. The Service will provide the Applicant/Federal agency with an explanation of why the IPP was deemed incomplete or not approved.

When the Applicant has been notified by the Service that the IPP is complete, they should go to the Service's ePermits website at <https://fwsepermits.servicenowservices.com/fws/> and begin filling out the Permit application.

Reporting

An annual report of Covered Activities undertaken under the terms of this GCP will be prepared by Permittees and submitted electronically through ePermits at:
<https://fwsepermits.servicenowservices.com/fws/>.

The total amount of take approved annually by the Service covered under individual incidental take permits (ITPs) using this GCP will be posted at <https://www.fws.gov/project/routine-development-gcp>. The amount of take will be updated on the website following each approval of an ITP or as Service end-of-year reports are made publicly available.

If the total take approved for ITPs reaches the total annual take analyzed under this GCP, no additional IPPs will be approved by the Service and notice will be provided on the GCP website.

Appendix D. Threatened and Endangered Species within the GCP Plan Area

As of, January 2024, there are currently 55 federally listed, proposed or candidate species in the Multi-State Bat General Conservation Plan (GCP) Plan Area for the following states: 31 in New York (NY), 26 in Pennsylvania (PA), and 37 in West Virginia (WV). Changes to the listing status of these species may occur over time.

Species	Listing Status	Critical Habitat	Presence by State
Ferns and Allies			
American hart's-tongue fern (<i>Asplenium scolopendrium</i> var. <i>americanum</i>)	T	-	NY
Flowering Plants			
Harperella (<i>Ptilimnium nodosum</i>)	E	-	WV
Houghton's goldenrod (<i>Solidago houghtonii</i>)	T	-	NY
Leedy's roseroot (<i>Rhodiola integrifolia</i> ssp. <i>leedyi</i>)	T	-	NY
Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)	E	-	NY, PA, WV
Northern wild monkshood (<i>Aconitum noveboracense</i>)	T	-	NY
Sandplain gerardia (<i>Agalinus acuta</i>)	E	-	NY
Seabeach amaranth (<i>Amarantus pumilus</i>)	T	-	NY
Shale barren rockcress (<i>Boechera serotina</i>)	E	-	WV
Small whorled pogonia (<i>Isotria medeoloides</i>)	T	-	NY, PA, WV
Virginia spiraea (<i>Spiraea virginiana</i>)	T	-	WV
Mollusks			
Chittenango ovate amber snail (<i>Novisuccinea chittenangoensis</i>)	T	-	NY
Mussel, Clubshell (<i>Pleurobema clava</i>)	E	-	NY, PA, WV
Mussel, Dwarf wedgemussel (<i>Alasmidonta heterodon</i>)	E	-	NY, PA
Mussel, Green floater (<i>Lasmigona subviridis</i>)	PT	P+	NY, PA, WV
Mussel, Fanshell (<i>Cyprogenia stegaria</i>)	E	-	PA, WV
Mussel, James spiny (<i>Pleurobema collina</i>)	E	-	WV
Mussel, Longsolid (<i>Fusconaia subrotunda</i>)	T	+	NY, PA, WV
Mussel, Northern riffleshell (<i>Epioblasma torulosa rangiana</i>)	E	-	NY, PA, WV
Mussel, Pink mucket (<i>Lampsilis abrupta</i>)	E	-	WV

Mussel, Rabbitsfoot (<i>Quadrula cylindrica cylindrica</i>)	T	+	PA
Mussel, Rayed bean (<i>Villosa fabalis</i>)	E	-	NY, PA, WV
Mussel, Round hickorynut (<i>Obovaria subrotunda</i>)	T	+	PA, WV
Mussel, Salamander (<i>Simpsonaias ambigua</i>)	PE	P+	NY, PA, WV
Mussel, Sheepnose (<i>Plethobasus cyphus</i>)	E	-	PA, WV
Mussel, Spectaclecase (<i>Cumberlandia monodonta</i>)	E	-	WV
Mussel, Snuffbox (<i>Epioblasma triquetra</i>)	E	-	PA, WV
Mussel, Tan riffleshell (<i>Epioblasma florentina walkeri</i>)	E	-	WV
Purple cat's paw (<i>Epioblasma obliquata obliquata</i>)	E	-	WV
Snail, Flat-spined three-toothed land (<i>Triodopsis platysayoides</i>)	T	-	WV
Crustaceans			
Big Sandy crayfish (<i>Cambarus callainus</i>)	T	+	WV
Guyandotte River crayfish (<i>Cambarus veteranus</i>)	E	+	WV
Madison Cave isopod (<i>Antrolana lira</i>)	T	-	WV
Insects			
Bog buck moth (<i>Hemileuca maia menyanthevora</i>)	E	-	NY
Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)	E	-	NY
Monarch butterfly (<i>Danaus plexippus</i>)	C	-	NY, PA, WV
Rusty-patched bumble bee (<i>Bombus affinis</i>)	E	-	PA, WV
Fishes			
Atlantic sturgeon (<i>Acipenser oxyrinchus</i>)	E	+	NY, PA
Candy darter (<i>Etheostoma osburni</i>)	E	+	WV
Diamond darter (<i>Crystallaria cincotta</i>)	E	+	WV
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	E	-	NY, PA
Amphibians			
Cheat Mountain salamander (<i>Plethodon nettingi</i>)	T	-	WV
West Virginia spring salamander (<i>Gyrinophilus subterraneus</i>)	PE	+	WV
Reptiles			
Bog turtle (<i>Glyptemys muhlenbergii</i>)	T	-	NY, PA

Eastern massasauga rattlesnake (<i>Sistrurus catenatus catenatus</i>)	T	-	NY, PA
Birds			
Eastern black rail (<i>Laterallus jamaicensis jamaicensis</i>)	T	-	NY, PA, WV
Piping plover (<i>Charadrius melodus</i>) (Atlantic Coast)	T	-	NY
Piping plover (<i>Charadrius melodus</i>) (Great Lakes)	E	+	NY, PA
Roseate tern (<i>Sterna dougallii dougallii</i>)	E	-	NY
Rufa red knot (<i>Calidris canutus rufa</i>)	T	P+	NY, PA, WV
Mammals			
Gray bat (<i>Myotis grisescens</i>)	E	-	WV
Indiana bat (<i>Myotis sodalis</i>)	E	+	NY, PA, WV
Northern long-eared bat (<i>Myotis septentrionalis</i>)	E	-	NY, PA, WV
Virginia big-eared bat (<i>Corynorhinus townsendii virginianus</i>)	E	+	WV
Tricolored bat (<i>Perimyotis subflavus</i>)	PE	-	NY, PA, WV

Listing status: (T) threatened
(E) endangered
(PE) proposed endangered
(PT) proposed threatened
(PDL) proposed for delisting
(C) candidate for listing

Critical habitat: (-) critical habitat has not been designated for this species
(+) critical habitat has been proposed or designated for this species
(P) critical habitat has been proposed for this species

Appendix E. National Historic Preservation Act Section 106 Compliance

Glossary

Adverse Effect/Impact: Anything that will alter, damage, or destroy the integrity of a historic property's characteristics, either directly or indirectly; thus, impact the historic property's qualification for listing in the National Register. Adverse effects may include: demolition; physical destruction of or damage to all or part of the property; alteration, restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, provision of handicapped access; removal of a property from its historic location; change of character; neglect which causes deterioration; introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; transfer, lease, or sale of a property out of federal ownership without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

Applicant: Refers to any person, as defined in ESA Section 3(13), who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action. For the purposes of this GCP, an eligible Applicant is one that has the legal authority to execute their proposed project on the lands that are proposed for coverage under the GCP and sufficient legal control to implement the conservation plan, such as ownership of property in fee simple, a lease agreement that grants authority for the proposed project, or similar type of legal authority to conduct the proposed activities (50 CFR²⁷⁹ 402.02, 50 CFR 17.22(b)(2)(F), 50 CFR 17.32(b)(2)(F), HCP and ITP Processing Handbook).

Area of Potential Effect (APE): The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

Concurrence: An agreement in judgment of consulting parties.

Consulting Parties: Individuals and organizations with a demonstrated interest in the undertaking or the affected historic properties. Consulting Parties can include "State Historic Preservation Officers; Tribal Historic Preservation Officers; Indian Tribes; Native Hawaiian organizations; representatives of local government; Applicants for Federal assistance, permits, licenses, and other approvals; the Advisory Council on Historic Preservation; and others with an interest in the property.

Cultural Resources Professional: A Cultural Resources Management (CRM) Qualified Professional is defined as an individual who meets the established professional standards as found in the Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation.²⁸⁰

²⁷⁹ CFR stands for Code of Federal Regulations.

²⁸⁰ NPS 1983

Cultural Site: Includes archaeological sites, traditional cultural property, and especially any identified or suspected religious/sacred site such as a platted or unplatted cemetery (including prehistoric earthen burial mounds).

Eligible for Listing on the National Register of Historic Places (NRHP): An action through which the property is determined to meet the National Register criteria even if the property does not actually become listed.

Ground Disturbing Activities: Any activity that involves disturbing the soil in any way.

Historic Property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and material remains related to and located within such properties. This term includes properties of traditional religious and cultural importance Indian tribe or Native Hawaiian organization and that meet the National Historic criteria” (sometimes referred to as traditional cultural properties or TCPs).

Ineligible for Listing on the National Register of Historic Places (NRHP): An action through which the property is found to NOT meet the National Register criteria for inclusion on the list of Historic Places.

Material Remains: The physical evidence of human habitation, occupation, use, or activity, including the site, location, or context in which such evidence is situated, or items of material culture from those locations. Only material remains that are of archaeological interest are considered to be archaeological resources.

Minimally Invasive Techniques: Any activity that does not disturb the environment, ground, or any historical properties within an APE.

National Historic Preservation Act of 1966 (NHPA): This law is the federal preservation authority for the preservation of cultural, historical, and archaeological resources on Federal land. Of particular interest is section 106, which requires Federal agencies to consider the effects, whether direct or indirect, of their undertakings on historic properties. Implementation is regulated by the Advisory Council on Historic Preservation (ACHP).

National Register of Historic Places (NRHP): The official list of our country's historic buildings, districts, sites, structures, and objects worthy of preservation.

Non-Ground Disturbing Activities: Activities that do not disturb the soil in any way.

Previously Disturbed Lands: Lands that the soil has previously been disturbed on, such as agricultural fields, construction sites, etc. If the project will surpass the soil depths that were previously disturbed than section 106 will still be required.

Regional Historic Preservation Officer (RHPO): The head U.S. Fish and Wildlife Service archaeologist for the region that the project is located in.

Secretary of Interior’s Professional Qualifications Standards: The Secretary of the Interior establishes professional standards for the preservation and protection of all cultural resources listed in or eligible to be listed in the National Register of Historic Places. These standards promote responsible preservation practices to protect our cultural resources and are used by Federal agencies for their “historic preservation responsibilities.”

Section 106: NHPA section 106 requires Federal agencies to consider the effects, whether direct or indirect, of their undertakings on historic properties by consulting with interested parties. This review process requires time and must be completed before any kind of approval or funding is granted.

State Historic Preservation Officer (SHPO): The head archaeologist for the state that the project is located in.

Traditional Cultural Properties (TCP): A property that is associated with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community.

Tribal Historic Preservation Officer (THPO): The Tribal preservation officer who reviews section 106 correspondences and ensures that the interests of their Tribe are being considered.

Tribe: A federally recognized Tribal Nation.

Undertaking: A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

Section 106 Compliance Protocol

1.0 Introduction

This protocol applies to Applicants adopting the Multi-Bat Species General Conservation Plan (GCP) for Routine Development Projects in New York (NY), Pennsylvania (PA), and West Virginia (WV), in their applications to the U.S. Fish and Wildlife Service (Service) for Incidental Take Permits (ITPs) under ESA section 10. It should only be used for those activities and lands specified in the GCP.²⁸¹ Following this protocol is necessary for compliance with the NHPA section 106 in the context of Service’s decision to grant an ITP permit under the GCP.

²⁸¹ It is the intention of the Service to make the GCP available to Applicants for a 10-year period. However, subsequent procedures may be developed that supersede the approach described herein. If a new procedure is adopted, the Service will engage appropriate Applicants to discuss any superseding protocol. However, the Service recommends that all permittees regularly contact the local field office (see GCP appendix A) or the Service’s Regional Habitat Conservation Plan (HCP) Coordinator to ensure that they are adhering to the most current protocol.

Activities authorized under an ITP, including those issued through the GCP, are considered an “undertaking” under the NHPA. An “undertaking” is defined in the NHPA regulations as follows:

“[A] project, activity, or program funding in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.”²⁸²

As such, compliance with section 106 is required when an ITP is issued pursuant to the GCP. For the purposes of this protocol, activities considered an undertaking in connection with the GCP, fall within two categories:

- 1) they do not have the potential to affect Historic Property; or
- 2) there is potential to affect Historic Property and an Applicant is required to consult with the SHPO, THPO, or Service RHPO.

The regulations promulgated pursuant to the NHPA define “Historic Property” as follows:

“[A]ny prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and material remains related to and located within such properties. This term includes properties of traditional religious and cultural importance Indian tribe or Native Hawaiian organization and that meet the National Historic criteria” (sometimes referred to as traditional cultural properties or TCPs).²⁸³

For the purposes of this protocol, Historic Property includes sites considered as TCPs. Notably, most activities authorized by the GCP, do not have the potential to affect Historic Property. Nevertheless, an Applicant must take the following steps to ensure compliance with section 106. This protocol assumes that Service will be the lead agency for the purposes of compliance.²⁸⁴

2.0 Determining Section 106 Applicability (see Flow Chart at the end of this Appendix to help with applicability determination)

Step 1. Are the activities considered to have no potential to impact Historic Property?

Activities authorized by the GCP that have no potential to affect Historic Property do not require further section 106 review.

The Service considers the activities listed below as having no potential to disturb any prehistoric or historic district, site, building, structure, or object included in, or eligible for

²⁸² 36 CFR 800.16(y).

²⁸³ 36 CFR 800.16(l)(1)

²⁸⁴ 36 CFR 800.2(a)

inclusion in the NRHP (aka “Historic Property”); therefore, do not require further section 106 review.²⁸⁵

Accordingly, if the proposed activity fits within one or more of the categories listed below, the Service’s section 106 compliance for this activity will be considered concluded. An Applicant shall maintain documentation of those conclusions for their records and make them available to the Service upon request.

Activities considered to have no potential to impact Historic Property.²⁸⁶

A. Non-ground disturbing exemptions

- 1) **Surveys and Inspections** – Field observations, site inspections, data collection, investigations, driving along previously established paths or roads, and report writing that do not involve disturbance of the ground or buildings/structures.
- 2) **Public Education and Outreach** – Classroom and outdoor education activities that do not involve ground or building/structure disturbance.
- 3) **Hand Removal or Introduction of Plants and Animals** – The removal from or introduction of plants or animals to the natural environment without ground or building/structure disturbance.
- 4) **Proposals, Plans or Protocols** – The writing or implementation of research or management activities that take place entirely within extant offices and laboratories.
- 5) **Other Non-Construction Activities** – Activities which do not involve or lead directly to construction, such as planning and research activities; grants for training; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed.

B. General Habitat and Vegetation Management

- 1) **Seeding and Planting** – Active planting of an area to promote preferred vegetation. Seeding and planting may use minimally invasive techniques such as broadcast seeding or no-till drill without disturbance of soil below the lowest level of previous disturbance.
- 2) **Herbicide Application** – Use of equipment and vehicles to apply herbicides via foliar applications and other techniques to control invasive plants, noxious weeds, and incompatible vegetation.
- 3) **Controlled Grazing** – Use of controlled grazing (i.e., using cows, goats) to sustain early successional habitats.

²⁸⁵ 36 CFR 800.3(a)(1)

²⁸⁶ 36 CFR 800.3(a)(1)

- 4) **Brush Removal** – Removal of dense brush using forestry mowing, chainsaws, or other mechanical methods to promote more open grassland habitat types.
- 5) **Mowing or Haying** – Mechanical mowing or clipping of vegetative material to sustain early successional habitats.
- 6) **Noxious/Invasive Weed/Woody Species Control** – The control of surface vegetation (weeds and woody species) by prescribed burning, hand and mechanical mowing, cutting, and clipping, or chemical control practices without disturbance of soil below the lowest level of previous disturbance.

C. Maintenance and Modernization Construction

- 1) **General Improvement and Maintenance** – Improvement and maintenance of existing infrastructure where lands have been previously disturbed and where activity will not disturb the soil beyond the area of previous disturbance.
- 2) **Building/Infrastructure Maintenance** – For utility infrastructure projects this includes, but is not limited to, guyed wire replacement, culvert replacement, pole wrapping or painting, above and below ground structural replacements, and woodpecker assessments and patching. On transportation lands this includes, but is not limited to, pavement repair, mill and overlays, shoulder repairs, painting and striping, guardrail installation or replacement, lighting installation or replacement, manhole/inlet cleaning, installation and maintenance of curb and gutter, culvert installation and maintenance, bridges and piers, scour aprons, cattle grates, and similar structures. These activities will not disturb the soil beyond the area of previous disturbance.
- 3) **Building/Structure Removal** - The removal of buildings and structures younger than 50 years from the date of the proposed activity or that have been determined to be ineligible for listing in the NRHP with SHPO concurrence.
- 4) **Temporary Staging and Storage** - Temporary staging and material storage areas for construction using construction matting or other access pads in wetlands, waterway crossings or other environmentally sensitive areas. Temporary staging and storage areas are removed, and vegetation is typically restored following construction.
- 5) **Construction within Previously Disturbed Lands** – Activities that do not cause disturbance beyond the extent or depth of previously disturbed land (i.e., largely within the impacted footprint of the existing infrastructure and previous ground disturbance). On utility infrastructure lands this includes, but is not limited to, construction of structures and pipe segments, re-conductoring, burying lines (conductors, fiber optic, or other), adding or modifying overhead lines or pole attachments, demolition and removal of existing structures and pipe segments, construction of substations, and installation of new structures or pipe within existing rights-of-way. On transportation lands this includes, but is not limited to, pavement replacement, roadway construction or repair, bridge and culvert widening, extensions or replacement, lane and shoulder widening or

extension. Construction of pathways (bike lanes, sidewalks, trails, or other paths), rail replacement, construction of noise walls or retaining walls, burying lines (conductors, fiber optic, or other), adding or modifying overhead pole attachments, bank stabilization activities that are hard armoring through rip rap, concrete, sheet piling, or similar methods that are unlikely to allow vegetation establishment, and, construction within the existing rights-of-way including rest areas, roundabouts, interchanges, truck escape ramps, weigh stations, spoils disposal or waste management areas, and similar facilities.

- a. For both utility infrastructure and transportation lands, this includes facility construction and building maintenance, including small buildings, lighting, storage areas, and stormwater facilities maintenance; grading and excavation; installation and maintenance of erosion control best management practices, site clean-up and restoration, including grading and reseeding on existing rights-of ways.

D. Areas Previously Reviewed

- 1) **APE Previously Surveyed with Negative Results** – The APE of the proposed activity has been previously subjected to a rigorous scientifically-conducted archaeological and/or architectural identification survey by professionals meeting the Secretary of the Interior’s qualifications and no sites/buildings/structures were found (with documented evidence that the survey[s] was conducted and concurrence was achieved from all consulting parties, especially SHPO).²⁸⁷

If the activity does not fit within any of the above categories, further review is warranted, proceed to Step 2.

Step 2. Are Known Historic Properties in the Permit Area²⁸⁸?

Due to their sensitivity to interested parties, any activity located within any previously known Historic Property and cultural site, including an archaeological site, traditional cultural property, and especially any identified or suspected religious/sacred site such as a platted or unplatted cemetery (includes prehistoric earthen burial mounds), requires further review.²⁸⁹

Applicants shall determine whether the activity would occur in a known Historic Property.

A known Historic Property can be identified through prior consultations, or through verbal or written communications with Federal, Tribal, or State historic preservation offices. Through reaching out to the SHPO, applicants may also cross-reference the project site to State and Federal cultural resource databases to determine if the site is a known Historic Property.

²⁸⁷ 36 CFR 61

²⁸⁸ The GCP defines the Permit Area as “the geographic area where a Permit applies (HCP and ITP Processing Handbook). The Permit Area for ITPs issued in association with this GCP will be defined for each individual project and must be completely within the GCP Plan Area consisting of the states of NY, PA, and WV, excluding Federal lands.”

²⁸⁹ 36 CFR 800.5(a)

If the activity has the potential to adversely impact Historic Properties but does not occur within an APE with known Historic Properties, the Applicant must conduct an inventory of the APE (in accordance with state guidelines) to confirm that there are no Historic Properties within the APE.

The Applicant shall maintain documentation of these conclusions for their records and make them available to the Service upon request.²⁹⁰ No further consultation is required if the inventory finds no Historic Properties, and the activity can proceed.

If the activity occurs within a known Historic Property, and scope of activity cannot be modified to avoid the boundaries of the Historic Property, further review is required and the Applicant should proceed to Step 3.

Step 3. An Activity that has the Potential to Affect Historic Property: Formal Section 106 Consultation

Where an activity has the potential to affect Historic Property, an Applicant is required to assist the Service in the section 106 compliance obligations by completing consultation. For each project area, the Applicant shall initiate procedures outlined in regulations working directly with the other consulting parties (e.g., SHPO, THPO).²⁹¹

At this stage, it is **strongly recommended** that an Applicant works with a cultural resources professional that meets the Secretary of Interior's CRM Professional Qualifications Standards to review the activity, guide the Applicant through the consultation process and identify ways to avoid impacts to known Historic Property through a change in the scope of activities.²⁹² The full protocol for consulting on an activity that has the potential to affect Historic Property includes the following:

- 1.) Define the project site and parameters (APE and timing of activities).
- 2.) Cross-reference the project site to State and Federal historic and cultural resource databases within the SHPO and/or the THPO, if applicable, to see if any potential impacts to known Historic Property can be identified (if not done already).
- 3.) Project information resulting from the review and consultation above will be submitted to the relevant SHPO and any other consulting parties identified as having an interest in the APE (e.g., THPOs/tribes). The Applicant should clearly state to the consulting parties that this is a Service undertaking for purposes of section 106. A specific SHPO's review form can be used, or correspondence containing equivalent information, with the supporting documentation including maps and database searches to be sent to the appropriate SHPO/THPO for review.

²⁹⁰ 36 CFR 800.4(d)

²⁹¹ 36 CFR 800 *et seq.*

²⁹² 36 CFR 61

- 4.)The SHPO and the other consulting parties should review the project within 30 calendar days (a THPO or tribe may need a longer time frame) and may request a field visit or “survey”.²⁹³ If no response is given or no survey is requested, activities can begin as planned and the Applicant shall document this for their records, to provide to the Service on request. If this occurs, the Service will consider its section 106 compliance satisfied in connection with this activity.
- 5.)If a field survey is mutually agreed to by the consulting parties, a cultural resource professional, meeting the above referenced standards in the appropriate academic discipline, must conduct it, and one of the following outcomes is possible as a result of the survey:
- a.If an Historic Property is not found, the Applicant must notify the consulting parties, receive concurrence, document this for their records, and be prepared to provide this information to the Service upon request. Completion of these steps by the Applicant will be considered to have satisfied the Service’s section 106 compliance for this activity.
 - b. If an Historic Property is found, the Applicant, in consultation with the consulting parties, will develop a plan, if necessary (most times it is not necessary if the site(s) can be avoided), to evaluate whether or not the site is eligible for inclusion on the NRHP and what effect the project, if any, will have on the site. Except for the stipulation below, while working with the consulting parties, the Applicant will independently follow the section 106 process to the end and shall maintain documentation for their records, which must be made available to the Service upon request.²⁹⁴

*Completion of these steps by the Applicants will be considered to satisfy the Service’s section 106 compliance for this activity.*²⁹⁵

Reference:

National Park Service (NPS). 1983. Archeology and Historic Preservation, Secretary of the Interior’s Standards and Guidelines. Part IV. Federal Register Vol. 48, No. 190, pp. 44716–44740. September 29, 1983.

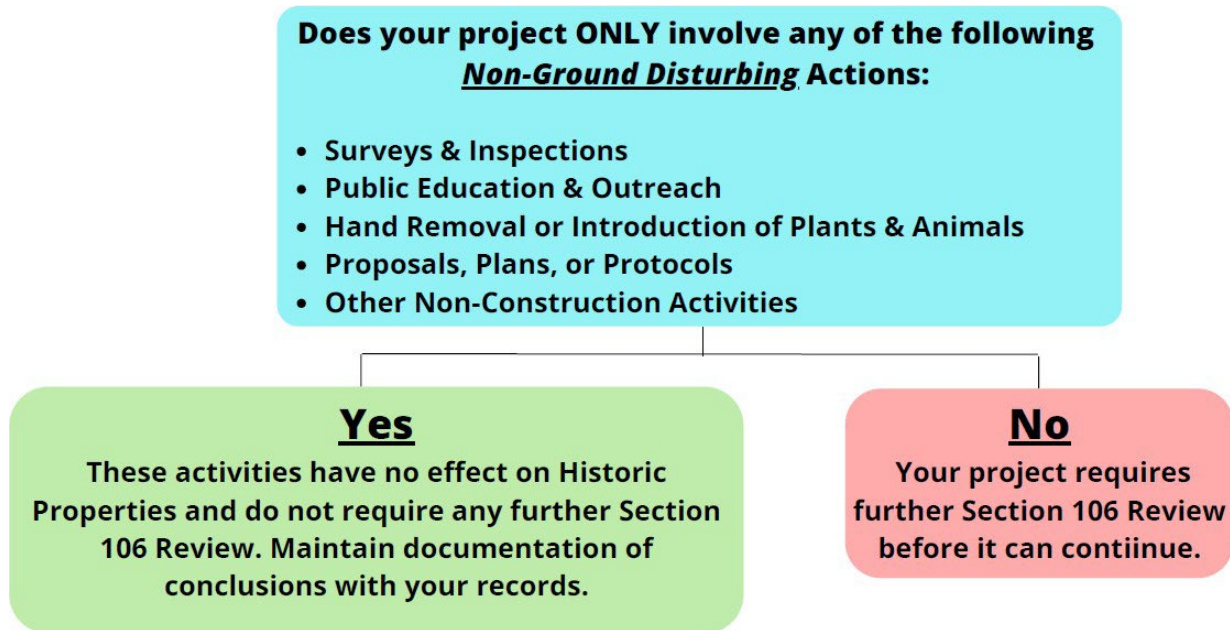
²⁹³ 36 CFR 800.4(d)(i)

²⁹⁴ The Service RHPO may become directly involved in the section 106 review (through the Applicant staff) if the process reaches “resolution of adverse effects” before the conclusion of the section 106 process (36 CFR 800.6). At that time, the Service will enter the process as a signatory to a Memorandum of Agreement to resolve the adverse effects to the Historic Property. The Service will only enter into the section 106 process earlier if any consulting party disagrees with the Applicant’s description of the undertaking or the Applicant’s determination, at which time, notification from the Applicant will be sent in writing to the Service if the disagreement cannot be resolved in a timely manner by the Applicant.

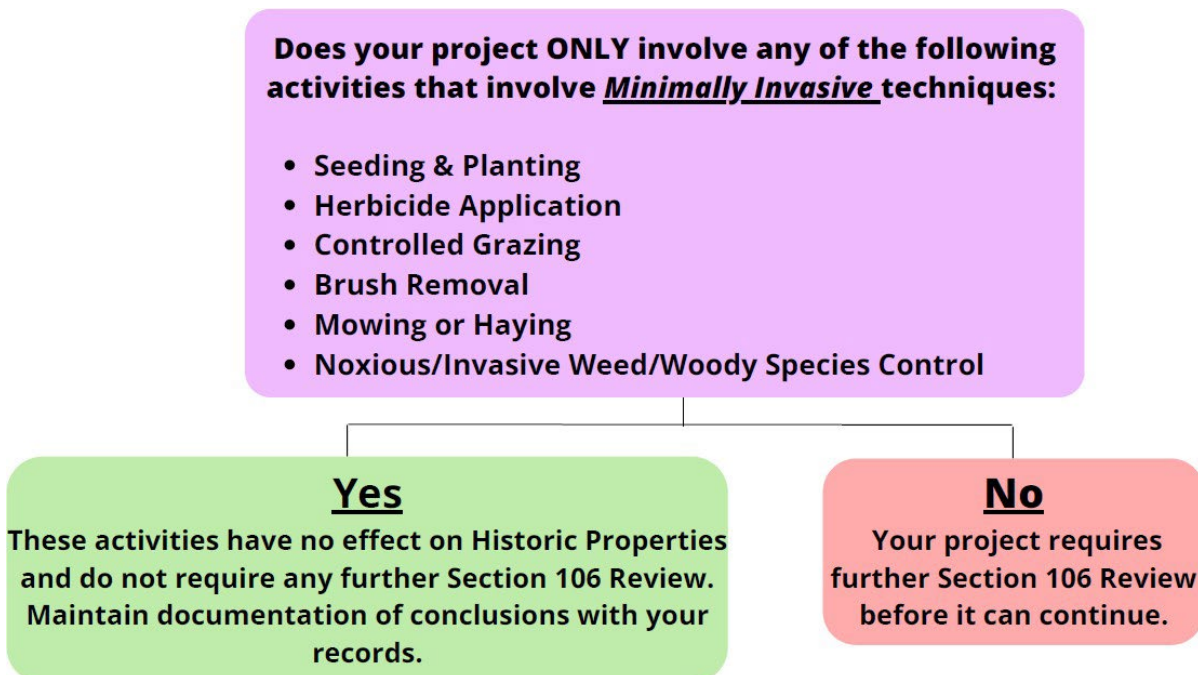
²⁹⁵ 36 CFR 800.4(d)(2)

The following flowcharts further help show how to proceed with completing the NHPA section 106 process.

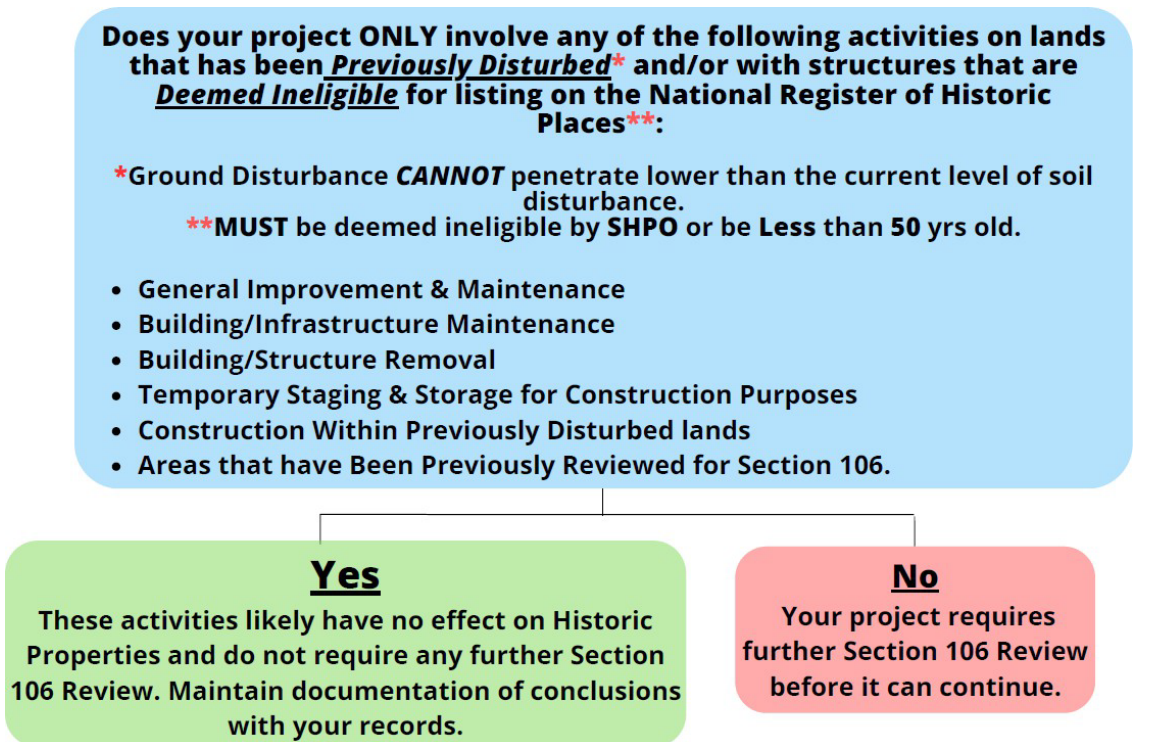
Non-Ground Disturbing Exemptions:



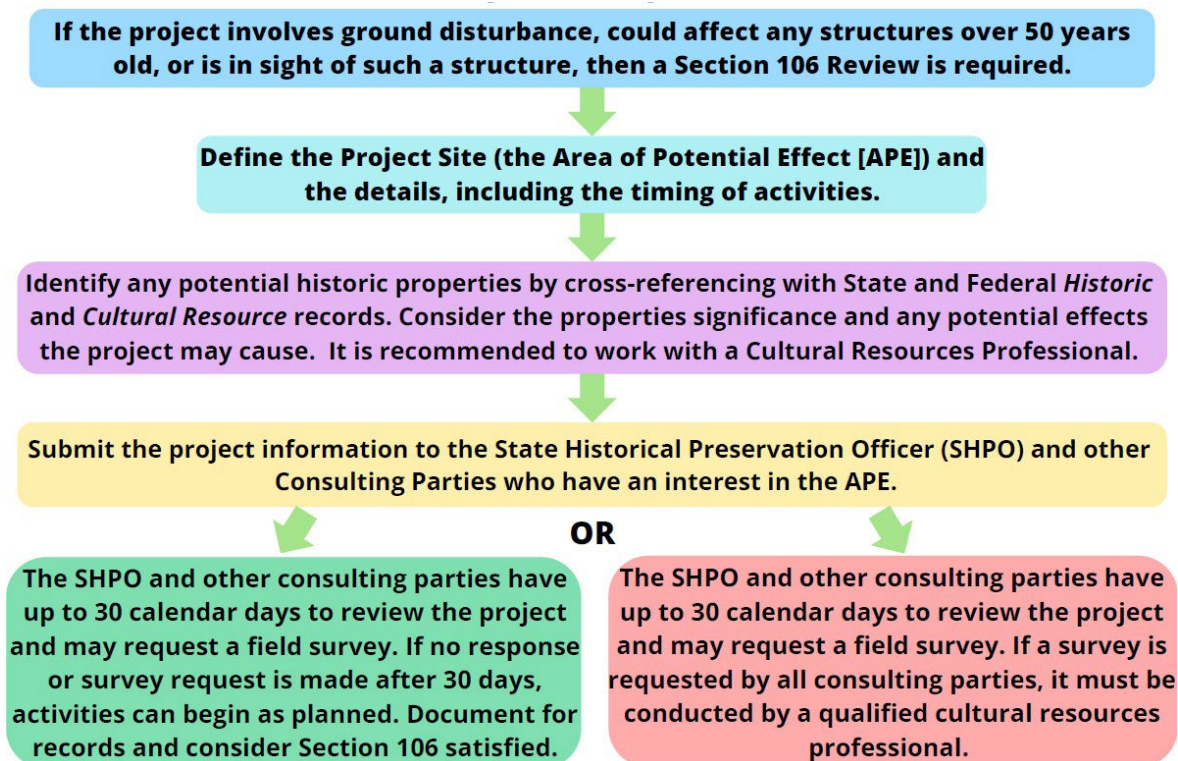
General Habitat and Vegetation Management Exemptions:



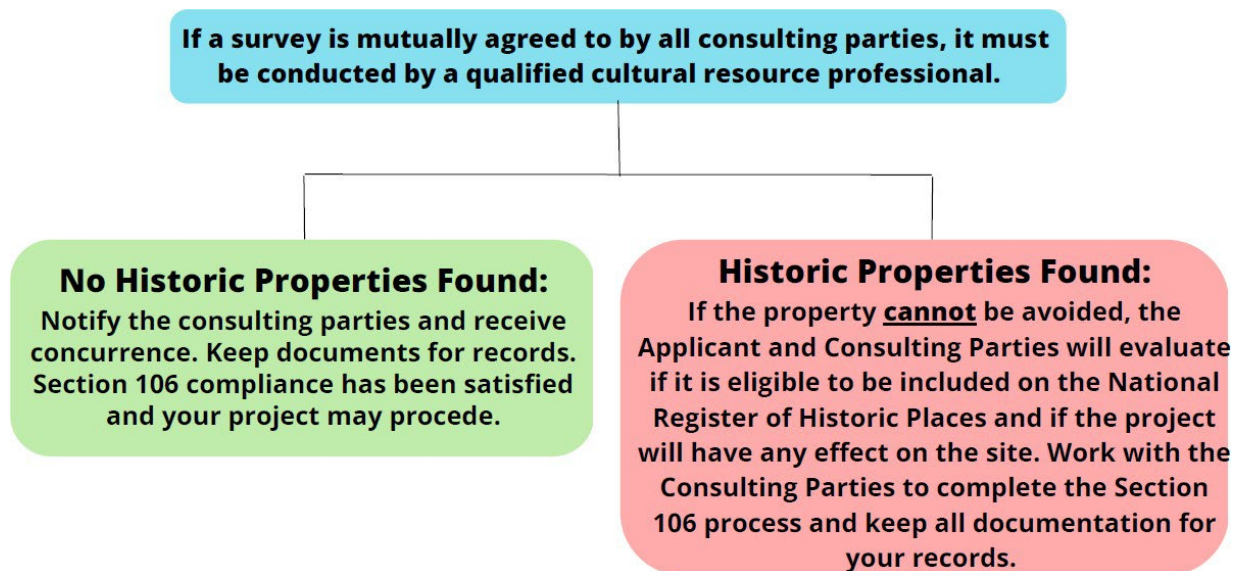
Maintenance and Modernization Construction Exemptions:



NON-Exempted Project Activities:



Field Survey Requested by Consulting Parties:



Appendix F. Federal Action Agency Involvement

The Multi-State Bat General Conservation (GCP) may streamline Endangered Species Act (ESA) implementation for proposed projects that also involve other Federal agency actions that may affect the Covered Species within the Plan Area of New York (NY), Pennsylvania (PA), and West Virginia (WV). The Covered Species include the federally listed Indiana bat (*Myotis sodalis*; Endangered; IBAT) and the northern long-eared bat (*Myotis septentrionalis*; Endangered; NLEB), as well as the tricolored bat (*Perimyotis subflavus*; Proposed Endangered; TCB).

In cases where Federal agencies authorize, fund, or carry out activities that may affect listed species, they must consult with the U.S. Fish and Wildlife (Service) under ESA Section 7(a)(2) to ensure that their actions will not jeopardize the listed species' continued existence²⁹⁶. In cases where a potential GCP project has such a Federal nexus, the Federal agency can incorporate the relevant Project Proponent's²⁹⁷ commitments, including the GCP required mitigation, into their formal consultation initiation package (e.g., Biological Assessment). Once the Service determines that the Federal agency has properly incorporated all of the Project Proponent's commitments into the initiation package, the Service can then extend incidental take²⁹⁸ coverage²⁹⁹ from the GCP's intra-Service Biological Opinion³⁰⁰ to the consulting Federal agency through a streamlined consultation process. The expectation is that the Service would be able to provide this brief document in significantly less time than standard statutory section 7 timeframes. The "No Surprises Rule"³⁰¹ regulatory assurances provided to non-Federal Project Proponents through Permit³⁰² issuance do not apply to participating Federal agencies and reinitiation requirements still apply to the Federal agency. The Service would expect there will be no additional reasonable and prudent measures or terms and conditions for the Federal agency

²⁹⁶ A Federal agency is required to consult with the Service if an action "may affect" listed species or designated critical habitat, even if the effects are expected to be beneficial. A "may affect" determination includes actions that are "not likely to adversely affect," as well as "likely to adversely affect" listed species. If the action is "not likely to adversely affect" listed species (i.e., the effects are beneficial, insignificant, or discountable), and the Service agrees with that determination, the Service provides concurrence in writing and no further consultation is required. If the action is "likely to adversely affect" listed species, then the Federal action agency must request initiation of formal consultation. This request is made in writing to the Service and must include a complete initiation package. Formal consultation concludes with the Service's issuance of a Biological Opinion to the Federal action agency.

²⁹⁷ The GCP defines a Project Proponent as "a potential Applicant. For the purposes of this plan, a Project Proponent is any person planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application." "Person" is further defined in ESA section 3(13).

²⁹⁸ Take is defined in ESA section 3 as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

²⁹⁹ Incidental take coverage provided to Federal action agencies through this GCP would be subtracted from the overall annual take estimated in GCP section 4.5.2, table 4.0 for the state (NY, PA, WV) where the take occurs.

³⁰⁰ April 22, 2020, memorandum from Assistant Director of the Service.

³⁰¹ The No Surprises Rule (63 FR 8859), provides regulatory assurances to the Permittee of a Permit issued under ESA Section 10(a)(1)(B) that no additional land use restrictions or financial compensation beyond that described in the Habitat Conservation Plan and under the Permit conditions will be required of the Permittee with respect to species covered by the Permit, even if unforeseen circumstances arise after the Permit is issued indicating that additional mitigation is needed for a given species covered by a Permit (50 CFR 17).

³⁰² A Permit refers to an incidental take permit under ESA section 10(a)(1)(B).

or Project Proponents with respect to ESA issues because these are already incorporated in the Project Proponent's project description and commitments, the Biological Assessment submitted by the Federal agency, and various GCP-related decision documents including its intra-Service Biological Opinion.

Additional information on implementation can be found in the Service's GCP intra-Service Biological Opinion. GCP eligibility should be discussed with the Service's local field office.³⁰³ Local field offices may need to work with the Federal action agency requesting to use this GCP to develop additional streamlining approaches.

³⁰³ Contact information for the Service's local field offices can be found in GCP appendix A.

Appendix G. Standard Process for Obtaining and Implementing a Permit for an HCP

For Endangered Species Act (ESA) Section 10(a)(1)(B) Habitat Conservation Plans (HCPs), there are four primary phases in the process of obtaining and implementing a Permit:³⁰⁴

1. pre-application;
2. development of an HCP;
3. processing the Permit; and
4. post-issuance compliance.

During **Phase 1**, the U.S. Fish and Wildlife Service (Service) provides technical assistance to the Project Proponent³⁰⁵ regarding the need for a Permit and if so, what type and scale of HCP would meet their needs. If any component of a project cannot be conducted in a way that avoids take³⁰⁶ of federally listed species, Project Proponents may choose to seek a Permit to ensure that they have coverage for take otherwise prohibited under ESA section 9. Coordination with the local field office³⁰⁷ can help determine if project activities are reasonably certain to result in take and if Permit coverage is recommended.

If a Project Proponent chooses to pursue a Permit, the Service works with them during **Phase 2** to develop a conservation plan³⁰⁸ that integrates the proposed project or action with the conservation needs of federally listed species.

Every HCP submitted in support of a Permit application must describe:

1. the impacts likely to result from the taking for which Permit coverage is requested;
2. measures that will be implemented to monitor, minimize, and mitigate these impacts; funding that will be made available to undertake such measures; and procedures to deal with unforeseen circumstances;
3. considered alternatives that would not result in take; and
4. any additional measures the Service may require as necessary or appropriate for purposes of the plan.³⁰⁹

³⁰⁴ A Permit refers to an incidental take permit under ESA section 10(a)(1)(B).

³⁰⁵ The Multi-Bat General Conservation Plan (GCP) defines a Project Proponent as “a potential Applicant. For the purposes of this plan, a Project Proponent is any person planning to engage in activities within the GCP Plan Area that may result in take of a Covered Species. A Project Proponent is referred to as an Applicant at the time they submit a complete application.” “Person” is further defined in ESA Section 3(13).

³⁰⁶ Take is defined in ESA section 3 as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

³⁰⁷ Contact information for the Service’s local field offices can be found in GCP appendix A.

³⁰⁸ The plan required by ESA Section 10(a)(2)(B) that an Applicant must submit when applying for a Permit. Conservation plans are also known as HCPs. Incidental take is authorized through a Section 10(a)(1)(B) Permit (HCP and ITP Processing Handbook, 50 CFR 17.3).

³⁰⁹ ESA 10(a)(2)(A)

Once the Service determines that an Applicant's³¹⁰ HCP meets statutory and regulatory issuance criteria, the Service initiates **Phase 3** by publishing a Notice of Availability of the application in the *Federal Register* (FR) to satisfy statutory public review and comment requirements. Notices may be published in the FR as individual applications are received or published in batches to streamline processing when multiple applications are received. Upon a determination by the Service that all statutory and regulatory requirements for Permit issuance have been met, the local field office makes a recommendation regarding Permit issuance and submits the HCP and all supporting materials for final approval, decision, and issuance to the Regional Office.

During **Phase 4**, Permittees implement their conservation plan in accordance with the terms and conditions of the issued Permit. The Service monitors Permittee compliance with issued Permits as well as its long-term progress and success.

³¹⁰ Refers to any person, as defined in ESA Section 3(13), who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action (50 CFR 402.02). Under the GCP, a Project Proponent is a potential Applicant, and becomes an Applicant at the time they submit a complete application as determined by the Service.

Appendix H. Annual Reporting Requirements

Annual reporting requirements discussed herein are applicable to Permittees³¹¹ under this Multi-Bat General Conservation Plan (GCP) for the states of New York (NY), Pennsylvania (PA), and West Virginia (WV). The Permittee will prepare and submit an annual report to the U.S. Fish and Wildlife Service (Service) local field office³¹² for the duration of the Permit term³¹³, detailing, among other things, compliance, effects, conservation measures (CMs), mitigation measures, and monitoring results. The reports must be sent to the local field office via email. The annual report(s) will summarize the previous calendar year's implementation activities and be provided to the Service by the date assigned in ePermits.³¹⁴ The due date will allow time for the data from the previous calendar year to be assembled, analyzed, and presented in a clear and concise format.

The annual report will include the following:

- the permit number;
- a description of the project implemented during the reporting period, as well as the cumulative total (i.e., from the start of the Permit term) of acres of forest impacted and the time of the year trees were cut;
- a brief status update on the project. Provide information on whether the project was completed and when. If the activity was not completed, describe what activities still need to occur and include the anticipated timeframe for completion;
- a map showing final tree removal locations, limits of disturbance boundaries, and location (State, County, Township) (if different from the map initially provided within the individual project plan³¹⁵ [IPP] checklist), or provide this information via a shapefile;
- the amount of permitted take (as previously identified in your IPP, in acres of suitable habitat or number of trees) that has occurred since the issuance of the permit and the amount of permitted take that still remains, if applicable.
- confirmation that the CMs from the IPP have been implemented (e.g., FALL/SPRING CM 2, SUMMER CM 13 and 14) and identify those that remain to be implemented;
- the type (Permittee-responsible, in lieu fee, or purchase of conservation bank credits) of mitigation required based on impacts and amount (in acres if applicable);
- the date of mitigation fulfillment (credit purchase or approval of conservation easement or fee title acquisition);
- any additional monitoring results (e.g., compliance and effects, and effectiveness monitoring, see GCP section 4.7.1.1) and bat survey results (if applicable);

³¹¹ Per the GCP, a person(s) as defined in ESA Section 3(13) that holds an active Permit. An Applicant becomes a Permittee upon issuance of a Permit.

³¹² Contact information for the Service's local field offices can be found in GCP appendix A.

³¹³ The GCP is available for adoption and use by eligible Applicants for a period of 10 years, unless amended or renewed. Individual permits issued through the streamlined GCP process may be authorized for a term of up to 5 years. Therefore, Permittees will have up to 5 years to complete their projects, even if the Permit is issued in the final year (i.e., year 10) of the GCP. Permittees that require additional time to complete their projects may seek renewal of their Permits in accordance with GCP section 6.4 and applicable regulations.

³¹⁴ https://fwsepermits.servicenowservices.com/nav_to.do?uri=%2Fhome_splash.do%3Fsysparm_direct%3Dtrue

³¹⁵ Information on individual project plans can be found in GCP appendix C.

- a description of circumstances that made adaptive management necessary and how it was implemented (if applicable);
- a description of any changed or unforeseen circumstances that occurred and how they were dealt with (if applicable);
- funding expenditures, balance, and accrual; and
- a proposal for any administrative changes and/or amendments.

Once the Permittee completes activities covered by a Permit, the Applicant will notify the local field office that they have completed all Covered Activities and mitigation measures identified in the IPP. The Permittee will provide a final report to the local field office once all mitigation and monitoring requirements are met.

Permittees are *not required to submit an annual report if no impacts to the Covered Species or their habitat occur during a given year* of the Permit's duration. Permittees may send an e-mail to the local Field Office stating that no impacts occurred during that calendar year. Include the following in the email subject line for each Annual Report: **“Annual Report – Project title, Permit Number, State [NY, PA, or WV] – No Impacts.”**

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
1	Introductory Statement	In the proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia (GCP) and associated assessment, the USFWS seeks comments from the public and local, State, Tribal, and Federal agencies. The New York State Department of Environmental Conservation (DEC) appreciates the opportunity to comment on the proposed documents and offers the following for your consideration.	Comment determined not to be substantive or otherwise require a response.
2	General Comment	The basic premise of the GCP is that if any of the covered bat species are documented on or near a project location, every acre of trees removed must be mitigated for. However, the eligibility requirements for the GCP require all such tree removal to occur while the species are not expected to be present or directly harmed by the habitat alteration. The definition of take includes not only killing animals, but also harm and harassment. Both DEC and the FWS consider habitat loss a potential source of harm to listed species, with DEC requiring take permits if the habitat loss is expected to result in the disruption of an essential behavior (e.g. breeding, hibernating, feeding). Habitat loss has the greatest adverse impacts when it occurs while the species are present and engaging in those behaviors. However, if the species is not present at the time of habitat loss, adverse impacts that impair the ability of the species to successfully complete essential behaviors may still occur if the habitat loss is limiting for the species. These indirect effects can include the inability of a species to find suitable hibernation sites, roost trees or food resources for example. Because forest habitat is not a limiting factor for the target bat species in New York and tree cutting is occurring when bats are not present, cutting is unlikely to adversely impact these species under most conditions. Only tree removal at a large scale or projects in the most sensitive areas would be likely to harm bats if conducted when the bats were not present, and those types of projects are excluded from eligibility for this GCP.	The GCP includes a summary of the best available information related to habitat loss and its effects on bats. Based on this literature, the GCP supports the assumption that take could result from the removal of documented habitat during the inactive season in certain scenarios. This same assumption is also supported by numerous Service biological opinions and HCPs. Under certain scenarios, active season tree removal and the take associated with that removal is covered under this GCP (Section 4.5.2).
3	General Comment	Permits for take should only be required when take is a likely outcome of project implementation. DEC appreciates the intent of the FWS but cannot agree with the approach being taken in the GCP. While DEC shares FWS concern over being able to identify the number of individual animals that may potentially be taken by a project in suitable habitat, the FWS relies solely on a habitat surrogate for assessing take and providing mitigation but provides no minimum size or means of establishing that take is likely to occur. This is despite the assessment in the accompanying Environmental Assessment that concludes that forest habitat throughout the geographical area covered by the plan has not been reduced over the past few decades and is considered stable. Forest habitat is the dominant landcover type in all three states covered by the plan. In addition, all three species covered under the GCP have experienced population declines of between 75-99% over the past 15 years. There are many fewer bats using the same amount of forested habitat on the covered landscape. As a result, it is unclear how the FWS arrives at the conclusion that take is likely to occur to covered species in the scenarios they seek to cover under the GCP. DEC can agree that there are certain landscapes and certain projects that are large enough to result in adverse impacts to the covered species even if habitat removal is restricted to the winter season when bats are not active. For example, a project that would reduce the amount of forest cover below 30% at the local landscape scale (e.g., 25 km ²) could potentially impact essential behaviors such as roosting and feeding. The lack of any NY Indiana bat roosts on landscapes with less than 30% forest cover supports this. However, it is unclear what bat conservation purpose is being met by being more protective in landscapes that already lack the habitat requirements for the species to be successful (forest cover below 30%).	Endangered Species Act Section 10(a)(1)(B) ITPs are voluntary on the behalf of the project proponent. The Service does not require a project proponent to apply for or obtain an Incidental Take Permit. An ITPs authorizes the take that is otherwise prohibited by Section 9(a)(1)(B) if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. So, when a project proponent determines that their project will result in take and decides to seek an ITP, the project proponent can utilize Appendix B of the GCP to determine if their project is eligible for take coverage under this GCP. The GCP is not intended to determine whether a project will or will not result in take; that responsibility remains with the project proponent. The Service does have the ability to use habitat as a surrogate (50 CFR 402.14(i)(1)(i)) for take and the GCP provides detailed rationale to support that decision in Section 4.5 Anticipated Type and Amount of Take.
4	General Comment	The GCP explicitly excludes coverage of any activity that the FWS identifies as likely to result in take of the covered species (e.g., clearing of habitat within 150 ft of roosts, 0.5 miles of hibernacula). In effect, the GCP is seeking to authorize activities that would not be likely to result in a take of the covered species; it only covers low probability events and does not authorize any activities if take is likely to occur. If tree removal was allowed when the animals were present, there would be a significant chance of direct harm, with that chance increasing in direct relation to the amount of suitable habitat being taken. There would be utility in a GCP that allows project proponents more flexibility to engage in habitat conversion in exchange for mitigation. However, by requiring the habitat removal to occur while the species are hibernating, there is an extremely low chance that a covered animal may be injured as a result of the habitat loss. Instead, the FWS assumes that any habitat taken while the bats are absent would result in meaningful yet unquantifiable impact to bats that may have used that habitat. They present no data to support detrimental impacts on productivity or other indirect measures of take.	The goal of the GCP conservation strategy is to protect the Covered Species WNS survivors in all facets of their life including all habitat areas that are needed to fully support their life cycle (e.g., areas around roost trees and hibernacula). The GCP includes a summary of the best available information related to habitat loss and its effects on bats. Based on this literature, the GCP supports the assumption that take could result from the removal of documented habitat during the inactive season in certain scenarios (see Section 4.5). As stated in the GCP (Section 4.5.2), active season tree removal and the take associated with that removal is covered under certain scenarios. The decision by a project proponent to pursue an application for incidental take authorization is voluntary. When a project proponent determines that their project will result in take and decides to seek an incidental take permit, the project proponent can utilize Appendix B of the GCP to determine if their project is eligible for take coverage under this GCP.
5	General Comment	There is no demonstration by the FWS that any of the eligible projects they seek to provide coverage for would be likely to result in a take at all. The only attempt at quantifying an adverse impact can be found in the Environmental Assessment (EA). It states that if all habitat authorized under the GCP is taken, there will be a net loss of 0.12% of available habitat. At a minimum, the FWS should provide an assessment that shows how such a loss is likely to adversely affect the covered species. Instead, in the EA the Service concludes this level of forest loss will have a negligible impact on other wildlife species and the environment in general. Meanwhile, in the GCP the FWS appears to suggest that the removal of even a single tree out of the 47 million acres of available habitat should seek coverage under the permit. This is despite the EA describing the forest habitat in all three covered states as stable over the past 40-60 years.	The quantification of forest loss in the EA focuses on Land Use as a resource of the human environment and how it could be affected by the proposed federal action alternative and the No Action alternative, this is separate from the calculation of take in the GCP. The GCP, as written, evaluates how forest loss affects Covered Species by considering habitat type, amount, proximity, and timing, thereby establishing a clear connection between habitat loss and take. Relying solely on the percentage of forest loss over the permit term and not considering the important factors listed above, would underestimate the amount of take anticipated. The GCP acknowledges that some projects involving tree removal are not eligible to use the GCP because they are outside the scope of analysis (Appendix B: GCP Eligibility Key).

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
6	General Comment	The potential for this GCP to be used in New York is low. In addition, DEC is concerned over the unsupported regulatory burden that the FWS would be placing upon potential applicants. The FWS can say their permits are optional and are a voluntary tool available to landowners to cover them if a covered species is taken by their project; however, New York's State Endangered Species Act prohibits all take without a permit. Adoption of this tool by FWS may lead to confusion as to how these species are being protected in New York State, with the FWS tool setting a lower bar for take than DEC can support, without sufficient justification for doing so. At the same time, the public may view the FWS GCP as the minimum level of habitat protection necessary for forested habitat throughout New York State, placing DEC in an uncomfortable position of having to constantly explain that our laws protect the covered bats, but not individual trees.	The Service developed this GCP in part, based on our past workload and expected future workload for these Covered Activities, associated covered bat species, and the relatively smaller sized projects. We identified a need to streamline our expected future workload and dedicated staff time to complete this GCP. The GCP does not create a regulatory burden. It is an optional permitting tool for project proponents to significantly streamline the ESA incidental take permitting process. The GCP does not change how the Service has defined, analyzed or offset take in the Section 10(a)(1)(B) context within the state of New York, Pennsylvania, or West Virginia. And the Service is available to continue to work closely with the states to clarify any differences and/or misconceptions between state and federal endangered species laws or regulations through general technical assistance to the public.
7	General Comment	While the effects of White-nose Syndrome (WNS) have been devastating to New York's hibernating bat populations, as well as those in Pennsylvania and West Virginia, habitat has not been shown to be a limiting factor in the populations' recovery from WNS. New York has abundant forest habitat for each of the covered species, and as explained in the EA for this plan, the amount of forest acreage removal allowed for by this permit would amount to significantly less than one percent of the forest cover available across the covered area. Considering that the covered species have experienced population declines as great as 99%, there is no credible argument made to substantiate that the removal of habitat when bats are not present would prevent these species from carrying out their essential behaviors on the landscape. If project activities involving removal of active-season habitat can be carried out during the inactive season, there does not seem to be reasonable justification that this level of habitat removal or modification would significantly impact the covered species.	The goal of the GCP conservation strategy is to protect WNS survivors in all facets of their life including all habitat areas that are needed to fully support their life cycle. We agree that forest cover is abundant throughout the Plan Area. However, because the Service is uncertain about the scope and scale of projects that may use the GCP over a large geographic area, a programmatic approach needs to be consistently applied. The Service does include rationale supported by the best available science in Section 4.5 supporting our assumption that take may occur as a result of habitat loss in certain scenarios. As a reminder it is the responsibility of the project proponent to determine if take is likely to occur.
8	General Comment	Given that WNS is the primary threat to the covered species, DEC recommends putting greater emphasis on this threat throughout the documents and giving higher priority to mitigation activities that address this threat directly. Activities such as hibernacula protection and restoration would likely provide the greatest benefit to the covered species, as well as any WNS treatments that may become available through research in the coming years.	Our mitigation priorities focus first on addressing impacts to summer maternity colonies, because the GCP allows for take during the active season within summer maternity habitat and requires the implementation of CMs around hibernacula and spring staging/fall swarming habitat to limit the amount of take in these specific areas. However, any mitigation proposed for hibernacula or hibernating bats impacted by WNS may receive higher prioritization depending on the site-specific proposal. The GCP does address managing effects of WNS; however, mechanisms to implement mitigation strategies are not currently available except for being addressed in Section 4.8.1.1 table 4.5c (Changed Circumstances).
9	General Comment	DEC also has concerns about the guidelines used by FWS to determine presence or absence of bats. The use of the range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines (Guidelines) for covered species can determine whether these species are present but is not adequate to prove their absence in a given area. In the definitions of occupied and documented habitat in the GCP, the FWS states that the habitat must have been surveyed using the most recent version of the Guidelines. Since the FWS updates the guidelines on an annual basis, this implies that documented habitat must be successfully resurveyed every year to maintain that designation. Would the FWS conclude that an applicant's project no longer needs a permit if the applicant conducted a negative survey the next field season after successfully detecting the species? This is contrary to the language in the Guidelines themselves, which states the survey results are good for 5 years.	The referenced survey protocol is a peer reviewed document that the Service consistently applies across the species range. When surveys are conducted in accordance with the protocol there is a 90% confidence that if bats were present, they would be detected. The Service does not claim that the guidelines can prove species' absence. Rather the guidelines are a planning tool to assist decision makers on their determination of the presence/probable absence of the species. Neither the survey guidelines nor the GCP require surveys every year. Once a survey is completed, those results would apply for 5 years. Subsequent surveys would not be needed if presence is confirmed during the initial surveys, and negative surveys the following year would not be accepted by the Service.
10	General Comment	Regardless, DEC recommends against using these surveys to rule out presence of the covered species within previously documented habitat because the guidelines call for 10 mist net nights per 123 acres of habitat. In New York, mist netting at that level of effort is unlikely to result in captures of NLEB even if present. The widespread availability of suitable habitat means that there are dozens of travel routes and foraging opportunities within any 123 acres of suitable habitat. The placement of 10 mist nets cannot possibly cover the potential travel routes through a typical 123 acre project site. In addition, studies of home ranges of breeding females estimate their home ranges to be roughly equal to an area the size of a 3-mile diameter circle (4524 acres - or the 1.5 mile buffer placed around known roosts by both FWS and DEC to map occupied habitat). Therefore, a 123 acre area is less than 3% of the area potentially used by a NLEB in a single night. With so few NLEB on the landscape and so many places for them to be, the odds of an NLEB flying through any 800sq ft of air space covered by a typical mist net is low. DEC recommends that any detections/captures of the covered species since the introduction of WNS should satisfy the definition of documented habitat as defined in the GCP.	The Range-wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines represents the Service's recommended guidance to project proponents completing habitat assessments and presence/probable absence surveys. For instance, information from NABat surveys can be considered as part of "best available" information when assessing whether there is already some existing information on presence of the species in the vicinity of a given project.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
11	General Comment	DEC is confused by the requirement for properties that are larger than 25 acres to conduct surveys to be eligible to use the GCP. It is unclear why the FWS explicitly excludes larger projects (26-200 acres in size) from the GCP, even if they assume all habitat is occupied. This is ostensibly done to ensure that only occupied habitat is regulated, but the Service states the surveys are necessary "because the specific nature of the species' presence (e.g., number of individuals and life stages present) is crucial to the analysis and must still be determined using the best available information." However, the Guidelines do not require mist netting and telemetry. They allow applicants to utilize acoustic surveys only, a much less expensive survey methodology and the one most frequently selected by the applicants themselves. Acoustic detections cannot provide any data on roost location or population demography, with the data only being useful for determining if certain species are present within the range of the acoustic receiver. In addition, there is nothing in the GCP or accompanying EA that indicates the Service has any methodology for using population data to assess impacts or otherwise modify the GCP based on the data from site specific surveys. The FWS should either clarify exactly what type of surveys applicants must do to be eligible for the GCP, along with an explanation of how the FWS would use the results, or strike the language quoted above.	The 25 acres is not biologically derived, rather, it is meant to limit uncertainty for nonlinear projects within assumed occupied habitat (see Section 4.5.2). However, the GCP does allow for the removal of up to 200 acres of suitable occupied habitat for nonlinear projects (see Section 4.5.2). We have incorporated the Service's survey guidelines on survey methods to ascertain presence/probable absence of the species in areas where we lack current information. The Service's survey guidelines allow applicants to choose whether to conduct mist-net surveys and/or acoustic surveys when trying to determine presence/probable absence. It also does not require telemetry. Both survey methods have been determined by the Service to provide sufficient information on species presence/probable absence. The data received from surveys is not meant to assess populations or impacts, but to provide presence/probable absence information. As part of this GCP, survey results are meant to determine project eligibility, limit uncertainty, and provide project flexibility.
12	General Comment	For the above reasons, DEC does not view the draft GCP as a useful tool to aid state agencies and the regulated community in avoiding and minimizing impacts to the covered species. If the eligibility requirements were amended to cover those situations where take through habitat conversion was likely to occur, the document would be improved and potentially utilized. DEC recommends that the FWS reassess the types of projects eligible to use this GCP. There could be true utility in the GCP if it could be applied to situations where projects are likely to adversely affect the species. That way, the GCP would get use in situations where there is known conservation value for the species instead of being restricted for use in situations where take is not likely to occur.	It will be up to future project proponents to determine how useful the GCP is for their purposes. If necessary, the Service can amend the GCP and associated NEPA document in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area.
13	General Comment	Please see the attached documents for more detailed comments regarding specific language within the proposed plan and environmental assessment.	Comment determined not to be substantive or otherwise require a response.
14	Closing Statement	Thank you for the opportunity to comment on the draft documents.	Comment determined not to be substantive or otherwise require a response.
15	EA Section 2.1 pg 7	Section 2.1 - pg. 7 - related to "up to 2,000 acres each state per year in NY, PA, and WV)," This should clarify that the specified maximum is up to 2,000 acres each state per year for each of the covered species to match the language in the proposed GCP. This results in 6,000 acres each state per year for all 3 species.	This Issue has been clarified in the GCP and in the EA.
16	EA Section 2.2 pg 7	Section 2.2 - pg. 7 - "a maximum of 2,000 acres of habitat could be impacted per year per state." Again, this should be 2,000 acres of habitat per species per year per state, or a maximum of 6,000 acres of habitat per year per state.	This Issue has been clarified in the GCP and in the EA.
17	EA Section 2.2 pg 7	Section 2.2, pg. 7 - related to "The maximum amount of forested lands that could be impacted is 60,000 acres over the duration of the proposed GCP," This should be 180,00 acres as there are 3 covered species across the 3 states, with a maximum of 2,000 acres of habitat impacted per species per year per state for the duration of 10 years. $3 \times 3 \times 2,000 \times 10 = 180,000$	This Issue has been clarified in the GCP and in the EA.
18	EA Section 2.2 pg 8	Section 2.2, pg. 8 - related to "0.12 percent", This should be 0.38 percent based on the 180,000 acres of impacted habitat.	This Issue has been clarified in the GCP and in the EA.
19	EA Section 3.4.3.2 pg 38	Section 3.4.3.2, Proposed Alternative - pg. 38, related to "60,000 acres" - Should be 180,000 acres.	This Issue has been clarified in the GCP and in the EA.
20	EA Section 3.4.3.2 pg 38	Section 3.4.3.2, Proposed Alternative - pg. 38, related to "0.12 percent" - Should be 0.38 percent.	This Issue has been clarified in the GCP and in the EA.
21	EA Section 3.4.8.1 pg 51	section 3.4.8.1 Affected Environment - pg. 51, related to "The USFS reports that the total area of forest in the state has remained relatively stable since 2007". Forest cover is reported as stable in NY, PA and in WV - this means that the pace of forest conversion to alternate habitat types is not an issue for bats at a landscape scale.	Section 3.4.8 of the EA focuses on Land Use as a resource of the human environment and how it could be affected by the proposed federal action alternative and the No Action alternative. The NEPA analysis is focused on land use trends. Land use and land cover are related but not synonymous concepts. Land use reflects human decisions and activity. Land cover describes surface features, including naturally occurring cover such as native vegetation as well as the result of human activities such as built environments or manipulated landscapes including cultivated crops or pastures. The references to the USFS report in Section 3.4.8.1 supported a description of existing land uses and reasonably foreseeable environmental trends and foreseeable patterns of land use changes in the Plan Area. Within the EA, the Service's rationale for effects to the Covered Species from tree removal associated with the covered activities is presented in Section 3.4.7.2.
22	GCP; glossary	Should include elevation as well	Elevation has been added to the description of active season in the glossary.
23	GCP; glossary	Clarify if this will be at a finer scale than state/region (as outlined in Table 2.0)	A reference to Table 2.0 was added to the description of active season.
24	GCP; glossary	Conservation banking on state and/or tribal lands may or may not be compatible with the regulatory intent.	Comment determined not to be substantive or otherwise require a response.
25	GCP; glossary	Conservation banking for state-listed species may or may not be compatible with the regulatory intent.	Comment determined not to be substantive or otherwise require a response.
26	GCP; glossary	Definition does not seem to match with CMs below - they seem to all be avoidance actions or impact reduction measures? This definition sounds like mitigation?	The definition of Conservation Measures has been updated to that published in the HCP Handbook.
27	GCP; glossary	This phrase contradicts the definition provided in the previous sentence.	The definition of Conservation Measures has been updated to that published in the HCP Handbook.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
28	GCP; glossary	Remove comma	The definition of Conservation Measures has been updated to that published in the HCP Handbook.
29	GCP; glossary	Conservation measures implemented prior to project proposal is not compatible with New York's regulatory framework.	The definition of Conservation Measures has been updated to that published in the HCP Handbook.
30	GCP; glossary	Since these guidelines are updated on an annual basis, this effectively rules out any habitat documented more than one year prior to project proposal.	The Service's survey guidelines would be applied at the time a project sponsor seeks technical assistance from the Service about developing an HCP. If the Service's survey guidelines are updated, we would not expect a project sponsor to redo a negative survey which is valid for 5 years. Once documented habitat is identified, supplemental surveys are at the discretion of the project sponsor.
31	GCP; glossary	Unnecessary to include multiple terms for the same definition.	The Service determined that including multiple terms was necessary to encompass how project sponsors define habitat and how other referenced Service documents define habitat.
32	GCP; glossary	Date frame of reference for occupied habitat? If the habitat was surveyed using an older version (as in last year, three years ago), by this definition, the habitat would not be documented even if the previous survey was positive. Ditto for known/occupied	The Service's survey guidelines would be applied at the time a project sponsor seeks technical assistance from the Service about developing an HCP. If the Service's survey guidelines are updated, we would not expect a project sponsor to redo a negative survey which is valid for 5 years. Once documented habitat is identified, supplemental surveys are at the discretion of the project sponsor.
33	GCP; glossary	Remove comma	Comma removed.
34	GCP; glossary	May also include tall structures on the landscape used as meet-up spots for mating (i.e., wind turbines)	No changes made to the definition of fall swarming. This definition lists examples of fall swarming areas, it is not meant to be all encompassing.
35	GCP; glossary	Should includes bridges/culverts. Unlikely to be used in most of NY, but has been observed in NJ, and may occur in places like LI	The Service added language in the definition of hibernacula to clarify that the types of TCB hibernacula stated are examples.
36	GCP; glossary	And elevation	Elevation has been added to describing inactive season in the glossary.
37	GCP; glossary	This is a departure from the 4 inches DBH used for this species to date, with no reference to source of information for this change.	No change was made regarding the minimum dbh size of trees for the IBAT as the Service used the Service's Rangewide Indiana Bat and Northern Long-eared Bat Survey Guidelines.
38	GCP; glossary	Should include open areas of water (streams, ponds, etc.)	This definition lists examples of nonforested habitats, it is not meant to be all encompassing.
39	GCP; glossary	Clarify if this is DBH or some other unit of measure (i.e., diameter at root flare).	This has been clarified in the GCP.
40	GCP; Section 1.2	This is the take addressed by this GCP.	Comment determined not to be substantive or otherwise require a response.
41	GCP; Section 1.2	High standard to meet when the species is not present and the habitat lost is not limiting.	This is not a substantive comment and therefore does not require a response.
42	GCP; Section 1.2	Reasonably certain implies that there is a high probability that an animal will be killed or injured based on paragraph above. Again, hard case to make when species is not present when actions are taken in habitats that are not limiting.	For federal Incidental Take Permits, the Service must apply the definition of take as defined in section 3 of the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." And also apply the definition of harm, which is defined as "...an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering" (50 CFR 17.3, 1981 Final Rule, 46 FR 54750). The GCP applies the ESA definition of take accurately and consistently, which includes take associated with habitat loss during the inactive season.
43	GCP; Section 1.2	The standard set here is that take is reasonably certain. The conservation measures outlined in this document do not adequately address this definition take as they make take uncertain. While this is protective for the covered species, this is conflicting language that is contradictory for the need of the permit in the first place.	For federal Incidental Take Permits, the Service must apply the definition of take as defined in Section 3 of the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." And also apply the definition of harm, which is defined as "...an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering" (50 CFR 17.3, 1981 Final Rule, 46 FR 54750). The GCP applies the ESA definition of take accurately and consistently, which includes take associated with habitat loss during the inactive season.
44	GCP; Section 2.2	And elevation	Elevation has been added to the GCP.
45	GCP; Section 2.2.2	It should be made more clear that maternal colonies may use non-tree roosts (i.e. manmade structures); this only seems apparent for non-maternity roosts	The Service clarified in the GCP that maternity colonies may use manmade structures in addition to suitable trees.
46	GCP; Section 2.2.5	And elevation	Elevation has been added to the GCP.
47	GCP; Section 2.2.6	Consider re-phrasing to something like "NY (excluding Long Island)" to avoid confusion about the geographic range of "Upstate NY."	Added language to clarify these annual cycle periods.
48	GCP; Section 2.2.6	These dates should be removed as bats may still be present on the landscape in NY after October 1.	This date applies to project specific conditions, which is outlined in the footnote for Table 2.0.
49	GCP; Section 2.2.6	NY does not use any dates other than Nov 1 - Mar 31 for any other counties in the state outside of Long Island. Recommend deleting this language.	The best available information that the Service has for NY is applied to Table 2.0.
50	GCP; Section 2.3	It seems disingenuous to list the threats in the order they are. While non-WNS threats were the original cause of listing, until WNS hit, the IBAT was making a strong recovery, one that is still sustained in the face of WNS based on figure 2.2. Placing WNS last here mistakenly places these other threats in the forefront, when NLEB and TCBs would not be remotely considered for listing in the absence of WNS.	Threats are not listed in order of concern.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
51	GCP; Section 2.3.1.1	More so than any other threat, individuals do not return to a colony because of poor overwinter survival due to WNS.	The Service agrees that the affect of WNS on bat survivorship at overwintering sites can also affect the reestablishment of maternity colonies.
52	GCP; Section 2.3.1.1	Even if this was a substantiated threat (where is the evidence that reproductive success is tied to number of female bats in a colony?), the loss of habitat should have the opposite effect. In a landscape with fewer options, shouldn't more bats select the same one? In other words, this effect is countered not by maintaining habitat or even increasing it. Colony size would best be increased through a reduction in available roost. So either the assumption is wrong and the number of bats is not really important, or the recommendations below do not serve to address the threat of declining colony size.	This section does not address declining colony size, rather the loss of a potential roost and how that loss may affect fission/fusion dynamics. Removing multiple roosts in a concentrated area can cause colony fragmentation. The Service agrees that overall colony size is declining as a result of WNS, however this section is specifically addressing impacts from loss of roosts on colony social structure. The number of bats is important for the purposes of thermoregulation and overall colony survival. The Services' statement is well supported by the literature, and references are included in the GCP.
53	GCP; Section 2.3.1.1	Again, tie to loss of habitat makes no sense. 90% fewer animals on the landscape due to WNS means fewer animals available for each colony overall. There has not been a corresponding 90% reduction in habitat, so remaining animals are trying to establish colonies over broader distances because habitat is more widespread and available now than it was before population reduction through WNS.	This section of the GCP discusses Loss or Degradation of Habitat and subsequent Impacts to Individual Roosts (section 2.3.1 and 2.3.1.1). Threats to Survival from WNS is presented in section 2.3.7.
54	GCP; Section 2.3.1.2	This should be defined. None of the three species does particularly well in old growth, large forest blocks - they all need forest/wetland edges to feed. CMs for fragmentation should only be needed within landscapes where fragmentation may reasonably be expected to result in an adverse effect. In many landscapes in WV,PA and NY, some forest loss is likely to increase the amount of foraging habitat without significantly reducing roosting opportunities, particularly given the loss of 90% or more of the population using these resources.	Patterson et al 2003 (footnote 108) explains the use of overly patchy habitats by insect eating bat species, which we applied to the bat species described in the GCP.
55	GCP; Section 2.3.1.2	Again - define the landscape where forested habitat is limiting. If single trees within 1000ft of 10 acres of forest are potential habitat, as the maps on the FWS NLEB page show, the species habitat is everywhere (suitable habitat is the dominant habitat/most abundant of all habitat types on the landscape).	Patterson et al 2003 (footnote 108) explains the use of overly patchy habitats by insect eating bat species, which we applied to the bat species described in the GCP.
56	GCP; Section 2.3.1.3	No way to assess actual risk - when does the risk become a likely outcome versus NLAA?	Bats are more concentrated near hibernaculum. Therefore, there is a higher risk of harm to bats from fragmentation the closer you are to a hibernaculum. The decision to pursue an application for incidental take authorization is voluntary. When a project proponent determines that take authorization is necessary and therefore, decides to seek a Incidental Take Permit, the project proponent can utilize Appendix B to determine if their project is eligible for take coverage under this GCP. The GCP does not determine what is and what is not take on behalf of the project proponent.
57	GCP; Section 2.3.5	The active season is limited by temperature and insect availability, so climate change would be lengthening the active season in these locations. Could still lead to mismatches, but as the next few lines state, the availability of prey is expected to expand as well.	Comment noted. Climate factors that may influence the yearly active season of the Covered Species is summarized in the GCP.
58	GCP; Section 2.3.5	Could also reduce the effects of WNS by shortening the inactive season and reducing the stress caused by longer hibernation needs.	This paragraph is meant to provide examples and not the full range of potential effects.
59	GCP; Section 2.3.5	This could also reduce the effects of WNS by shortening the inactive season and reducing the stress caused by longer hibernation needs. The covered species may also alter their winter survival strategy by opting to enter shorter bouts of torpor rather than hibernation, as TCB and NLEB do in southern portions of their range. This would no longer require underground environments for hibernation, where they would be exposed to Pd.	This paragraph is meant to provide examples and not the full range of potential effects.
60	GCP; Section 2.3.7	Seems to down play WNS - this is the only threat with reasonable estimates of impacts and is the reason for listing two of the three, and not delisting the third. Seems like they should lead with the 90-99% mortality of populations exposed to WNS in this paragraph. And why list it as the last of the threats to the species?	Comment is addressed in section 2.3.
61	GCP; Section 2.3.7	Seems to down play WNS - this is the only threat with reasonable estimates of impacts and is the reason for listing two of the three, and not delisting the third. Seems like they should lead with the 90-99% mortality of populations exposed to WNS in this paragraph. And why list it as the last of the threats to the species?	Comment is addressed in section 2.3.
62	GCP; Section 3.2	These permits do not cover projects for many things... 25 acres max without surveys, 200 acres of occupied habitat.	Comment noted. The activities covered by the GCP are described in Section 3.
63	GCP; Section 3.2	These permits do not cover projects for many things... 25 acres max without surveys, 200 acres of occupied habitat.	Comment noted. The activities covered by the GCP are described in Section 3.
64	GCP; Section 3.2	How wide of a swath does this cover? What if there are multiple routes available due to contiguous forest surrounding roosting and foraging habitat?	Projects that result in effects to documented Covered Species travel/corridor habitat is not eligible for participation in the GCP and will require coordination with the local field office.
65	GCP; Section 3.3	No fast tracking of forest management under this tool.	Correct, forestry activities are not covered under this GCP. The Service has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area.
66	GCP; Section 3.3	These are most SEQR projects, minus the large ones (>200 acres of occupied habitat)	Comment noted. The activities covered by the GCP are described in Section 3.
67	GCP; Section 3.4	Applies to SEQR solar and the solar projects under ORES if less than 25 acres of suitable habitat being taken, or up to 200 acres if surveyed and occupied	Comment noted. The activities covered by the GCP are described in Section 3.
68	GCP Section 3.4	Central Hudson et al could apply through this	Comment noted. The activities covered by the GCP are described in Section 3.
69	GCP Section 3.4	No continuing mortality covered (vehicle/rail/building collision?)	This has been clarified. See Section 3.2 in the GCP.
70	GCP Section 3.4	Eagle surveys by helicopter or plane not covered	Comment noted. The activities covered by the GCP are described in Section 3.
71	GCP Section 3.4.1	Aerial restrictions also apply to herbicides.	Comment noted. The activities covered by the GCP are described in Section 3.
72	GCP Section 4.0	Sounds like a good IBAT reference...	Comment noted. Comment determined not to be substantive or otherwise require a response.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
73	GCP Section 4.1	This is unlikely to be provided by implementing the recommended survey protocol - acoustics cannot determine this	Comment noted. Comment determined not to be substantive or otherwise require a response.
74	GCP Section 4.1	Where are these areas? How does anyone now where they are? Or is this back to the definition of occupied habitat, meaning there is none except within the season it is found?	This is determined by coordinating with the local Service field office.
75	GCP Section 4.1	25 acre limitation without surveys to promote surveys, but applies in areas without known data - so not occupied????	The decision by a project proponent to pursue an application for incidental take authorization is voluntary. When a project proponent decides to seek an incidental take permit, the project proponent can utilize Appendix B of the GCP to determine if their project is eligible for take coverage under this GCP. To assist project proponents in determining the likelihood of take of Covered Species from their proposed activities, project proponents can either follow Service approved survey guidelines, or assume presence based on habitat suitability.
76	GCP Section 4.2	Should explain why this is being done, especially since habitat is not limiting for these species and protecting active season habitat does nothing to address the primary threat to these species (WNS).	Clarified in GCP -see Section 4.5 in GCP as surrogate is further described there.
77	GCP Section 4.4	Habitat loss mitigated with habitat preservation	Habitat preservation in perpetuity is included in the mitigation strategy of the GCP.
78	GCP Section 4.4.1.2	Both filling hibernacula openings and collapse of hibernacula from vibrations should be completed avoided regardless of time of year, as this would likely alter the hibernacula environment and/or prevent bats from accessing the hibernacula.	Conservation Measure HIB CM 1A or 1B must be complied with for a project to be eligible for an Incidental Take Permit under the GCP. Both Conservation Measures result in avoidance of such effects to Covered Species' hibernacula regardless of the time of year.
79	GCP Section 4.4.1.2	This should include partial collapses within hibernacula.	The Service agrees that take from filling in hibernacula and collapse causing vibrations will be avoided by projects permitted under the GCP.
80	GCP Section 4.4.1.2	How will these be measured?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
81	GCP Section 4.4.1.2	This would cause some level of noise and/or vibration.	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
82	GCP Section 4.4.1.2	How is this determined?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
83	GCP Section 4.4.1.2	How is this determined?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
84	GCP Section 4.4.1.2	How is this quantified?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance if take is reasonably certain to occur the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
85	GCP Section 4.4.1.3	This was formerly the only regulated activity, and now it is being precluded from a take permit...	Eligible projects under the GCP must, in this case, avoid all damage to or removal of documented IBAT, NLEB or TCB roosts (unless no longer suitable for roosting) and trees within 150 feet of documented roosts any time of year. Projects that include removal of known roosts (that continue to be suitable) are ineligible under the GCP but can apply for an Incidental Take Permit under the standard HCP process.
86	GCP Section 4.4.1.3	But since it is minimizing, no time of year is specified - shouldn't this say minimize habitat removed and attempt to remove it during the winter as much as possible?	This CM is intended to address the minimization of habitat loss. Other measures are related to the timing of the habitat loss.
87	GCP Section 4.4.1.3	This makes "commuting habitat" the most protected habitat for a species that may roost in trees 1000 ft away from the nearest forested habitat - why the misplaced protection on the least substantial habitat type based on species biology (there would be no Ibats/NLEB or Pipis in FWS R3 if this were limiting).	Projects that result in effects to documented Covered Species travel/corridor habitat are not eligible for participation in the GCP and will require coordination with the local field office. This specific documented habitat type is rare within the plan area and therefore this CM will be applied very infrequently.
88	GCP Section 4.4.1.3	Clarify TOY restrictions	Conservation Measure - Summer CM 4 states: <i>Site project activities to minimize removing potential travel/commuting habitat in known or assumed occupied summer habitat.</i> A TOY (Time Of Year) restriction is not relevant to this Conservation Measure.
89	GCP Section 4.4.1.3	Unless these are mist net surveys, no data will be accumulated that addresses the need raised above about needing sex and numbers for more detailed guidance.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Rows 9-11.
90	GCP Section 4.4.1.3	A similar caveat could/should be given for fall/spring habitat, including the footnote.	The Service decided to apply more conservative conservation measures in the spring staging/fall swarming buffers in an effort to protect WNS survivors and limit impacts to populations over the permit term.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
91	GCP Section 4.4.1.3	A similar caveat could/should be given for fall/spring habitat	The Service decided to apply more conservative conservation measures in the spring staging/fall swarming buffers in an effort to protect WNS survivors and limit impacts to populations over the permit term.
92	GCP Section 4.4.1.3	Is this based on any studies? How will FWS evaluate?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
93	GCP Section 4.4.1.3	How is this quantified?	Coordination with the local FO should occur prior to submitting an IPP to determine if potential projects are reasonably certain to cause take of the Covered Species. In this instance, if take is reasonably certain to occur, the project is not eligible for the GCP. However, in general, specific project details will be included in the IPP.
94	GCP Section 4.4.1.3	Even if project area is entirely dry? Seems unnecessary.	This CM is intended to be more protective of drinking and foraging areas, but these pesticides can be used in entirely dry areas, as well.
95	GCP Section 4.4.1.4	This seems to indicate that exclusion of bats can no longer occur in artificial roosting structures- seems overly onerous for DOT.	Eligible projects under the GCP must, in this case, avoid removing or altering roosting potential of structures or bridges with signs of roosting bats (e.g., signs of stains, guano, or vocalizations). Projects that are ineligible under the GCP can apply for an Incidental Take Permit under the standard HCP process.
96	GCP Section 4.5	Agreed, but this undermines the use of P/A surveys that are recommended in this GCP.	Presence/probable absence surveys in this GCP serve two distinct purposes (1) to determine if the proposed project is occupied by the species and whether the project meets all eligibility criteria related to size and location, and (2) if presence is determined, the results will be applied on a site-specific scale to determine which CMs will need to be applied. In this particular Section, the GCP explains why presence/probable absence surveys are not appropriate for determining the amount of take (or monitoring of take) and further supports the Service's use of habitat as a surrogate for monitoring take. Therefore, the GCP does not undermine the use of presence/probable absence surveys because the Sections in question are describing two different purposes for surveys (determining presence vs quantifying/monitoring take).
97	GCP Section 4.5	So again, why the statement above about the service needing to know life stages and numbers present?	Presence/probable absence surveys in this GCP serve two distinct purposes (1) to determine if the proposed project is occupied by the species and whether the project meets all eligibility criteria related to size and location, and (2) if presence is determined, the results will be applied on a site-specific scale to determine which CMs will need to be applied. In this particular Section, the GCP explains why presence/probable absence surveys are not appropriate for determining the amount of take (or monitoring of take) and further supports the Service's use of habitat as a surrogate for monitoring take. Therefore, the GCP does not undermine the use of presence/probable absence surveys because the Sections in question are describing two different purposes for surveys (determining presence vs quantifying/monitoring take).
98	GCP Section 4.5	While the logic to use habitat as a surrogate for take is clear, it doesn't make sense to hold the same level of scrutiny for take assessment for a surrogate as there is for the resource. Take of individuals is much more clear in assessing take (LAA vs NLAA), whereas I would think using habitat as a surrogate would almost always result in a may effect or NLAA determination, and almost never a LAA determination unless dealing with hibernacula where covered species are known to be roosting. With that, minimization measures seem to be downplayed in this document relative to full avoidance measures, which are overly onerous for both the regulatory agencies and the regulated community.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Row 3. Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.
99	GCP Section 4.5.1.1	While using up energy reserves is a large concern for the covered species during the inactive period, this is unlikely to have any significant impacts on individuals or populations of the covered species. Prey are readily available to replenish energy preserves throughout the active season, as are alternate roosts.	Impacts to individuals or populations associated with habitat loss depends on the location and extent of tree removal, the landscape context (amount of remaining suitable habitat), and the fitness of the individual bat. Significant impacts are not anticipated as a result of increased energy expenditure because of the CMs required in this GCP and because of the temporary nature of the impacts (see 4.5.1 in GCP).
100	GCP Section 4.5.1.1	This does not follow from the previous statement. Hedge rows and tree lines, including forest edges, are most likely to be encountered along the boundaries of existing ROWs - all important habitats for foraging and traveling per species habitat descriptions above.	The Service acknowledges that these areas are important to the species, however, this paragraph is discussing the potential for projects to intersect with trees that bats are occupying. It does not discount the importance of these areas.
101	GCP Section 4.5.1.1	This seems somewhat counter intuitive. The greatest likelihood of take is exactly this situation when bats are present, but when they are not, why is this a high likelihood of take? And what is the point of a take permit if it cannot apply to situations where a take is likely? The GCP seems to only cover low probability impacts, which should not require a permit in the first place.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Row 4.
102	GCP Section 4.5.1.1	Does this mean that any suitable roost tree within assumed occupied summer habitat is assumed to be a roost tree and therefore clearing cannot occur within 150ft? This seems overly onerous.	The GCP does not authorize the removal of suitable documented roosts or trees within 150 feet of those roosts any time of year. The 150 foot buffer does not apply to suitable roost trees within assumed occupied habitat.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
103	GCP Section 4.5.1.1	So the GCP does not allow take. These are essentially avoidance measures.	The GCP permits take. For example, the GCP permits active season tree removal beginning August 16 in suitable summer habitat. Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.
104	GCP Section 4.5.1.1	This seems counter to the restrictions on tree clearing during the inactive season (i.e., Summer CM 1), as well as the language in the following section regarding harm from loss of roosts.	Such activities could result in take but would not be considered eligible under the GCP. A separate HCP and Incidental Take Permit would be needed to cover that take.
105	GCP Section 4.5.1.1	Again, the GCP is not allowing take when it is likely to occur, the whole purpose an entity would have for obtaining a permit.	The GCP permits take. For example, the GCP permits active season tree removal beginning August 16 in suitable summer habitat. Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.
106	GCP Section 4.5.1.1	These species live in landscapes that have been completely deforested/converted to agriculture/reforested/developed. This landscape scale habitat alteration did not result in their listing. Bat populations in the midwest did not go extinct with the advance of industrial scale agriculture. Most roost trees are dead or dying trees. Why is a permit necessary for "take" of imaginary roosts for impacts that may affect a behavior that has not been shown to be essential to the productivity of the species?	This section of the GCP addresses effects of Covered Activities on the Covered Species. Habitat loss, including the removal of established roosting and foraging areas may affect colonies of these species as supported by literature referenced in the GCP. The effects to a colony may be temporary but likely would meet the federal definition of take. Therefore, a project proponent may voluntarily decide to pursue an incidental take permit.
107	GCP Section 4.5.1.1	Many colony sites are ephemeral. Rural woodlots have been logged repeatedly over their history. They have managed to maintain colony cohesion through the largest/fastest landscape change over the last 150 years...	This section of the GCP addresses effects of Covered Activities on the Covered Species. Habitat loss, including the removal of established roosting and foraging areas may affect colonies of these species as supported by literature referenced in the GCP. The effects to a colony may be temporary but likely would meet the federal definition of take. Therefore, a project proponent may voluntarily decide to pursue an incidental take permit.
108	GCP Section 4.5.1.1	No reference here. Indicates this is based on speculation alone. Even take that can't be quantified is ineligible for coverage?	This is a summary paragraph. Fission/Fusion dynamics are cited in 4.5.1.1 above of the GCP.
109	GCP Section 4.5.1.1	Main source of smaller colonies is WNS mortality reducing the number of breeding adults. If this were true, there would be a feedback loop on the landscape that would continue to depress populations even in the absence of WNS. If the argument is that colony size hasn't decreased because the bats find each other on the landscape and just form fewer colonies, that debunks the assessment that removal of a roost location creates a hardship - the bats manage to find each other and maintain colony cohesion despite population losses or relocating to new roost sites...	The goal of the GCP conservation strategy is to protect WNS survivors in all facets of their life including all habitat areas that are needed to fully support their life cycle. For example, the IBAT was listed prior to the introduction of WNS with the primary threat being habitat loss.
110	GCP Section 4.5.1.1	Thes loss of unknown roosts are reasonably certain to occur, but not the impacts if they occur when bats are not present.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Rows 2, 3, 4.
111	GCP Section 4.5.1.1	We know this is not true in NY, where Ibats have access to local landscapes that range from 10% - 95% forested - they do not select heavily forested habitats. So this assumption is known to be incorrect at least for one of the three species.	This is meant to be a general statement that applies to all three bat species depending on the location of the project in the Plan Area. The GCP acknowledges that Ibats can occur in completely forested and highly fragmented forested areas in Section 4.5.1.1.
112	GCP Section 4.5.1.1	Forest habitat is not limiting throughout the Plan area (NY, PA and WV are majority forest states!)	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Rows 2, 3, 4.
113	GCP Section 4.5.1.1	If the cutting happens outside of the active season, the bats acclimate in the next year. We know the species acclimate to altered landscapes - so why is this included as a take issue?	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Rows 2, 3, 4.
114	GCP Section 4.5.1.1	This explanation of bats' resilience to an altered landscape completely undermines the use of habitat as a surrogate for take.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Row 3.
115	GCP Section 4.5.1.1	This is overly protective of assumed (a.k.a. unknown) occupied habitat and not protective enough for known occupied habitat.	The CMs/eligibility criteria included in this GCP are designed to limit uncertainty and give our analysis book ends, it is not intended nor does it put more value on assumed occupied habitat. The 25 acres is not biologically derived, rather, it is meant to limit uncertainty for nonlinear projects within assumed occupied habitat (see Section 4.5.2). However, the GCP does allow for the removal of up to 200 acres of suitable occupied habitat for nonlinear projects (see Section 4.5.2). We have incorporated the Service's survey guidelines on survey methods to ascertain presence/probable absence of the species in areas where we lack current information. Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.
116	GCP Section 4.5.1.1	The logic here seems backwards. On its surface it sounds like allowing more impacts to known habitat than unknown habitat.	The CMs/eligibility criteria included in this GCP are designed to limit uncertainty and give our analysis book ends, it is not intended nor does it put more value on assumed occupied habitat. The 25 acres is not biologically derived, rather, it is meant to limit uncertainty for nonlinear projects within assumed occupied habitat (see Section 4.5.2). However, the GCP does allow for the removal of up to 200 acres of suitable occupied habitat for nonlinear projects (see Section 4.5.2). We have incorporated the Service's survey guidelines on survey methods to ascertain presence/probable absence of the species in areas where we lack current information. Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
117	GCP Section 4.5.1.1	Again, this exemplifies why the level of take assessed for habitat should not be equivalent to that of individuals.	Presence/probable absence surveys in this GCP serve two distinct purposes (1) to determine if the proposed project is occupied by the species and whether the project meets all eligibility criteria related to size and location, and (2) if presence is determined, the results will be applied on a site-specific scale to determine which CMs will need to be applied. In this particular section, the GCP explains why presence/probable absence surveys are not appropriate for determining the amount of take (or monitoring of take) and further supports the Service's use of habitat as a surrogate for monitoring take.
118	GCP Section 4.5.1.1	If bats are not present at time of tree removal, there is no direct link between # of trees and foraging habitat quality. All three species are known to forage on forest edges. Seems like the type of forest impact is more important than the acres impacted (e.g. selective cut may have no impact on foraging habitat vs. a large clear cut).	Under the ESA, the Service can use habitat as a surrogate (50 CFR 402.14(i)(1)(i)) for take, and the GCP provides detailed rationale to support that decision in Section 4.5 Anticipated Type and Amount of Take. When determining whether a project is likely to result in take under the ESA or not, it is not a question of which effect has the greater impact or which is more important. But rather, it is necessary to assess whether each activity is likely to result in take.
119	GCP Section 4.5.1.1	Again, the take permit does not cover take that is reasonably certain to occur.	Projects that are ineligible under the GCP for streamlined permit processing can apply for an Incidental Take Permit under the standard HCP process.
120	GCP Section 4.5.2	Does this mean that no suitable roosts anywhere can be removed, or no suitable roosts within 150ft of a known roost can be removed?	The GCP does not authorize the removal of suitable documented roosts or trees within 150 feet of those roosts any time of year. Such projects are considered ineligible under the GCP and therefore cannot benefit from the GCP's streamlined permit process. Such projects can apply for an Incidental Take Permit under the standard HCP process. The 150 foot buffer does not apply to suitable roost trees within assumed occupied habitat.
121	GCP Section 4.5.2	What does it mean from a regulatory perspective if acoustic surveys detect covered species, but follow-up mist net surveys do not capture covered species? If acoustic surveys are not and only mist net surveys are done, how the results then interpreted?	Refer to the Service's Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines. Presence/probable absence of the covered species may be determined by conducting either mist-netting or acoustic surveys. If the project area contains habitat that is appropriate to conduct either survey method, it is the project proponent's choice as to which option to use. A combined mist-netting and acoustic approach is also acceptable. Under no scenario can a project proponent use either mist-netting or acoustic surveys to challenge the other method's results. The Service accepts the results of either option and has no preference for methods. The Service field office can discuss pros and cons of different approaches depending on project proponent needs and project- specific habitat conditions.
122	GCP Section 4.5.2	Explain how this level of take of habitat avoids jeopardy for the covered species. It is not clear how this level of take of habitat is calculated, and what proportion of available habitat this constitutes within the covered area.	The GCP mitigation measures are intended to offset impacts that remain after avoidance and minimization measures are implemented. An Applicant's IPP submitted as part of the GCP application process will identify which mitigation option they've selected to offset the impacts of their project. Jeopardy is addressed specifically in the Service's Biological Opinion. Over the 10-year life of this GCP, the maximum amount of take permitted will be up to 180,000 acres (with habitat as a surrogate for individual bats), depending on species overlap. This includes up to 2,000 acres for each state per year per Covered Species in NY, PA, and WV totaling 6,000 acres annually.
123	GCP Section 4.5.2, Table 4.0	It is not clear if the maximum amount of take permitted is for a single GCP across the covered area, or all GCPs across the covered area. It is also not clear if the figures provided in this table for the each state are meant to highlight maximum amount of take permitted for each state per year or 10 years, or if this simply serves to highlight how maximum take was calculated for the entire covered area.	A single GCP has been prepared for the entire Plan Area. Individual Incidental Take Permits will be issued under the GCP for individual projects. As indicated in Table 4, over the 10-year life of this GCP, the maximum amount of take permitted will be up to 180,000 acres (with habitat as a surrogate for individual bats), depending on species overlap. This includes up to 2,000 acres for each state per year per Covered Species in NY, PA, and WV totaling 6,000 acres annually. The Service has clarified how take of habitat was calculated in the GCP.
124	GCP Section 4.6.1.3	This runs counter to previous statements regarding mitigation requirements. Clarify if mitigation is achieved simply by protecting existing habitat, or if habitat improvement is needed as well. Example: "Projects that result in permanent loss of occupied habitat, for example, will be offset with similarly permanent protection of occupied habitat." (p.67)	Mitigation does not have to be "in-kind" (e.g., impacts resulting from removal of summer habitat does not require offsets of summer habitat) because this GCP prioritizes the recovery-focused conservation needs for each of the Covered Species. Therefore, in certain site-specific instances, mitigation in the form of hibernacula protection may be the only mitigation needed. Applicants wishing to pursue those activities should coordinate with the local field office to determine if these CMs are appropriate for their project type and location, and what monitoring and adaptive management requirements may apply.
125	GCP Section 4.6.3	Since WNS is the primary threat to the covered species, protecting hibernacula (where the species are most vulnerable to the disease) should be considered Priority 1.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Row 8.
126	GCP Section 4.6.3	Since WNS is the primary threat to the covered species, protecting hibernacula (where the species are most vulnerable to the disease) should be considered Priority 1.	This comment was incorporated into NYSDEC's summary of comments posted on regulations.gov. This comment has been addressed in the Service's response to comment matrix in Row 8.

The New York State Department of Environmental Conservation			
	Comment Type/Section Referenced	Comment	Service Response
127	GCP Section 4.6.4, Table 4.3b	This condition is not applied to active season habitat restoration. The burden of proving bat use of inactive habitat may keep applicants from pursuing this potentially very beneficial mitigation measure. Instead, it would make more sense to require applications to prove that the mitigation actions taken to restore/enhance hibernacula would actually improve use of the habitat by bats (i.e., documenting change in temperature/humidity of the site that the target species prefers in hibernation).	GCP mitigation measures are intended to offset impacts that remain after avoidance and minimization measures are implemented. To fully offset take through restoration/enhancement of known or potentially suitable hibernacula, applicants must demonstrate presence and usage of hibernacula by the Covered Species. Applicants wishing to pursue those activities should coordinate with the local field office to determine if these CMs are appropriate for their project type and location, and what monitoring and adaptive management requirements may apply.
128	GCP Section 4.6.4, Table 4.3c	Financial assurances would be beneficial in case the gate is tampered with after it is built.	When an applicant identifies the type of mitigation they wish to pursue, financial assurances will need to be incorporated as part of that mitigation. The project specific details/funding will be outlined in the IPP.
129	GCP Section 4.6.4, Table 4.3d	This insinuates that surveys can be conducted across state borders.	This statement is correct, however, this would be coordinated with the local field office prior to permit issuance.
130	GCP, Appendix B	Previously documented detections/captures at the site (at least post-WNS) should not be overruled by one year of surveys.	The Service's survey guidelines would be applied at the time a project sponsor seeks technical assistance from the Service about developing an HCP. If the Service's survey guidelines are updated, we would not expect a project sponsor to redo a negative survey which is valid for 5 years. Once documented habitat is identified, supplemental surveys are at the discretion of the project sponsor.



pennsylvania
GAME COMMISSION



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES



pennsylvania
FISH AND BOAT COMMISSION

November 26, 2024

Public Comments Processing
U.S. Fish and Wildlife Service Headquarters
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SUBJ: Docket No: FWS-R5-ES-2024-0039

On behalf of the Pennsylvania Conservation and Natural Resources (DCNR), Pennsylvania Game Commission (PGC), and the Pennsylvania Fish and Boat Commission (PFBC), please accept the comments below in regards to the proposed General Conservation Plan (GCP) for routine development projects in New York, Pennsylvania, and West Virginia that impact the federally listed Indiana Bat (*Myotis sodalis*), Northern Long-Eared Bat (*Myotis septentrionalis*), and the proposed Tricolored Bat (*Perimyotis subflavus*).

Since federally-listed bats are extremely rare by definition, many development projects do not encounter a listed bat occurrence. However, *any development project has the potential* to discover that a proposed site supports federal- or state-listed bat use. For this reason, we applaud the efforts of the United States Fish and Wildlife Service (USFWS) to streamline the review of projects by developing tools that efficiently identify the projects most likely to impact bat survival, and therefore, projects that can most effectively support bat recovery if appropriate avoidance and mitigation occurs.

We support the development of cost-effective tools that expedite the review of projects with smaller footprints and presumably lower impacts to bats, offering applicants a potential alternative to the development of a Habitat Conservation Plan (HCP). We support processes and tools that effectively protect endangered species and their habitats, while promoting species recovery.

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Technical Comments - Bat Conservation Utility:

- 1) We appreciate the efforts of USFWS in developing the GCP to simplify the review process for project applicants and reviewers. This tool seems to address projects with relatively small footprints. However, it is still quite meaningful. Even small projects can have significant negative effects if they directly impact distinct locations and habitats required by listed bats. Small projects may also create indirect impacts extending beyond the project footprint due to habitat loss and fragmentation. Small impacts are additive to ongoing landscape-scale threats that impact bats and are thus not inconsequential. We agree there is value in minimizing and mitigating numerous small impacts across the landscape when trying to recover imperiled species and their habitat due to cumulative effects.
- 2) The GCP does not cover project types with more significant footprints or impacts such as new electric transmission line construction, wind energy projects, forestry activities, due to the potential for unanalyzed effects and complexities requiring additional NEPA analysis (Section 3.3). We support the approach of projects encompassing complex potentially detrimental impacts going through a more individualized review and consultation process with USFWS.
- 3) Mitigation in the GCP is completely focused on protecting habitat. Clearly, the recovery of species will not occur if their habitat is continually destroyed or impaired. We recommend 1) all mitigation occur in appropriate locations that currently support the species or are likely to in the future; 2) permanent mitigation and site protections at sites currently supporting listed bats; 3) a clearly defined determination process for where mitigation should occur based on value to bat populations.
- 4) We recommend the inclusion of a GCP mitigation requirement for permanent agency access necessary to monitor bat populations and habitat integrity, if this is not already addressed in the current GCP.
- 5) We recommend that State agency input be sought and/or incorporated into minimizing impact, guiding conservation measures, and approving mitigation strategies at sites where state-listed species co-occur with the species covered by the GCP.
- 6) It should be recognized that habitat protected for mitigation will likely not be equal in value to the habitat currently used by bats that will be altered or destroyed. Yet the GCP, as currently written, has no way to discern high-value habitat from low-value habitat. Therefore, the tool lacks the ability to determine if acreage being removed (or used for mitigation) is meaningful to bats. We recommend the inclusion of 'habitat value' considerations into a Tables 4.1 and 4.2 (Section 4.6.4; pp.76-77) as detailed

below. Our recommendations are aimed at creating mitigation ratios and incentives for better offsetting the loss of occupied habitat:

- a. We concur with Table 4.1 (Section 4.6.4; p.76) that removing a maternity roost has more significant negative impacts than removal of a portion of foraging habitat, and that a higher mitigation ratio should apply to the former.
 - b. We recommend that factors such as proximity, habitat type, and habitat quality, be factored into in the mitigation ratios in table 4.1 (Section 4.6.4, p. 76) so they better inform the mitigated acreage calculations of table 4.2 (Section 4.6.4; p.77).
 - i. *Habitat Proximity.* We support the USFWS metrics that apply different mitigation ratios based on distance from documented roosts and/or suitable habitats (table 4.1).
 - ii. *Habitat Type.* The habitat type currently occupied by the listed species (e.g. mixed deciduous forest) will be more effective in recovering the species than a habitat type lacking the ability to support the species in similar ways (e.g., grassland or other habitat types with limited roost options). We recommend forest cover type and structure be assessed when considering project sites vs proposed mitigation sites. Mitigated sites supporting similar cover type could be required or incentivized.
 - iii. *Habitat Quality.* High-quality habitats (e.g. mid to late succession forest with complex structure supporting various roost opportunities) should be credited a higher mitigation value than those that require significant rehabilitation or time before they significantly benefit endangered species recovery (e.g. young forest lacking mature trees and complex structure, pine plantations, etc). We recommend habitat quality be assessed when considering project site vs proposed mitigation sites. Mitigated sites supporting high-quality habitat could be required or incentivized.
- 7) Table 4.1 (Section 4.6.4; p.76) separates projects into counties with less than or greater than 50% forest cover. Mitigation to protect forested areas in counties with significantly fewer trees may have higher value for bats than in heavily forested counties. However, bats evolved to use dead trees, those with exfoliating bark, and/or those with cavities, all of which are temporal resources and ephemeral in nature. Thus, bats are well-adapted for searching and finding alternative roost locations within the local landscape as changes occur. However, *maintenance of high-quality forest as a component of the local area* is important. Therefore, we ask USFWS to consider whether finer scale forest cover data than county-level should be used and whether applicants should be required to use most-recent data sources. These considerations become particularly important once a threshold proportion of ‘total

forest cover within the species foraging distance from occupied roosts’ has been degraded or removed.

- 8) The GCP recognizes the impact of White Nose Syndrome (WNS) (Section 4.1 ‘key conservation needs’ item #1, p. 48). Yet actions to ‘manage the effects of WNS by reducing impacts and conserving survivors’ are not listed as a Goal of the GCP beyond basic protection of hibernacula (Section 4.2; Goal 1; p.49). Nor is reference to WNS treatment, mitigation, or research included in Objectives 1 and 2 in Section 4.3; pp. 49-50.

In December 2023, USFWS produced a memo with subject ‘Research as a Mitigation Option for Wind Power HCPs Affecting White-nose Syndrome-impacted Bats’ which states:

“While research is generally not an acceptable form of mitigation for most impacts to fish, wildlife, and their habitats, the recent 2023 FWS Mitigation Policy (501 FW 2, Appendix 1) states that “(i)n rare circumstances, research or education that is directly linked to reducing threats, or that provides a quantifiable benefit to the species, may be included as part of a mitigation package” (Part 6.6.3.2, pg. 14). Research related to the cause, effects, and remediation of white-nose syndrome on affected bat species, or to technology that can reduce the effects of wind power projects on white-nose syndrome impacted bats, present such circumstances.”

We recommend more explicit support throughout the Goals, Objectives, and Conservation Measures to incentivize data-supported research into WNS treatments and site mitigations that show evidence of limiting WNS impact and/or supporting survivorship, when other types of mitigation are not available or feasible. This recommendation seems to align with the GCP provision: “Mitigation that does not secure complete biological and ecological offsets for the impacts of the taking prior to project impacts may require additional Service review and approval of a site-specific mitigation and restoration plan and additional funding assurances.” (Section 4.6.4; p.77).

- 9) Acoustic surveys only provide information on presence and will not better inform knowledge of how valuable the project area is and how it will fit into the mitigation table. If surveys occur and bat use is detected, we recommend a requirement for an attempt to capture and follow endangered species with telemetry. This would better characterize their use of the project area and detect previously unknown summer or winter roosts of WNS survivors.

Joint Jurisdiction:

It is important to recognize that state agencies and the USFWS have jurisdiction over the protection and recovery of species designated as both state- and federally-imperiled (i.e., threatened or endangered). PGC jurisdiction includes bats that are just state-listed and may co-occur in project areas. All three agencies have jurisdiction over state-listed species of other taxa that may co-occur on proposed project sites. For this reason, clear and timely communication is a high priority. The GCP must produce clear language to project applicants that state agency consultation is still required.

- 1) We request that GCP expand Section 6.0 to include a clear statement that all proposed projects in Pennsylvania begin with submission to PA Conservation Explorer (PACE). This will eliminate any confusion among project proponents regarding the need for State project review for those species not covered by GCP. It is critical that applicants understand the GCP is not the only review, avoidance, and mitigation process required for bats.
- 2) We recommend USFWS keep States apprised of GCP project submissions, review outcomes, and mitigation discussions, so conflicts do not arise across State- and federally-listed species consultations.
- 3) Project applicants will need state and federal processes clearly presented so they can follow all necessary steps, while avoiding missteps and delays. We recommend the addition of a flowchart that clearly presents (without acronyms) the GCP submission and review timelines, processes, communications, and next steps following GCP decision. This illustration should clearly represent the entire GCP process to occur before, during and after project submission. This should also include required processes of State agencies occurring before or after GCP review. We feel a visual schematic is necessary to avoid confusion regarding state and federal processes. We recommend USFWS seek input from the three affected states to develop this clear GCP process language and illustration.
- 4) We recommend USFWS keep States apprised of GCP project submissions, review outcomes, and mitigation discussions, so conflicts do not arise across State- and federally- listed consultations. We suggest that perhaps USFWS should refrain from notification of final GCP decisions until USFWS confirms that State agency consult has occurred, at least during the initial period of GCP rollout. Otherwise, projects may be initiated/completed without state agencies having the opportunity to consult.
- 5) Tricolored bats are proposed to be federally endangered, but listing is not yet finalized. Will the public release and use of the GCP be delayed until tricolored bats

are under Federal jurisdiction? If the GCP is released first, then tricolored bats are not listed, what will be the status of the tool? We suggest a possible way to avoid issues is for USFWS to consider re-wording the GCP to state that it covers ‘Federally listed bats’ without naming them specifically – or include language addressing potential listing complications for tricolored bats - so the GPC remains relevant even if species listings are delayed, added, or dropped.

- 6) It would be beneficial to forest landowners, forest managers, timber investment management organizations and wood utilization groups to be able to take advantage of a GCP for forestry practices. Forestry activities (e.g. prescribed fire, timber harvests, early successional habitat management) is an ineligible project type according to the GCP. The GCP also states that “Similar GCP approaches may be developed to accommodate other project types if or when the Service has sufficient data to complete analyses of the effects of those projects and appropriate CMs.” DCNR and PGC suggest that the USFWS consider developing a Forestry GCP for forest management practices for private landowners in the future.

Editorial Comments:

- 1) We recommend USFWS review of the Glossary for missing terms and acronyms (pp vi-xii). [Permittee-responsible Mitigation (PRM), Forest Cover, and perhaps other key terms are missing]
- 2) In table 4.1 (Section 4.6.4; p.76), the biological importance of a project being positioned in close proximity to a road or railway is not intuitive as to how it relates to habitat value/mitigation ratios. We recommend this be clearly explained so applicants understand ecological rationales used in the GPC.

Throughout the GCP, the biological importance of a project being more or less than 25 acres, being linear or non-linear is not intuitive as to how it impacts the use of the GCP tool. [25-acre thresholds are mentioned in Sections 4.1; 4.5.1.1; 4.5.2; Appendix C]. We recommend the diverging process points triggered by 25-acre thresholds be clearly summarized and explained so applicants understand the processes and rationales of GPC

- 3) We recommend GCP Section 4.6.4 (or Glossary) be expanded to describe how forest cover is to be determined for use in Table 4.1. [What constitute acceptable data sources; how recent should data be; which party determines the figure; how to provide documentation of forest cover if determinations were already performed.] Percent forest cover is a critical piece of information for determining mitigation ratios, so clear guidance is needed.

- 4) We recommend the GCP Section 6.0 more fully describe long term mitigation processes and requirements. [Requirements that mitigation parcels be retained and kept intact for perpetuity? Requirements for maintenance of habitat quality of mitigated parcels over time, and who is responsible party?]

Thank you for your consideration.

Sincerely,



Cindy Adams Dunn
Secretary
PA Department of Conservation
and Natural Resources



Stephen P. Smith
Executive Director
PA Game Commission



Timothy D. Schaeffer
Executive Director
PA Fish and Boat Commission

Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and Pennsylvania Fish and Boat Commission		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	On behalf of the Pennsylvania Conservation and Natural Resources (DCNR), Pennsylvania Game Commission (PGC), and the Pennsylvania Fish and Boat Commission (PFBC), please accept the comments below in regards to the proposed General Conservation Plan (GCP) for routine development projects in New York, Pennsylvania, and West Virginia that impact the federally listed Indiana Bat (<i>Myotis sodalis</i>), Northern Long-Eared Bat (<i>Myotis septentrionalis</i>), and the proposed Tricolored Bat (<i>Perimyotis subflavus</i>).	Comment determined not to be substantive or otherwise require a response.
General Comment	Since federally-listed bats are extremely rare by definition, many development projects do not encounter a listed bat occurrence. However, any development project has the potential to discover that a proposed site supports federal- or state-listed bat use. For this reason, we applaud the efforts of the United States Fish and Wildlife Service (USFWS) to streamline the review of projects by developing tools that efficiently identify the projects most likely to impact bat survival, and therefore, projects that can most effectively support bat recovery if appropriate avoidance and mitigation occurs.	Comment determined not to be substantive or otherwise require a response.
General Comment	We support the development of cost-effective tools that expedite the review of projects with smaller footprints and presumably lower impacts to bats, offering applicants a potential alternative to the development of a Habitat Conservation Plan (HCP). We support processes and tools that effectively protect endangered species and their habitats, while promoting species recovery.	Comment determined not to be substantive or otherwise require a response.
General Comment	We appreciate the efforts of USFWS in developing the GCP to simplify the review process for project applicants and reviewers. This tool seems to address projects with relatively small footprints. However, it is still quite meaningful. Even small projects can have significant negative effects if they directly impact distinct locations and habitats required by listed bats. Small projects may also create indirect impacts extending beyond the project footprint due to habitat loss and fragmentation. Small impacts are additive to ongoing landscape-scale threats that impact bats and are thus not inconsequential. <u>We agree there is value in minimizing and mitigating numerous small impacts across the landscape when trying to recover imperiled species and their habitat due to cumulative effects.</u>	Comment determined not to be substantive or otherwise require a response.
General Comment	The GCP does not cover project types with more significant footprints or impacts such as new electric transmission line construction, wind energy projects, forestry activities, due to the potential for unanalyzed effects and complexities requiring additional NEPA analysis (Section 3.3). <u>We support the approach of projects encompassing complex potentially detrimental impacts going through a more individualized review and consultation process with USFWS.</u>	Comment determined not to be substantive or otherwise require a response.
Section 4.0	Mitigation in the GCP is completely focused on protecting habitat. Clearly, the recovery of species will not occur if their habitat is continually destroyed or impaired. We recommend 1) all mitigation occur in appropriate locations that currently support the species or are likely to in the future; 2) permanent mitigation and site protections at sites currently supporting listed bats; 3) a clearly defined determination process for where mitigation should occur based on value to bat populations.	The Service agrees with the commenter. All of these points are addressed in GCP Chapter 4. Project-specific details will be coordinated and included in the IPP prior to permit issuance.
Section 4.0	We recommend the inclusion of a GCP mitigation requirement for permanent agency access necessary to monitor bat populations and habitat integrity, if this is not already addressed in the current GCP.	The Service agrees with the commenter. This is stated under Section 4.6.3 Priority Mitigation Projects under 2nd Priority 8th bullet.
General Comment	We recommend that State agency input be sought and/or incorporated into minimizing impact, guiding conservation measures, and approving mitigation strategies at sites where state-listed species co-occur with the species covered by the GCP.	Comment determined not to be substantive or otherwise require a response.
Section 4.0	It should be recognized that habitat protected for mitigation will likely not be equal in value to the habitat currently used by bats that will be altered or destroyed. Yet the GCP, as currently written, has no way to discern high-value habitat from low-value habitat. Therefore, the tool lacks the ability to determine if acreage being removed (or used for mitigation) is meaningful to bats. We recommend the inclusion of 'habitat value' considerations into a Tables 4.1 and 4.2 (Section 4.6.4; pp.76-77) as detailed below. Our recommendations are aimed at creating mitigation ratios and incentives for better offsetting the loss of occupied habitat:	The Service does consider proximity in the mitigation ratios based on distance to known roosts and occupied habitat, and distance from road edge. Habitat type was also considered in two different contexts (1) suitable unsurveyed habitat versus suitable documented habitat; and (2) suitable summer roosting habitat and/or suitable spring staging/fall swarming habitat. Habitat quality is inherent in the fact that the area is occupied by the covered species. Therefore, for mitigation purposes the quality of the habitat is not factored into the ratio beyond the qualifier of presence. Additionally, habitat quality is taken into consideration by applying a percent forest cover qualifier. The working assumption in our GCP is that bats occupying forested habitat with less than 50% cover are more likely to experience local population impacts as a result of habitat loss and therefore require higher mitigation ratios.
Section 4.6.4	We recommend that factors such as proximity, habitat type, and habitat quality, be factored into in the mitigation ratios in table 4.1 (Section 4.6.4, p. 76) so they better inform the mitigated acreage calculations of table 4.2 (Section 4.6.4; p.77).	
Section 4.6.4	<u>Habitat Type</u> - The habitat type currently occupied by the listed species (e.g. mixed deciduous forest) will be more effective in recovering the species than a habitat type lacking the ability to support the species in similar ways (e.g., grassland or other habitat types with limited roost options). We recommend forest cover type and structure be assessed when considering project sites vs proposed mitigation sites. Mitigated sites supporting similar cover type could be required or incentivized.	The GCP does consider supporting similar cover type, or in-kind habitat, when reviewing and approving mitigation sites. However, mitigating with out-of-kind habitat, such as conserving or gating a hibernaculum, can sometimes represent a greater conservation benefit for the Covered Species. Therefore, the GCP allows for alternative mitigation strategies to be considered.

Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and Pennsylvania Fish and Boat Commission		
Comment Type/Section Referenced	Comment	Service Response
Section 4.6.4	<u>Habitat Quality</u> . High-quality habitats (e.g. mid to late succession forest with complex structure supporting various roost opportunities) should be credited a higher mitigation value than those that require significant rehabilitation or time before they significantly benefit endangered species recovery (e.g. young forest lacking mature trees and complex structure, pine plantations, etc). We recommend habitat quality be assessed when considering project site vs proposed mitigation sites. Mitigated sites supporting high-quality habitat could be required or incentivized.	High quality habitats as described are considered and are detailed in GCP Section 4.6.3-Priority Mitigation projects. GCP mitigation strategies also take landscape context into consideration, so the location, size, configuration, adjacent uses, and presence of hibernacula, roost trees, travel corridors, and other relevant conservation factors are also considered.
Table 4.1	Table 4.1 (Section 4.6.4; p.76) separates projects into counties with less than or greater than 50% forest cover. Mitigation to protect forested areas in counties with significantly fewer trees may have higher value for bats than in heavily forested counties. However, bats evolved to use dead trees, those with exfoliating bark, and/or those with cavities, all of which are temporal resources and ephemeral in nature. Thus, bats are well-adapted for searching and finding alternative roost locations within the local landscape as changes occur. However, maintenance of high-quality forest as a component of the local area is important. Therefore, we ask USFWS to consider whether finer scale forest cover data than county-level should be used and whether applicants should be required to use most-recent data sources. These considerations become particularly important once a threshold proportion of 'total forest cover within the species foraging distance from occupied roosts' has been degraded or removed.	A goal of the GCP is to provide certainty across a broad geographic scale, which allows applicants to plan projects with confidence that the mitigation ratios will not change over time. Habitat Conservation Plan regulations require that applicants fully offset their take (minimize and mitigate to the maximum extent practicable), which the GCP does. Finer scale analyses may negate the streamlining process that has been intentionally incorporated into this GCP via uniform mitigation ratios. Additionally, the approach taken for this GCP is similar to other large-scale programmatic consultations currently available. Finer scale forest cover data and other best scientific data are typically used by conservation banks and In Lieu Fee Programs which GCP applicants may use.
Section 4.0	The GCP recognizes the impact of White Nose Syndrome (WNS) (Section 4.1 'key conservation needs' item #1, p. 48). Yet actions to 'manage the effects of WNS by reducing impacts and conserving survivors' are not listed as a Goal of the GCP beyond basic protection of hibernacula (Section 4.2; Goal 1; p.49). Nor is reference to WNS treatment, mitigation, or research included in Objectives 1 and 2 in Section 4.3; pp. 49-50...citation of the December 2023 FWS mitigation policy...We recommend more explicit support throughout the Goals, Objectives, and Conservation Measures to incentivize data-supported research into WNS treatments and site mitigations that show evidence of limiting WNS impact and/or supporting survivorship, when other types of mitigation are not available or feasible. This recommendation seems to align with the GCP provision: "Mitigation that does not secure complete biological and ecological offsets for the impacts of the taking prior to project impacts may require additional Service review and approval of a site-specific mitigation and restoration plan and additional funding assurances." (Section 4.6.4; p.77).	The GCP does address managing effects of WNS. Some WNS mitigation strategies are not currently available and were therefore considered in the changed circumstances section. Specifically, WNS research and WNS treatment see Section 4.8.1.1 table 4.5c discusses new mitigation strategies: "The Service notifies a Permittee that a new mitigation method has been developed, particularly specific to addressing threats from WNS (research/vaccines) that could further the recovery of the species."
General Comment	Acoustic surveys only provide information on presence and will not better inform knowledge of how valuable the project area is and how it will fit into the mitigation table. If surveys occur and bat use is detected, we recommend a requirement for an attempt to capture and follow endangered species with telemetry. This would better characterize their use of the project area and detect previously unknown summer or winter roosts of WNS survivors.	The Service approved survey protocol allows applicants to conduct mist-net surveys or/and acoustic surveys when trying to determine presence/probable absence. It also does not require telemetry. We chose to include both options in this GCP to provide applicants with project planning flexibility, as both methods have been determined by the Service to provide sufficient information on species presence. Mitigation ratio table 4.1 includes ratios for impacts to suitable habitat in acoustic buffers and habitat within documented roost buffers. The GCP also includes an option for surveys as mitigation which does include a requirement for mist-netting and telemetry work.
Section 6.0	It is important to recognize that state agencies and the USFWS have jurisdiction over the protection and recovery of species designated as both state- and federally-imperiled (i.e., threatened or endangered). PGC jurisdiction includes bats that are just state-listed and may co-occur in project areas. All three agencies have jurisdiction over state-listed species of other taxa that may co-occur on proposed project sites. For this reason, clear and timely communication is a high priority. The GCP must produce clear language to project applicants that state agency consultation is still required. We request that GCP expand Section 6.0 to include a clear statement that all proposed projects in Pennsylvania begin with submission to PA Conservation Explorer (PACE). This will eliminate any confusion among project proponents regarding the need for State project review for those species not covered by GCP. It is critical that applicants understand the GCP is not the only review, avoidance, and mitigation process required for bats.	Please refer to section 1.2.4 (GCP Approach to Satisfy Other Required Statutes and Policies), which requires the applicant to ensure that all applicable state and federal laws and regulations are met.
Appendix C - IPPs	We recommend USFWS keep States apprised of GCP project submissions, review outcomes, and mitigation discussions, so conflicts do not arise across State- and federally-listed species consultations.	We agree and Service field offices will be responsible for coordinating with state agencies.
Appendix C - IPPs	Project applicants will need state and federal processes clearly presented so they can follow all necessary steps, while avoiding missteps and delays. We recommend the addition of a flowchart that clearly presents (without acronyms) the GCP submission and review timelines, processes, communications, and next steps following GCP decision. This illustration should clearly represent the entire GCP process to occur before, during and after project submission. This should also include required processes of State agencies occurring before or after GCP review. We feel a visual schematic is necessary to avoid confusion regarding state and federal processes. We recommend USFWS seek input from the three affected states to develop this clear GCP process language and illustration.	Thank you for the suggestion. We will consider providing the field offices with guidance on how to streamline coordination with the states.

Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and Pennsylvania Fish and Boat Commission		
Comment Type/Section Referenced	Comment	Service Response
Appendix C - IPPs	We recommend USFWS keep States apprised of GCP project submissions, review outcomes, and mitigation discussions, so conflicts do not arise across State- and federally- listed consultations. We suggest that perhaps USFWS should refrain from notification of final GCP decisions until USFWS confirms that State agency consult has occurred, at least during the initial period of GCP rollout. Otherwise, projects may be initiated/completed without state agencies having the opportunity to consult.	Added text to Appendix C Individual Project Plan Application to address this comment.
General Comment	Tricolored bats are proposed to be federally endangered, but listing is not yet finalized. Will the public release and use of the GCP be delayed until tricolored bats are under Federal jurisdiction? If the GCP is released first, then tricolored bats are not listed, what will be the status of the tool? We suggest a possible way to avoid issues is for USFWS to consider re-wording the GCP to state that it covers 'Federally listed bats' without naming them specifically – or include language addressing potential listing complications for tricolored bats - so the GPC remains relevant even if species listings are delayed, added, or dropped.	Per the Service's Section 10 Handbook, "Congress also intended that HCPs include, when possible, conservation measures for candidate species, proposed species, and other species not listed under the ESA at the time an HCP is developed. Covering species likely to be listed within the term of the permit can benefit the permittee by ensuring the terms of an HCP will not need to be changed over time with subsequent species listings. It can also provide early protection for many species and, ideally, prevent subsequent declines and in some cases the need to list such species." Thus, the Service does not plan to delay the release of this tool pending the final listing rule of TCB.
General Comment or Section 3.4	It would be beneficial to forest landowners, forest managers, timber investment management organizations and wood utilization groups to be able to take advantage of a GCP for forestry practices. Forestry activities (e.g. prescribed fire, timber harvests, early successional habitat management) is an ineligible project type according to the GCP. The GCP also states that "Similar GCP approaches may be developed to accommodate other project types if or when the Service has sufficient data to complete analyses of the effects of those projects and appropriate CMs." DCNR and PGC suggest that the USFWS consider developing a Forestry GCP for forest management practices for private landowners in the future.	The Service has the ability to amend the GCP in the future to include additional Covered Activities, Covered Species, and/or expand the Plan Area. Also, the Service would be available to work with a specific timber company or perhaps a group of timber companies to develop a company-wide HCP or Industry Conservation Plan (ICP), that is based on the strategy and analysis of the GCP, to address consultation needs beyond the scope of the proposed GCP. ICPs are a form of an umbrella or template HCP that is specific to a particular industry, and could be drafted by an industry proponent group, and/or negotiated directly between the Service and representatives of that industry. Such an ICP can work very much like a GCP and would significantly benefit from industry stakeholder input.
Glossary	We recommend USFWS review of the Glossary for missing terms and acronyms (pp vi-xii). [Permittee-responsible Mitigation (PRM), Forest Cover, and perhaps other key terms are missing]	Thank you for the suggestion. Our glossary is intended to define confusing, technical, or advanced words and terms with interchangeable meanings. The Service will consider adding additional terms, where needed.
Section 4.6.4	In table 4.1 (Section 4.6.4; p.76), the biological importance of a project being positioned in close proximity to a road or railway is not intuitive as to how it relates to habitat value/mitigation ratios. We recommend this be clearly explained so applicants understand ecological rationales used in the GPC.	Clarification added to document to address this comment.
Section 4.1, 4.5.1, 4.5.2, Appendix C - IPPs	Throughout the GCP, the biological importance of a project being more or less than 25 acres, being linear or non-linear is not intuitive as to how it impacts the use of the GCP tool. [25-acre thresholds are mentioned in Sections 4.1; 4.5.1.1; 4.5.2; Appendix C]. We recommend the diverging process points triggered by 25-acre thresholds be clearly summarized and explained so applicants understand the processes and rationales of GPC	The 25 acres is not biologically derived, it is meant to limit uncertainty which is explained in the GCP. See section 4.5.2. The intent of this CM is to limit uncertainty and give our analysis book ends, it is not intended to put more value on assumed occupied habitat than known habitat.
Section 4.6.4	We recommend GCP Section 4.6.4 (or Glossary) be expanded to describe how forest cover is to be determined for use in Table 4.1. [What constitute acceptable data sources; how recent should data be; which party determines the figure; how to provide documentation of forest cover if determinations were already performed.] Percent forest cover is a critical piece of information for determining mitigation ratios, so clear guidance is needed.	The mitigation approach in the GCP is based on an existing Service-approved programmatic consultation that has worked well. Should implementation of the GCP result in the need for clearer guidance regarding forest cover, the Service can incorporate the information provided in your comment into either future Service guidance documents or an amendment to the GCP.
Section 6.0	We recommend the GCP Section 6.0 more fully describe long term mitigation processes and requirements. [Requirements that mitigation parcels be retained and kept intact for perpetuity? Requirements for maintenance of habitat quality of mitigated parcels over time, and who is responsible party?]	This information and detail will be included in the site-specific IPP and part of the applicant's chosen mitigation tool/mechanism.
Closing Statement	Thank you for your consideration.	Comment determined not to be substantive or otherwise require a response.



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November 27th, 2024

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To whom it may concern:

Resource Environmental Solutions, LLC (RES) is submitting our comments in response to the Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment (Docket No. FWS–R5–ES–2024–0039). RES is the nation's largest ecological restoration company. We are innovative ecological problem solvers dedicated to being long-term stewards of the earth. We are inspired by the notion that robust, accountable, well-regulated ecological offsets are critical to allowing continued economic development (and critical infrastructure) for human prosperity, facilitating a win/win for humanity and the environment. Since 2007, we have designed and constructed 406 mitigation sites in 17 U.S. Army Corps districts, restored over 60,000 acres of wetlands, 400 miles of stream, planted over 20 million native trees/shrubs and rehabilitated, preserved, and managed over 15,000 acres of special-status species habitat.

We applaud and support the U.S. Fish and Wildlife Service's (USFWS) ongoing efforts to protect critical species and habitats, particularly as the agency navigates potential changes to the Endangered Species Act (ESA) under the future administration. These anticipated adjustments present an opportunity for USFWS to reinforce its commitment to safeguarding vulnerable species while streamlining regulatory processes to better balance ecological stewardship with infrastructure development. The proposed General Conservation Plan (GCP) is a pivotal step forward in this regard, specifically designed to enhance protection for three at-risk bat species [Indiana bat (*Myotis sodalis*), Northern long-eared bat (*Myotis septentrionalis*) and Tricolored bat (*Perimyotis subflavus*)]. With the continued decline of these species due to habitat loss, white-nose syndrome, and other anthropogenic pressures, the GCP could offer a robust framework to mitigate impacts effectively while ensuring compliance with the ESA.

We appreciate the opportunity to provide input on this consequential, Conservation Plan. While we support the overall objectives of the proposed GCP, we have identified certain inconsistencies that warrant clarification to ensure the effectiveness of its implementation. Addressing these inconsistencies will not only enhance regulatory clarity but also align the proposed changes with best practices and the overarching goals of the GCP. We would be happy to provide specific examples or further details to assist in addressing these issues and ensure the GCP achieves its intended outcomes effectively.

One notable inconsistency in the proposed ruling lies in its approach to mitigation requirements for impacted habitats, particularly in relation to the treatment of subsurface mineral rights as outlined in Section 4.6.1.3 Permittee-Responsible Mitigation:

Section 4.6.1.3 Permittee-Responsible Mitigation, Habitat Protection paragraph 5:
"Lands conserved as PRM, whether acquired in fee title or through conservation easement, shall secure unencumbered surface, air, and subsurface (e.g., mineral) rights to the property where possible, and conflicting interests that cannot otherwise be cleared should be subordinated. Permittees that cannot acquire, clear, or subordinate potentially-conflicting property interests may be required to provide additional assurances (financial or otherwise) to ensure that if such rights are exercised the biological and ecological values for which the mitigation was established will be maintained or replaced in a manner suitable to the Service."

We note that many bat-occupied areas, particularly in regions like West Virginia, Pennsylvania, and New York, are encumbered by subsurface mineral rights that may not be subordinated. This issue has presented challenges, as demonstrated during the development of the Pennsylvania Statewide Bat Conservation Bank Instrument. In this case, the Field Office encouraged RES to pursue the creation of a conservation bank in this area precisely because of the habitat threats associated with mineral-extraction activities. We worked collaboratively with the U.S. Fish and Wildlife Service (USFWS), the Solicitor's Office, and the mineral rights holder to develop a creative conservation strategy that protected both the habitat and the species, threading the needle between conservation goals and underlying land-use constraints.

Such constraints on land use, particularly in areas with prevalent mineral extraction, underscore the importance of proactive planning within the framework of the Landscape Approach outlined in the U.S. Fish and Wildlife Service's Endangered Species Act Compensatory Mitigation Policy¹. Furthermore, with the expansion of utility-scale renewable energy projects (e.g., wind and solar) often sited in regions with underlying mineral-extraction land uses, this challenge is likely to persist.

To address this, we recommend that USFWS establish a consistent framework for resolving conflicts between conservation goals and mineral rights by providing guidelines on acceptable financial assurances, such as bonds, escrow accounts, or insurance, to mitigate risks associated with mineral extraction, as well as criteria for land-use allowances that balance conservation with coexisting land uses. Additionally, USFWS should offer examples of successful mitigation strategies and case studies that demonstrate how conservation objectives have been achieved under similar constraints, ensuring clarity for sponsors and proponents in developing conservation strategies that address both ecological goals and land-use challenges. By implementing these measures, USFWS can continue fostering collaborative solutions and supporting innovative conservation efforts that align with broader energy and land-use trends, while maintaining robust protections for habitat and species.

Another inconsistency we observed in the proposed GCP is found in Section 4.6.4, *Calculating Mitigation Offsets*, where the lack of prescribed uniform ratios for alternative mitigation strategies creates uncertainty for applicants and complicates efforts to achieve consistent conservation outcomes.

Section 4.6.4, *Calculating Mitigation Offsets*

No uniform ratios are prescribed for alternative mitigation strategies, including installation of cave gates; restoration, enhancement, or protection of hibernacula; or surveys that result in the identification of new hibernacula or roost trees for the species that are identified as Covered Species in the IPP. For instance, depending on the amount of tree removal within spring staging/fall swarming habitat, impacts could be offset with gating of a hibernacula. Applicants wishing to pursue those activities should coordinate with the local field office to determine if these CMs are appropriate for their project type and location, and what monitoring and adaptive management requirements may apply.

While this approach allows flexibility, it fails to establish a standardized framework for applying mitigation offsets, leaving room for significant variation. Further complicating this issue is the fact that USFWS Field Offices differ in their approaches to mitigation, which impedes on the overarching goals/framework outlined in Section 4.0. *Conservation Program*, 4.1 *Conservation Strategy* and 4.2 *Biological Goals of this GCP*. While some offices actively promote innovative or research-driven mitigation strategies, others may take a more conservative stance. This variation across regions creates challenges for applicants attempting to comply with mitigation requirements, establish mitigation banks/ILFs and achieve consistent outcomes. Such discrepancies are particularly problematic for applicants working across multiple jurisdictions, where differing standards and expectations can lead to delays and inefficiencies.

To address this inconsistency, we urge the Service to establish a more consistent and standardized approach to mitigation offsets. Clear guidance on acceptable conservation measures and uniform metrics for calculating offsets would reduce variability across field offices, ensuring that the GCP achieves its intended conservation goals. Standardizing these practices would also provide applicants with greater clarity and predictability, fostering more efficient implementation of mitigation strategies.

Additionally, this lack of consistency conflicts with the principles outlined in Section 5.3 of the FWS ESA Mitigation Policy, which emphasizes the need for reliable, consistent, and science-based approaches to mitigation:

¹ U.S. Fish and Wildlife Service. "Endangered Species Act Compensatory Mitigation Policy." 501 FW 3. May 10, 2023.

Section 5.3 of the ESA Mitigation Policy (Appendix 1, 501 FW3):

5.3. Reliable and Consistent

Metrics that measure ecological functions or services at compensatory mitigation sites and impact sites should be science based, quantifiable, consistent, repeatable, and related to the conservation goals for the species. These metrics may be species- or habitat-based. Metrics used to calculate credits generally should be the same as those used to calculate debits for the same species or habitat type, including consistent use of baseline conditions. If they are not the same, the relationship (conversion) between credits and debits must be transparent and scientifically defensible. Metrics must account for duration of the impact, temporal loss to the species, management of risk associated with compensatory mitigation, and other such measures. This does not mean that metrics developed to measure losses and gains on the landscape must be precise, as this is rarely possible in biological systems, but uncertainty should be noted where it exists, and metrics must be based on the best scientific data available to gauge the adequacy of the compensatory mitigation. When developing performance metrics for a mitigation mechanism, the methods and rationale to support them should be clearly described. To provide context for the metrics and their precision, that description should also account for, to the extent possible, the sources of uncertainty and their extent. Modifying existing metrics on which approved conservation banks or other compensatory mitigation programs are based and still in use warrants careful consideration and must be based on the best available science.

Lastly, we note that the GCP does not adequately address temporal loss, a critical consideration outlined in the Service's Mitigation Policy¹ to achieve the goal of no net loss. Temporal loss refers to the delay between the occurrence of ecological impacts and the realization of mitigation benefits, which can significantly affect the effectiveness of compensatory mitigation efforts. Consistency with the Mitigation Policy requires clear guidance on how temporal loss will be accounted for within the GCP framework. Specifically, we urge the Service to address how it will incentivize mitigation projects that provide advance compensatory mitigation. Advance mitigation offers a proactive approach to reducing temporal gaps and ensuring that conservation benefits are available at the time of impact. By explicitly integrating temporal loss considerations into the GCP, the Service can enhance alignment with its own goals and provide greater clarity and predictability for stakeholders.

RES appreciates the opportunity to provide thoughtful input on this consequential GCP. We remain committed to working collaboratively with the U.S. Fish and Wildlife Service to address these identified inconsistencies and ensure that the GCP becomes a reliable, consistent, and science-driven framework that effectively supports species recovery while streamlining implementation for stakeholders.

Thank you,



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Resource Environmental Solutions, LLC		
Comment Type/Section Referenced	Comment	Service Response
Introductory Statement	Resource Environmental Solutions, LLC (RES) is submitting our comments in response to the Proposed Multi-Bat Species General Conservation Plan for Routine Development Projects in New York, Pennsylvania, and West Virginia; Draft Environmental Assessment (Docket No. FWS-R5-ES-2024 0039). RES is the nation's largest ecological restoration company. We are innovative ecological problem solvers dedicated to being long-term stewards of the earth. We are inspired by the notion that robust, accountable, well-regulated ecological offsets are critical to allowing continued economic development (and critical infrastructure) for human prosperity, facilitating a win/win for humanity and the environment. Since 2007, we have designed and constructed 406 mitigation sites in 17 U.S. Army Corps districts, restored over 60,000 acres of wetlands, 400 miles of stream, planted over 20 million native trees/shrubs and rehabilitated, preserved, and managed over 15,000 acres of special status species habitat.	Comment determined not to be substantive or otherwise require a response.
General Comment	We applaud and support the U.S. Fish and Wildlife Service's (USFWS) ongoing efforts to protect critical species and habitats, particularly as the agency navigates potential changes to the Endangered Species Act (ESA) under the future administration. These anticipated adjustments present an opportunity for USFWS to reinforce its commitment to safeguarding vulnerable species while streamlining regulatory processes to better balance ecological stewardship with infrastructure development. The proposed General Conservation Plan (GCP) is a pivotal step forward in this regard, specifically designed to enhance protection for three at-risk bat species [Indiana bat (<i>Myotis sodalis</i>), Northern long-eared bat (<i>Myotis septentrionalis</i>) and Tricolored bat (<i>Perimyotis subflavus</i>)]. With the continued decline of these species due to habitat loss, white-nose syndrome, and other anthropogenic pressures, the GCP could offer a robust framework to mitigate impacts effectively while ensuring compliance with the ESA.	Comment determined not to be substantive or otherwise require a response.
General Comment	We appreciate the opportunity to provide input on this consequential, Conservation Plan. While we support the overall objectives of the proposed GCP, we have identified certain inconsistencies that warrant clarification to ensure the effectiveness of its implementation. Addressing these inconsistencies will not only enhance regulatory clarity but also align the proposed changes with best practices and the overarching goals of the GCP. We would be happy to provide specific examples or further details to assist in addressing these issues and ensure the GCP achieves its intended outcomes effectively.	Comment determined not to be substantive or otherwise require a response.
Section 4.6.1.3	One notable inconsistency in the proposed ruling lies in its approach to mitigation requirements for impacted habitats, particularly in relation to the treatment of subsurface mineral rights as outlined in Section 4.6.1.3 Permittee-Responsible Mitigation: We note that many bat-occupied areas, particularly in regions like West Virginia, Pennsylvania, and New York, are encumbered by subsurface mineral rights that may not be subordinated. This issue has presented challenges, as demonstrated during the development of the Pennsylvania Statewide Bat Conservation Bank Instrument. In this case, the Field Office encouraged RES to pursue the creation of a conservation bank in this area precisely because of the habitat threats associated with mineral-extraction activities. We worked collaboratively with the U.S. Fish and Wildlife Service (USFWS), the Solicitor's Office, and the mineral rights holder to develop a creative conservation strategy that protected both the habitat and the species, threading the needle between conservation goals and underlying land-use constraints. Such constraints on land use, particularly in areas with prevalent mineral extraction, underscore the importance of proactive planning within the framework of the Landscape Approach outlined in the U.S. Fish and Wildlife Service's Endangered Species Act Compensatory Mitigation Policy1 (Footnote 1 -U.S. Fish and Wildlife Service. "Endangered Species Act Compensatory Mitigation Policy." 501 FW 3. May 10, 2023. Furthermore, with the expansion of utility-scale renewable energy projects (e.g., wind and solar) often sited in regions with underlying mineral-extraction land uses, this challenge is likely to persist. To address this, we recommend that USFWS establish a consistent framework for resolving conflicts between conservation goals and mineral rights by providing guidelines on acceptable financial assurances, such as bonds, escrow accounts, or insurance, to mitigate risks associated with mineral extraction, as well as criteria for land-use allowances that balance conservation with coexisting land uses.	This comment is outside the scope of the GCP. See Pg 65 of GCP. On pg 65, the GCP says: <i>Lands conserved as PRM, whether acquired in fee title or through conservation easement, shall secure unencumbered surface, air, and subsurface (e.g., mineral) rights to the property where possible.</i> The intent is to provide a suite of mitigation options that fully offset the impact of the taking, and the specifics of the mitigation would be outlined in the IPP.

Resource Environmental Solutions, LLC		
Comment Type/Section Referenced	Comment	Service Response
Section 4.6.1.3	Additionally, USFWS should offer examples of successful mitigation strategies and case studies that demonstrate how conservation objectives have been achieved under similar constraints, ensuring clarity for sponsors and proponents in developing conservation strategies that address both ecological goals and land-use challenges. By implementing these measures, USFWS can continue fostering collaborative solutions and supporting innovative conservation efforts that align with broader energy and land-use trends, while maintaining robust protections for habitat and species.	This comment is outside the scope of the GCP. The Service is available to work with mitigation providers to address these topics.
Section 4.6.4	Another inconsistency we observed in the proposed GCP is found in Section 4.6.4, Calculating Mitigation Offsets, where the lack of prescribed uniform ratios for alternative mitigation strategies creates uncertainty for applicants and complicates efforts to achieve consistent conservation outcomes.....citation of Section 4.6.4. While this approach allows flexibility, it fails to establish a standardized framework for applying mitigation offsets, leaving room for significant variation. Further complicating this issue is the fact that USFWS Field Offices differ in their approaches to mitigation, which impedes on the overarching goals/framework outlined in Section 4.0. Conservation Program, 4.1 Conservation Strategy and 4.2 Biological Goals of this GCP. While some offices actively promote innovative or research-driven mitigation strategies, others may take a more conservative stance. This variation across regions creates challenges for applicants attempting to comply with mitigation requirements, establish mitigation banks/ILFs and achieve consistent outcomes. Such discrepancies are particularly problematic for applicants working across multiple jurisdictions, where differing standards and expectations can lead to delays and inefficiencies. To address this inconsistency, we urge the Service to establish a more consistent and standardized approach to mitigation offsets. Clear guidance on acceptable conservation measures and uniform metrics for calculating offsets would reduce variability across field offices, ensuring that the GCP achieves its intended conservation goals. Standardizing these practices would also provide applicants with greater clarity and predictability, fostering more efficient implementation of mitigation strategies.	For the GCP, the mitigation options are presented in section 4.6.4 and Table 3 and 4. The Service has provided clear, biologically justified, uniform mitigation ratios to fully offset take using conservation banks, in lieu fee programs, and permittee responsible mitigation actions. Alternate mitigation strategies likely would focus on hibernacula; the value of which can vary greatly. As stated in the GCP, alternative mitigation strategies are not intended to be prescribed or applied uniformly. This is to account for the unique and site-specific differences in the value (quality, function, and timing) of the alternate mitigation relative to the impacted area.
Section 4.6	Additionally, this lack of consistency conflicts with the principles outlined in Section 5.3 of the FWS ESA Mitigation Policy, which emphasizes the need for reliable, consistent, and science-based approaches to mitigation...citation of Section 5.3 of the ESA Mitigation Policy (Appendix 1, 501 FW3): 5.3 Reliable and Consistent.	The GCP presents reliable and consistent mitigation metrics for use with conservation banks, in lieu fee programs, and permittee responsible mitigation actions as described in Tables 3 and 4. This is consistent with Section 5.3 of the Service's ESA Mitigation Policy. GCP applicants can choose to mitigate their project using one of these standard mitigation strategies or propose an alternative such as installation of cave gates; restoration, enhancement, or protection of hibernacula; or surveys that result in the identification of new hibernacula or roosts. The inclusion in the GCP of alternate mitigation strategies provides applicants with additional flexibility in meeting their mitigation obligations. GCP applicants that have an opportunity to implement an alternative mitigation strategy that represents a significant or high value conservation benefit, has been incorporated into the GCP and is considered beneficial to the species as well as the applicant. However, the baseline values associated with a hibernaculum or another alternative mitigation strategy can vary greatly. Out of kind mitigation often requires the relationship between the mitigation credit and impact debit to be described when the specific details are available. Therefore, applicants wishing to pursue an alternate mitigation strategy should coordinate with the local field office to describe those project specific details, determine if it is appropriate under the GCP, and transparently disclose the alternative strategy in the project specific IPP. This alternative mitigation strategy approach is also considered to be consistent with the Service's ESA Mitigation Policy.
Section 4.6	Lastly, we note that the GCP does not adequately address temporal loss, a critical consideration outlined in the Service's Mitigation Policy ¹ to achieve the goal of no net loss. Temporal loss refers to the delay between the occurrence of ecological impacts and the realization of mitigation benefits, which can significantly affect the effectiveness of compensatory mitigation efforts. Consistency with the Mitigation Policy requires clear guidance on how temporal loss will be accounted for within the GCP framework. Specifically, we urge the Service to address how it will incentivize mitigation projects that provide advance compensatory mitigation. Advance mitigation offers a proactive approach to reducing temporal gaps and ensuring that conservation benefits are available at the time of impact. By explicitly integrating temporal loss considerations into the GCP, the Service can enhance alignment with its own goals and provide greater clarity and predictability for stakeholders.	Advanced mitigation removes temporal loss and ensures that conservation benefits that are intended to offset a project's effects are available at the time of impact. The GCP incentivizes advanced mitigation in section 4.6.4 (Timing and Additional Considerations for PRM Post Permit Conservation Actions) by stating " <i>Mitigation that does not secure complete biological and ecological offsets for the impacts of the taking prior to project impacts may require additional Service review and approval of a site-specific mitigation and restoration plan and additional funding assurances. Tables 5-8 outline considerations related to timing and other requirements that apply to PRM proposals that are expected to increase or accrue ecological or habitat values after Permit issuance to meet GCP mitigation standards.</i> " ILF accounts should also have a timeframe for which conservation actions need to be accomplished in order for the ILF to provide the expected conservation benefits. And credits at mitigation/conservation banks are not released for sale until the land associated with those credits provide the conservation benefits. The Service identifies habitat protection via conservation banks as well as ILF and PRM as Priority 1 actions for mitigation projects (see section 4.6.3 of the GCP).

Resource Environmental Solutions, LLC		
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Closing Statement	RES appreciates the opportunity to provide thoughtful input on this consequential GCP. We remain committed to working collaboratively with the U.S. Fish and Wildlife Service to address these identified inconsistencies and ensure that the GCP becomes a reliable, consistent, and science-driven framework that effectively supports species recovery while streamlining implementation for stakeholders.	Comment determined not to be substantive or otherwise require a response.