

8.1 Alternatives to Take

The Endangered Species Act (ESA) requires that applicants for an incidental take permit specify what alternative actions to the take of federally listed species were considered and why those alternatives were not selected. The *Habitat Conservation Planning and Incidental Take Permit Processing Handbook* (U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service 2016) identifies two alternatives commonly used in Habitat Conservation Plans (HCPs).

- Any alternative that would reduce take below levels anticipated for the proposed project.
- An alternative that would avoid take and, therefore, not require a permit from U.S. Fish and Wildlife Service (USFWS).

The choice of a preferred alternative represents the best attempt to reduce significant impacts on the four bat species, while allowing the Departments of Natural Resources for Michigan, Minnesota, and Wisconsin (State DNRs) to conduct forest management activities.

In accordance with the ESA, this chapter discusses alternatives that were considered but not selected and the reasons those alternatives were not selected for analysis.

8.2 Description of Alternatives

Three alternatives were considered but not selected for analysis in the Lakes States HCP: no take, reduced covered activities, and reduced geographic coverage. These alternatives and the rationale for their elimination are discussed below. A comprehensive discussion and evaluation of these, as well as other potential alternatives considered, will also be provided in the National Environmental Policy Act (NEPA) analysis for the Lake States HCP, which accompanies this document and which will be publicly available with release of the public draft Lake States HCP.

8.2.1 No Take Alternative

Under the no take alternative, the State DNRs would not engage in forest management activities that result in the take of covered species, thereby removing the need for an incidental take permit (ITP) from USFWS. This alternative was not selected because the State DNRs must continue to adhere to their mandates and missions to manage forests to benefit a variety of organisms, provide economic benefits to citizens, maintain ecosystem services, and provide recreational opportunities for residents in the states of Michigan, Minnesota, and Wisconsin (Chapter 1, *Introduction*, Section 1.2, *Purpose*). Specifically, each State DNR's forestry division has a stated vision for how to manage their forests to serve these multiple mandates.

The mission statement for each State DNR is described below:

- **Michigan.** Michigan's state forests provide us with clean air and water, materials for a strong forest products industry, and places to hunt, fish, hike, and camp. We take forest management seriously. That means maintaining our sustainability certification and carefully planning out how we manage Michigan's state forests. These management strategies can include science-based methods such as harvesting trees, prescribed burning, and controlling invasive species (Michigan Department of Natural Resources 2018).
- **Minnesota.** The Division of Forestry protects and manages the trees, woodlands, and forests entrusted to us for the benefit of the people of Minnesota. In support of the DNR's mission, as forest stewards we strive to:
 - Provide our shared expertise to understand, sustain, and manage Minnesota's trees, woodlands, and forests,
 - Provide a sustainable supply of multiple forest resources and opportunities,
 - Protect lives and property from wildfires, and
 - Fulfill responsibilities to the permanent school trust (Minnesota Department of Natural Resources 2018).
- **Wisconsin.** The 17.1 million acres of forests that cover nearly half of Wisconsin and the millions of trees in our communities are vital to the quality of life in Wisconsin. Our forests provide a wide range of social, cultural, ecological, and economic benefits we all use every day, from clean air and water to wildlife habitat to outdoor recreational opportunities to hundreds of wood and paper products. The Division of Forestry administers programs that protect and sustain these forested lands throughout the state, combining technical and financial assistance, planning, research, technology, education and policy to help meet the many demands on the forest both today and for many years to come (Wisconsin Department of Natural Resources 2018).

In most cases, these mandates are aligned with the need to protect and improve habitat for covered species. However, in some cases, the State DNRs' mandates to integrate use of the forest through timber harvest and prescribed fire for wildlife, recreation, and economic development can compete or conflict with using forests to maximize benefits for bats. In addition, activities that provide long-term benefits to bat habitat may have direct, short-term impacts on individual bats.

Chapter 2, *Covered Lands and Activities*, identifies the forest management activities that are necessary for the State DNRs to fulfill their mandates. Because these covered activities are necessary, take of Indiana bats, northern long-eared bats, little brown bats, and tricolored bats can be minimized but not entirely avoided. As a result, the no take alternative was rejected.

8.2.2 Reduced Covered Activities Alternative

Under the reduced covered activities alternative, select covered activities with some risk of take would not be covered under the Lake States HCP. While the elimination of these select activities could reduce or delay implementation of some covered activities under this alternative, the majority would continue to occur without significant limitations. The reduced activities considered for the Lake States HCP were road and trail construction, maintenance, and use on State DNR and county lands. Use of roads and trails in the Lake States HCP supports forest management and public use purposes. Construction and road maintenance require tree removal, generally with heavy timber harvest equipment, while trail construction and maintenance are at a much lower intensity. Road

and trail maintenance and use have the potential to affect covered species roosting habitat in a manner similar to timber harvest.

This alternative was not selected because road and trail maintenance and use are necessary to the forest management practices covered under the Lake States HCP, it would not be beneficial to consider these activities separately from forest management practices. Covering these activities under this HCP will lead to a more comprehensive, large-scale conservation strategy that will provide greater conservation benefit to covered bat species.

8.2.3 Reduced Geographic Coverage Alternative

Under this alternative, the State DNRs would only obtain take coverage for activities on land owned and managed by the State DNRs. Incidental take coverage would not be extended to counties, municipalities, or private landholders in the Lake States.

DNR forestlands account for approximately 9.2 million acres of covered lands and include state managed forestlands, wildlife or game areas, and parks. County and municipal forestlands account for approximately 5.4 million acres and include forests under county and municipal ownership and other local government lands. Private lands represent the largest acreage of forestlands (approximately 32.7 million acres) but only 12.6 million acres are eligible for enrollment and include large tracts of forestlands owned by corporations, private individuals, nonprofit conservation groups, and private clubs.

Covered activities on county, municipal, and private forestlands may need to comply with ESA requirements for take of the four covered bat species. Establishing one HCP for the three states and statewide lands streamlines the permit process (one incidental take permit application) and allows additional partners to participate while providing for a landscape-scale approach rather than a project-by-project approach (e.g., at the stand level) to conservation of the four covered species.

Extending incidental take coverage to the counties, municipalities, and private landowners will almost triple the covered lands (an increase of 17.9 million acres) covered by DNR lands alone. The reduced geographic coverage alternative was rejected because the conservation strategy in the Lake States HCP offers the following advantages:

- Provides streamlined compliance by considering the impacts of forestry on the four covered species at a landscape scale rather than on a project-by-project basis.
- Utilizing a landscape scale approach, allows State DNRs to meet their mandates and missions efficiently (see description of missions under the No Action Alternative above).
- Incorporates a program of comprehensive, large-scale planning and conservation.

This alternative was not selected because, while it would reduce the amount of take associated with covered activities, it would also proportionally reduce the amount of conservation associated with the proposed alternative. Forest management activities on private lands would still occur and may result in take of federally listed species; this would leave individual private landowners to seek their own incidental take authorizations from USFWS as needed to conduct their own forest management activities. Project-by-project permitting would end up as a mosaic of smaller HCPs (potentially hundreds) with potentially less connectivity between the conservation areas. This can lead to a greater effect on covered species. Individual HCPs would not be coordinated between landowners within a state let alone across all three states, meaning covered activities (including how they are

implemented), covered species (individual landowners may not address non-listed species), effects analysis, and conservation strategies would all be different. Project-by-project permitting would also increase the financial burden on private landowners who elect to develop their own HCP and increase the USFWS workload in having to process individual permits on a case-by-case basis.

8.3 References

- Michigan Department of Natural Resources. 2018. The Department of Natural Resources—Forestry. Available: https://www.michigan.gov/dnr/0,4570,7-350-79136_79237---,00.html. Accessed: June 21, 2018.
- Minnesota Department of Natural Resources. 2018. About Us—Minnesota DNR—MN Department of Natural Resources. Division of Forestry. Available: <https://www.dnr.state.mn.us/forestry/about.html>. Accessed: June 21, 2018.
- U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Service. 2016. *Habitat Conservation Planning and Incidental Take Permit Processing Handbook*. December.
- Wisconsin Department of Natural Resources. 2018. Forestry Division. Available: <https://dnr.wi.gov/about/divisions/forestry/>. Accessed: June 21, 2018.