

Wayne National Forest

Land and Resource Management Plan (Forest Plan)

Amendment No. 13

Approved: May 22, 2003

WAYNE NATIONAL FOREST
May 22, 2003

Forest Plan Amendment No. 13

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DIGEST: This amendment is a result of formal consultation with the USDI Fish and Wildlife Service on continued implementation of the Forest Plan for the Wayne National Forest after discovery of the endangered Indiana bat within the Wayne National Forest. The Fish and Wildlife Service completed a Biological Opinion that addressed the impacts of continued implementation of the Wayne Forest Plan and included Terms and Conditions that had to be added to the Wayne Forest Plan to prevent implementation of the Forest Plan from potentially having an adverse effect on listed Threatened and Endangered Species. This amendment adds those Terms and Conditions to the Forest Plan.

Close most newly constructed Forest Service roads to public motorized use unless they occur where motorized use is emphasized.

Provide areas for non-motorized recreation opportunities by closing Forest Service roads.

Provide areas for motorized recreation.

Construct new hiking and horse trails and trailheads in areas that can sustain and maintain the desired experience. Ensure roads closed to motorized traffic will be available as trails.

Provide the opportunity for developed recreation sites to be operated by private concessionaires.

Provide cost-effective service in developed recreation sites.

Provide added developed recreation capacity only where demand already exists and private sector cannot or will not meet the demand.

Locate, determine the significance of, and where appropriate, preserve historical and archaeological sites.

Manage exceptional historical and archaeological sites for increased public use and visitation, while still protecting the values of the site.

Make historical and archaeological sites available for study by agencies involved in research.

Maintain, enhance, and/or restore visual resources in visually sensitive areas.

Design interpretive service programs to resolve management problems, reduce management costs, obtain visitor feedback, increase public understanding of Forest Service management, and provide safe use of the Forest.

Wildlife and Fish

Improve fish habitats and manage wildlife habitats to maintain viable populations of native and desired nonnative species and to maintain and improve habitat of management indicator species. Population trend objectives of management indicator species are displayed in Table B-5, Appendix B.

Protect and enhance riparian habitat for wildlife.

Promote the diversity of plant and animal communities by providing a variety of vegetative communities.

Improve habitat effectiveness and minimize disturbance to wildlife consistent with management area goals.

Make the Forest available for fish and wildlife research by universities and agencies involved in such research.

Federally
Endangered and
Threatened Species

Manage endangered and threatened plant and animal species to population sizes and distribution where they are no longer threatened, in cooperation with other State and Federal Agencies.

(This section
revised by Forest
Plan Amendment
13)

The following reasonable and prudent measures are necessary and appropriate to minimize take of the Indiana bat and minimize any adverse impacts to the bald eagle (USDI FWS, 2001). The Biological Opinion's terms and conditions are specific actions on how these measures must be met. The terms and conditions are incorporated in the Forest-wide Standards and Guidelines, pages 4-44. The following reasonable and prudent measures outlined below fall within the Forest Service's responsibilities to conserve Federally listed species as outlined in sections 2(c)(1) and 7(a)(1) of the Endangered Species Act.

Indiana Bat

Maintain adequate canopy cover in hardwood stands (depending on the size of the stands) to provide Indiana bat foraging habitat.

Provide roosting habitat by preserving shagbark hickory or shellbark hickory trees.

No snag removal (snags with a dbh>6 inches), except where they pose an imminent threat to human safety.

Maintain a component of large, over-mature trees, in hardwood stands, when possible.

These trees will ensure a continuous supply of large roost trees for the bat.

Tree removal activity will be closely monitored and reported on a project-by-project basis to ensure that impacts of incidental take associated with future proposed projects are appropriately minimized.

Protect all known Indiana bat hibernacula on the Wayne National Forest.

Bald Eagle

Reduce the potential of removing unknown communal night roosts.

Discourage continuous and/or repeated human disturbance where wintering bald eagles (November 15 to March 15) are known to have communal night roosts or form daily congregations (as defined in the Northern States Bald Eagle Recovery Plan) on all lands or waters managed by the Wayne National Forest.

Use appropriate smoke management techniques to minimize potential impacts of smoke inversion to occupied communal night roosts, daytime concentrations, or occupied breeding territories.

In association with the predicted removal of this species from the list of endangered and threatened wildlife, assist the U. S. Fish and Wildlife Service and the Ohio Division of Wildlife in monitoring the status of the species on the

Wayne National Forest up through the five years following delisting, according to requirements outlined in the Endangered Species Act.

Timber	<p>Provide commercial timber sales of sufficient quantity and quality to accomplish desired vegetation treatment goals.</p> <p>Meet as much of the demand for wood products as economically feasible within the multiple-use objectives.</p> <p>Provide fuel wood opportunities consistent with encouraging private sector supplies through use fees and provision of a stable supply of small diameter material.</p> <p>Provide high quality hardwoods.</p> <p>Maintain a healthy forest by applying appropriate silvicultural treatments consistent with management prescription objectives.</p> <p>Implement appropriate silvicultural practices supported by site-specific inventory data and management area goals.</p>
Soils and Water	<p>Protect soil and water productivity so that neither will be significantly or permanently impaired for all activities on National Forest land.</p> <p>Streams, lakes, wetlands, floodplains and other bodies of water will be protected from significant impairment resulting from water and/or air pollution.</p> <p>Maintain riparian areas adjacent to lakes, perennial and non-perennial streams and wetland and floodplains to protect or enhance riparian dependent resources, such as water and fish.</p> <p>Conduct soil and water resource improvement activities on lands with declining watershed conditions.</p>
Minerals	<p>Provide for exploration access to assure that most important federal and private mineral deposits can be discovered and evaluated.</p> <p>Administer private mineral rights so that all their activities/operations are prudently consistent with best private management practices.</p>
Lands	<p>Purchase, exchange and consolidate lands when in the public interest.</p> <p>Acquire necessary rights-of-way to facilitate public access to National Forest System lands and to meet resource management objectives.</p> <p>Locate, identify, and mark National Forest property lines to standard.</p>
Protection	<p>Promote an integrated pest management program to prevent and control insect and disease infestations.</p>

Federally
Endangered and
Threatened
Species
(this part replaced
completely with
Forest Plan
Amendment #13,
approved 5/22/03)

Consultation with the U. S. Fish and Wildlife Service indicates nine federally listed species are present in or near the Wayne National Forest. These species include:

Indiana bat	<i>Myotis sodalis</i>
Bald eagle	<i>Haliaeetus</i>
<i>leucocephalus</i>	
American burying beetle	<i>Nicrophorus</i>
<i>americanus</i>	
Fanshell	<i>Cyprogenia stegaria</i>
Pink mucket pearly mussel	<i>Lampsilis abrupta</i>
Northern wild monkshood	<i>Aconitum</i>
<i>noveboracense</i>	
Running buffalo clover	<i>Trifolium stoloniferum</i>
Small whorled pogonia	<i>Isotria medeoloides</i>
Virginia spiraea	<i>Spiraea virginiana</i>

Descriptions of the life histories, occurrences, habitats, and other related information about these species can be found in the Biological Assessment, prepared for the Forest Plan. As a result of formal consultation, the U. S. Fish and Wildlife Service provided specific Terms and Conditions through its Biological Opinion for the Indiana bat and bald eagle. The Terms and Conditions minimize the take of federally listed species and are included below as Forest-wide Standards and Guidelines.

Indiana Bat Standards and Guidelines

Terms and Conditions related to the Indiana bat

1. When conducting hardwood timber harvests and completing timber stand improvement (TSI) within hardwood stands, maintain at least 60 percent canopy cover whenever possible.
2. Shagbark hickory or shellbark hickory trees shall not be cut during TSI activities, unless the density of trees of these 2 species, combined, exceeds 16 trees/acre. If present, at least 16 live shagbark and shellbark hickory (combined) greater than 11 inches dbh must be maintained per acre.
3. Snags that are potential Indiana bat habitat shall not be removed for TSI purposes. Firewood cutting permits should clearly state that standing dead trees may not be taken.
4. To maintain a component of large, over-mature trees, at least 3 live trees per acre > 20 inches dbh should be maintained in the stand. The three trees should be any of the preferred species listed below or a combination of the species listed below. (A tree with < 10% live canopy should be considered a snag and would not count towards the three trees to be left). These must be among the largest trees of these species remaining in the stand. An additional 6 live trees per acre > 11 inches dbh (of the species listed below) must also be maintained. (The

“per acre” requirement can be expressed as the average per acre on a stand-wide basis, depending on the definition of a stand). If there are no trees greater than 20 inches dbh to leave standing, 16 live trees per acre must be left, and these must include the largest specimens of the preferred species remaining in the stand.

Shagbark hickory
Shellbark hickory
Bitternut Hickory
Silver maple
Green ash
White ash
Eastern cottonwood
Northern red oak
Post oak
White oak
Slippery elm
American elm
Black locust
Pignut hickory*
Red maple*
Sugar maple*
Black oak*

This list of trees is based on review of literature and data on Indiana bat roosting requirements. Other species may be added as identified.

(*) Species added to the list after completion of the Biological Opinion.

5. During non-hibernation season, Wayne National Forest will retain all shagbark and shellbark hickory trees over 6 inches dbh and all live trees, of any species, over 6 inches dbh that are hollow, have major splits, or have broken tops, unless they are a safety hazard. Additionally, the Wayne National Forest will retain a minimum of 12 live trees per acre over 6 inches dbh, of any species, with large areas of loose bark, unless they are a safety hazard. Harvesting of shagbark and shellbark hickory is allowed on the forest during the Indiana bat hibernating season (after September 15 and before April 15) except as might be restricted by the preceding terms and conditions #2 and #4.

6. Consult and coordinate with the U.S. Fish and Wildlife Service as described in Appendix J.

7. The U. S. Fish and Wildlife Service shall be contacted (as described in Appendix J) if any dead bats are found in the Forest, or if an Indiana bat is identified.

8. If additional Indiana bat hibernacula are discovered on the Wayne National Forest, bat-friendly gates shall be installed, as funding allows, to prevent unauthorized entry. Human access to areas surrounding the known hibernacula will be deterred by closing or relocating trails that lead to or pass within easy viewing distance of hibernacula. A one-quarter mile of undisturbed forested buffer should be retained surrounding all known hibernacula where the Forest Service has jurisdiction. Undisturbed forested buffer is defined as an area where trail and road construction and tree harvesting activities are prohibited. Prescribed fires should not occur within one-quarter mile of all known hibernacula on the Wayne National Forest, where the Forest Service has jurisdiction, during the fall swarming and hibernation period of the Indiana bat. When developing prescribed burn plans, Wayne National Forest personnel should ensure that smoke management in the vicinity of known hibernacula will prevent smoke from entering into the known hibernacula.

9. Before backfilling any mine openings, such as a portal entrance or subsidence depression with a developed opening, a survey for potential bat presence will be required during the fall swarming period. This period usually falls between mid-August to mid-October. The survey is optional if the closure will be accomplished by installing a bat-friendly gate.

Terms and Conditions related to the Bald Eagle

1. Conduct a minimum of three annual winter (early, middle, and late) searches, as funds are available, (aerial and/or ground) to locate any previously unknown communal night roosts or eagle concentrations following criteria outlined in the Northern States Bald Eagle Recovery Plan (USDI FWS 1983). Searches will focus on areas eagles are known to frequent, where congregations of eagles have been previously documented, or where there are concentrated food sources (such as poultry farms, hog lots, aquiculture facilities, etc.) near lands or waters managed by the WNF.

2. Any bald eagle communal night roosts and concentrations (including nests) discovered during winter surveys or during any additional field surveys of proposed project areas, shall be protected following guidelines outlined in the Northern States Bald Eagle Recovery Plan (USDI FWS 1983).

3. Any bald eagle nests discovered on Wayne National Forest lands shall be immediately reported to Reynoldsburg Ohio Field Office and the Ohio Department of Natural Resources, Division of Wildlife (ODNR-DOW).

4. Consult and coordinate with the U. S. Fish and Wildlife Service, and complete administrative reporting requirements as detailed in Appendix J.

5. Protect super-canopy (Tyrell *et al.* 1998) or other identified congregation roost trees along major river corridors, lakes, and lands managed by the WNF, in addition to adhering to standards and guidelines outlined in the Forest Plan for riparian corridors.

In order to minimize potential impacts of smoke inversion to occupied communal night roosts, daytime concentration sites, or occupied breeding territories, it is necessary to:

6. Consider all bald eagle communal night roosts, daytime concentration sites, or breeding sites (if and when discovered on the WNF) as occupied bald eagle sites. Prescribed fires should not be conducted within ½ mile of occupied bald eagle sites. In order to prevent smoke inversion from occurring at all occupied bald eagle sites, WNF should conduct any planned prescribed fire (in areas outside the ½ mile radius of occupied sites) only when the following have been considered: wind direction, speed, mixing height and transport winds needed in burn planning and implementation, to minimize smoke from drifting toward any occupied sites.

7. By June 1 of each year, provide an annual report to Reynoldsburg Ohio Field Office, that includes any documented case of a prescribed fire that behaved contrary to predicted movement patterns and which resulted in a confirmed adverse impact to bald eagles.

8. For any prescribed fire that could potentially impact Bald eagles, provide Reynoldsburg Ohio Field Office with the opportunity to review burn plans with Wayne National Forest Fire Management Officer prior to the burn plan being approved.

9. Should the bald eagle be found on the Wayne National Forest, populations should be monitored and managed as directed by this biological opinion and the species delisting monitoring plan for a period of five years after delisting (USFWS, 2001)

Further information about conservation of federally listed species on or near the Wayne National Forest can be found in Appendix J.

Sensitive
Species 1/ and
Forest Species of
Concern

Seven Wayne National Forest candidates for the Eastern Region's list of sensitive species (candidate sensitive species are listed on page 4-48. Three of the plant species, Small- flowered Alumroot, Synandra, and Great Indian-plantain, are known to occur on the Forest in suitable habitats. The other plant species are Bradley's Spleenwort and Tennessee Pondweed. All five plant species are ranked as globally rare by the Nature Conservancy, and their distribution throughout the Eastern Region is believed to be limited. Candidate animal species are the Eastern Spadefooted Toad and the Loggerhead Shrike.

Other species for which population viability in the Forest is a concern and which are termed, "Forest species of concern", are listed in Appendix H.

Any candidate sensitive species which after Regional evaluation are not included in the Eastern Region's list of sensitive species will be added to the Forest list of species of concern.

1/ Sensitive Species. Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by:

- a. Significant current or predicted downward trends in population numbers or density.
- b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Appendix J

CONSERVATION PLAN FOR FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

The purpose of this Conservation Plan is to identify and document actions the Forest Service will take to conserve threatened and endangered species on the Wayne National Forest under Section 7(a)(1) and 7(a)(2) of the Endangered Species Act (ESA) of 1973 as amended. Through the Biological Assessment and Biological Opinion processes these actions have been determined to maintain quality habitat over the long term for these species across the entire Wayne NF (USFS 2001, USFWS 2001b).

Section 7(a)(1) of the Endangered Species Act states that Federal Agencies should take a proactive approach to conserving endangered species.

“All other Federal agencies shall, in consultation with and with the Secretary, utilize their authorities in furtherance of the purposes of this Act, by carrying out programs for the conservation of endangered species and threatened species pursuant to Section 4 of this Act.”

Section 7(a)(2) of the Endangered Species Act states that Federal agencies shall consult with the U. S. Fish and Wildlife Service.

“Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such an agency is granted an exemption for such action by the committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.”

All actions in the Conservation Plan are dependent on available funding through annual budgets; however, non-compliance with a mandatory term or condition would trigger the need for further consultation with the U. S. Fish and Wildlife Service. In the event that a species is recovered and de-listed, some conservation actions may change.

The Conservation Plan is subject to change as new information is obtained, and as Forest Plan monitoring occurs. Such changes will be made following consultation with, and assistance of, the U. S. Fish and Wildlife Service.

Federally Listed Species

According to the U.S. Fish and Wildlife Service, nine federally listed species have been identified as occurring on or near the Wayne National Forest (USFWS 2001a, 2002) (Table 1).

Table 1.

Species	Common Name	Status
<i>Aconitum noveboracense</i>	Northern wild monkshood	Threatened
<i>Trifolium stoloniferum</i>	Running buffalo clover	Endangered
<i>Isotria medeoloides</i>	Small whorled pogonia	Threatened
<i>Spiraea virginiana</i>	Virginia spiraea	Threatened
<i>Cyprogenia stegaria</i>	Fanshell	Endangered
<i>Lampsilis abrupta</i>	Pink mucket pearly mussel	Endangered
<i>Nicrophorus americanus</i>	American burying beetle	Endangered
<i>Myotis sodalis</i>	Indiana bat	Endangered
<i>Haliaeetus leucocephalus</i>	Bald eagle	Threatened

To meet the consultation requirements under Section 7(a)(2) of the Endangered Species Act, the Forest Service completed a Biological Assessment (USFS 2001) for the Wayne National Forest Land and Resource Management in March 2001. The Biological Assessment provides an in depth review of the life history, current status, species range, potential habitat on the Wayne National Forest, and threats and limiting factors for the nine species. This information can be found on the following pages in the Biological Assessment: Northern monkshood (BA pages 5-1 to 5-5); Running buffalo clover (BA pages 5-17 to 5-20); Small whorled pogonia (BA pages 5-33 to 5-37); Virginia spiraea (BA pages 5-47 to 5-50); Fanshell (BA pages 6-1 to 6-4); Pink mucket pearly mussel (BA pages 6-13 to 6-15); American burying beetle (BA pages 7-1 to 7-4); Indiana bat (BA pages 7-11 to 7-17); and Bald eagle (BA pages 7-31 to 7-35).

Relationship to Other Documents

Upon completion of the Biological Assessment for the Wayne National Forest Land and Resource Management, the U. S. Fish and Wildlife Service responded with a Biological Opinion (BO) on the Wayne National Forest Land and Resource Management Plan (USFWS 2001b) on September 20, 2001. The BO addressed three of the nine species: American burying beetle, Indiana bat, and bald eagle. The U. S. Fish and Wildlife Service determined that activities outlined in the Forest Plan were likely to adversely affect these three species. The remaining six species continue to be addressed through informal consultation with the U. S. Fish and Wildlife Service since activities outlined in the Forest Plan are not likely to adversely affect them.

This BO provided non-discretionary terms and conditions that would minimize the potential for incidental take for the Indiana bat and bald eagle. In addition, it provided conservation

recommendations that could be implemented by the Wayne National Forest to meet responsibilities under Section 7(a)(1) for the Indiana bat, bald eagle and American burying beetle. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information (BO page 44).

Additional guidance to conserve and recover each threatened or endangered species throughout its range is provided in a species-specific recovery plan. Each recovery plan has been developed by a team of scientists who are considered experts on the species being addressed. A National Forest such as the Wayne National Forest may encompass only a small part of the range of a species and all recovery objectives may not be applicable. A copy of each recovery plan can be located in the Athens Unit office, the Ironton Ranger District office, and the Supervisor's Office.

Northern Monkshood Recovery Plan (USFWS 1983a)
Northern States Bald Eagle Recovery Plan (USFWS 1983b)
Pink Mucket Pearly Mussel Recovery Plan (USFWS 1985)
Running Buffalo Clover Recovery Plan (USFWS 1989)
Fanshell Recovery Plan (USFWS 1991a)
American Burying Beetle Recovery Plan (USFWS 1991b)
Small Whorled Pogonia Recovery Plan (USFWS 1992a)
Virginia Spiraea Recovery Plan (USFWS 1992b)
Indiana Bat Revised Recovery Plan (USFWS March 1999)

Development of the Conservation Plan

This Conservation Plan includes a summary of the conservation program activities that have occurred recently or are ongoing, and the actions that will be implemented with respect to Federally endangered and threatened species in response to ESA Section 7(a)(1) and (2) requirements. While there are distinct differences in the requirements of each of these sections, in practice there is a great deal of overlap between the actions being proposed to comply with both of these sections. For purposes of developing a comprehensive plan that provides for continuity in implementation and ease of reference, the actions will be presented as one plan.

Some of the items included in this Conservation Plan are non-discretionary activities that were issued in the BO (Section 7(a)(2) requirements). These include Reasonable and Prudent Measures, which are considered Forest Management Goals, and Terms and Conditions, which are considered Forest-wide Standards and Guidelines.

As part of the BO, the U. S. Fish and Wildlife Service suggested management activities that meet ESA's Section 7(a)(1) requirements. These activities are known as Conservation Recommendations are considered discretionary activities. In other words, these are activities that Forest managers can implement to further minimize or avoid adverse effects of a proposed action on Federally listed species, to help implement recovery plans, or to develop information. These are not considered mandatory by the U. S. Fish and Wildlife Service, but are activities that may be conducted at the discretion of the Forest Service as time and funding allow.

The Forest Service is required to notify the U. S. Fish and Wildlife Service when any Conservation Recommendations are implemented that minimize or avoid adverse effects or provide a benefit to Federally listed species.

Format of the Conservation Plan

This Conservation Plan is arranged into three sections: (1) Section I highlights some of the more recent activities the Forest Service has implemented to protect and conserve Federally listed species; (2) Section II displays direction and guidance that is applicable to all nine Federally listed species; and (3) Section III outlines the direction and guidance specific for the Indiana bat, bald eagle and American burying beetle.

Within each section, activities which are administrative in nature (Administrative Requirements) and easily implemented through existing authorities and program of work decisions are identified. Non-discretionary Reasonable and Prudent Measures and Terms and Conditions included in the “Forest Plan Amendment for Threatened and Endangered Species” are shown as Forest Management Goals and Forest-wide Standards and Guidelines. Forest Management Goals, Forest-wide Standards and Guidelines, and Conservation Recommendations are displayed by type of activity (Habitat Protection and Improvement; Protection of Individuals; Inventory, Analysis and Monitoring; and Education and Awareness).

Items that are non-discretionary (as determined by the U. S. Fish and Wildlife Service in the BO) are identified in italics.

Implementation of the Conservation Plan

Responsibilities for implementation of this Conservation Plan rest primarily with personnel of the Wayne National Forest. Some work, however, will be done cooperatively with the Ohio Division of Wildlife or U. S. Fish and Wildlife Service staff or other partners.

I. Conservation Program Efforts on the Wayne National Forest

The Forest Service has a proactive conservation program that concurrently addresses protection and recovery of the nine Federally listed species on the Wayne National Forest. This work generally falls within one of four categories: (1) Habitat Protection and Improvement; (2) Protection of Individuals; (3) Inventory, Analysis, and Monitoring; and (4) Education and Awareness. The following highlights a few examples of the recent projects that have occurred or are ongoing for these federally listed species.

A. Habitat Protection and Improvement

- The Forest Service has planted native tree seedlings in riparian areas along the Little Muskingum River, Symmes Creek, and Pine Creek as a way to restore forest cover along streams. By doing this, the Forest Service is promoting bank stability, shade, organic matter production, and sedimentation reduction along streams where host fish for the pink mucket pearly mussel and fanshell occur. Reforestation of riparian areas also plays a role in improving downstream water quality and provides a source for future bald eagle roosting trees.

B. Protection of Individuals

- The first Indiana bat was captured on the Wayne National Forest in 1997. In February of 1999, Indiana bat presence was confirmed on the Wayne National Forest when a limestone mine was entered and approximately 150 Indiana bats were found. This mine has since been designated as a Priority 3 area. A bat gate has since been installed on this known Indiana bat hibernaculum to protect individuals from human disturbance. Bat gates have been installed on two additional mine openings, and plans are in the works for the installation of additional bat gates in partnership with the U. S. Fish and Wildlife Service and Ohio Division of Minerals Management.

C. Inventory, Analysis, and Monitoring

- Approximately 260 acres of National Forest System lands on the Ironton Ranger District (Scioto County) were surveyed for the small whorled pogonia in June/July of 1997. No individuals were found on National Forest System lands.
- In 1991, the southeastern portion of Ohio, including portions of all three units of the Wayne National Forest was surveyed for Virginia spiraea. No individuals were found on National Forest System lands.
- A survey for running buffalo clover was completed on approximately 320 acres of National Forest System lands, on the Ironton Ranger District, during May of 1996. Survey efforts were focused primarily along streams, trails, and old roads. No individuals were found.
- Surveys for northern monkshood, running buffalo clover, small whorled pogonia, and Virginia spiraea occur on a project-by-project basis where suitable habitat exists, but no individuals have been found to date on the Wayne National Forest.
- The fanshell and pink mucket pearly mussel occur in the Ohio River and in the adjacent Muskingum River. Suitable habitat is not present within the Wayne National Forest. However, a comprehensive aquatic inventory was completed for the Little Muskingum River watershed and Ohio River tributaries in 1999 and 2000 in partnership with the Ohio Division of Natural Areas and Preserves and Otterbein College. While the fanshell and pink mucket pearly mussel were not found during the inventory, some of their host fish were documented using streams within the Wayne National Forest.
- The Forest Service conducted mid-winter bald eagle surveys during Winter 2001-2002 on the Wayne National Forest. Sightings have occurred at sites outside, but nearby, the Wayne National Forest.
- The Forest Service entered into a partnership with the U. S. Fish and Wildlife Service to study Indiana bat roost tree characteristics. Indiana bats were tracked for a period of time

using radio telemetry. The study is complete and information about roost trees has been incorporated into a proposed Indiana bat standard and guideline for the Forest Plan Amendment.

- Forest Service personnel have conducted mist net surveys of mine openings during the fall swarming season since 1997. Indiana bats were captured during the 1998, 1999 and 2002 fall swarming season at an abandoned mine portals.
- The Forest Service has initiated an analysis that will identify potential American burying beetle reintroduction sites on the Wayne National Forest. This follows a Forest Service analysis of suitable habitat for this species based on soil characteristics. Potential partners in this reintroduction effort include the U. S. Fish and Wildlife Service, the Ohio Division of Wildlife, and The Ohio State University.

D. Education and Awareness

- Educational signs were developed and have been placed on newly planted riparian areas to raise public awareness of the importance of forested riparian areas for fish and wildlife resources.
- The Forest Service has constructed bat boxes for display at area festivals, and provides free copies of bat box construction instructions to festival visitors. While this does not target the Indiana bat specifically, it is an attempt to raise public awareness of the value of bats in general.

II. Conservation Direction and Guidance for All Species

The following section includes direction that applies to all nine federally listed species.

Italicized actions are those that are non-discretionary.

A. Administrative Requirements

To ensure that the exemption of incidental take is appropriately documented, the U. S. Fish and Wildlife Service will implement a tiered programmatic consultation approach. As individual projects are proposed under the Forest Plan, the Forest Service shall provide project-specific information to the U. S. Fish and Wildlife Service Reynoldsburg Field Office that (1) describes the proposed action and the specific area to be affected, (2) identifies the species that may be affected, (3) describes the manner in which the proposed action may affect listed species, and the anticipated effects, (4) specifies that the “anticipated effects from the proposed project are similar to those anticipated in the programmatic biological opinion,” (5) a cumulative total of take that has occurred thus far under the tier I biological opinion, and (6) describes any additional effects, if any, not considered in the tier I consultation.

The U. S. Fish and Wildlife Service will review the information for each proposed project and this project-specific review is appropriately documented. During this review if it is

determined that an individual proposed project is not likely to adversely affect listed species, the U. S. Fish and Wildlife Service will complete its documentation with a standard concurrence letter that refers to the biological opinion, the tier I programmatic document (i.e., it “tiers” to it), and specifies that the U. S. Fish and Wildlife Service concurs that the proposed project is not likely to adversely affect listed species or designated critical habitat. If it is determined that the proposed project is likely to adversely affect listed species or designated critical habitat, then the U. S. Fish and Wildlife Service will complete a tier II biological opinion with a project-specific incidental take.

B. Forest Management Goals

The Wayne National Forest Plan directs the Forest Service to “manage endangered and threatened plant and animal species to population sizes and distribution where they are no longer threatened, in cooperation with other State and Federal Agencies”.

C. Forest-wide Standards and Guidelines

Resource specialist coordination is required for all proposed oil and gas activities in known locations of federally endangered, threatened, proposed or regional sensitive species or their habitats. Biologist/ecologist/botanist Stipulations, which protect these resource values, will be applied. No activities will be allowed if such activities are shown to be detrimental to any federally threatened, endangered, proposed, or regional sensitive plant or animal species.

III. Species-Specific Conservation Direction and Guidance

The U. S. Fish and Wildlife Service provided non-discretionary Reasonable and Prudent Measures and Terms and Conditions in the BO to minimize incidental take for the Indiana bat and to minimize adverse impacts to the bald eagle. In addition, they provided discretionary Conservation Recommendations for the Indiana bat, bald eagle, and American burying beetle. These non-discretionary and discretionary actions are listed for the appropriate species as either (1) Administrative Requirements; (2) Forest Management Goals; (3) Forest-wide standards and Guidelines; or (4) Conservation Recommendations.

Italicized actions are those that are non-discretionary.

A. Indiana Bat (*Myotis sodalis*)

Background Information

Several inventories have been conducted on-Forest to assess the presence of Indiana bats. Indiana bats have been captured during some of these surveys, both on the Ironton Ranger District and the Athens Unit. On the Wayne NF, one abandoned mine, specifically a limestone mine, provides a winter hibernaculum for Indiana bats. Numerous mines are located throughout the Forest on each of the ranger districts, however the majority of limestone mines are found in the Ironton Ranger District. Maternity colonies have not been found on the Wayne NF. However, lactating and post-

lactating females have been found during summer surveys, which indicate the presence of at least one maternity colony. (Please reference the Biological Assessment if additional background information is required)

Administrative Requirements

Because habitat manipulation acreage is being used to monitor levels of incidental take for the Indiana bat, for each proposed individual project, within the tree removal activities listed below, provide the U. S. Fish and Wildlife Service Reynoldsburg Field Office with a description of the project that includes the location, type of activity, and total acreage to be disturbed by individual project. When reporting the type of activity it must correspond to one of the following management activities:

Activity	<i>Anticipated level of take of Indiana bat habitat that may occur between 2001-2006 with continued implementation of the Forest Plan</i>
<i>Hardwood thinning and uneven-aged cuts</i>	2250 acres
<i>Pine thinning and uneven-aged cuts</i>	250 acres
<i>Timber stand improvements (TSI)</i>	2500 acres
<i>Prescribed fire</i>	2500 acres
<i>Permanent road construction</i>	32 acres
<i>Temporary road construction</i>	37 acres
<i>Oil and gas wells road construction</i>	25 acres
<i>Trail construction (hiking, horse, ORV)</i>	160 acres
<i>Creation of wildlife openings</i>	352 acres
<i>Mineral development</i>	2125 acres
<i>Special use permits (roads and utility corridors)</i>	125 acres
<i>Hazard tree removal</i>	125 trees
<i>Closing of underground entrances</i>	25 acres

Each project proposal must report how the individual project increases the cumulative forested acres (or number of trees) affected within each of the above management activities and report on the total acreage (or number of trees) remaining in each management activity. The letter requesting the project specific review must include your determinations that the proposed project is consistent with this programmatic biological opinion and incidental take statement and request that the proposed project be tiered to this programmatic biological opinion.

Any individual project that results in the level of incidental take, identified above, to be exceeded would necessitate the reinitiation of formal consultation (BO page 47).

Any dead bats located on the Wayne National Forest, where the species determination is unclear, should be immediately reported to the U. S. Fish and Wildlife Service Reynoldsburg Field Office, and subsequently transported on ice to that office. No attempt should be made to handle any live bat, regardless of its condition; report bats that appear to be sick or injured to U. S. Fish and Wildlife Service Reynoldsburg Field Office. The U. S. Fish and Wildlife Service will make the final species determination on any dead or moribund bats found on the Wayne National Forest. If an Indiana bat is identified, U. S. Fish and Wildlife Service Reynoldsburg Field Office will contact the appropriate U. S. Fish and Wildlife Service Law Enforcement office. (The handling part of this term and condition does not apply to those specific individuals who are permitted, as agents of the State, for conducting work on Federally listed bat species.)

In order for the U. S. Fish and Wildlife Service to be kept informed of actions for minimizing or avoiding adverse effects or benefiting federally listed species or their habitats, the Forest Service will notify the U. S. Fish and Wildlife Service of the implementation of any conservation recommendations.

If, after adhering to the standards and guidelines, it is determined that activities on a project level are likely to adversely affect the Indiana bat, the U. S. Fish and Wildlife Service requests that formal consultation be initiated (BO page 47).

1. Habitat Protection and Improvement

Forest Management Goals

Maintain adequate canopy cover in hardwood stands (depending on the size of the stands) to provide Indiana bat foraging habitat.

Provide roosting habitat by preserving shagbark hickory or shellbark hickory trees.

No snag removal (snags with a dbh > 6 inches), except where they pose an imminent threat to human safety.

Maintain a component of large, over-mature trees, in hardwood stands, when possible.

These trees will ensure a continuous supply of large roost trees for the bat.

Tree removal activity will be closely monitored and reported on a project-by-project basis to ensure that impacts of incidental take associated with future proposed projects are appropriately minimized.

Forest-wide Standards and Guidelines

When conducting hardwood timber harvests and completing TSI within hardwood stands, maintain at least 60% canopy cover whenever possible.

Shagbark and shellbark hickory trees shall not be cut during TSI activities, unless the density of the trees of these two species, combined, exceeds 16 trees/acre. If present, at least 16 live shagbark and shellbark hickory (combined) greater than 11 inches dbh must be maintained per acre.

Snags that are potential Indiana bat habitat shall not be removed for TSI purposes. Firewood cutting permits should clearly state that standing dead trees may not be taken.

To maintain a component of large, over-mature trees, at least 3 live trees per acre > 20 inches dbh should be maintained in the stand. The three trees should be any of the preferred species listed below or a combination of the species listed below. (A tree with < 10% live canopy should be considered a snag and would not count towards the three trees to be left). These must be among the largest trees of these species remaining in the stand. An additional 6 live trees per acre > 11 inches dbh (of the species listed below) must also be maintained. (The "per acre" requirement can be expressed as the average per acre on a stand-wide basis, depending on the definition of a stand). If there are no trees greater than 20 inches dbh to leave standing, 16 live trees per acre must be left, and these must include the largest specimens of the preferred species remaining in the stand.

*Shagbark hickory
Shellbark hickory
Bitternut Hickory
Silver maple
Green ash
White ash
Eastern cottonwood
Northern red oak
Post oak
White oak
Slippery elm
American elm
Black locust
Pignut hickory
Red maple
Sugar maple
Black oak*

This list of trees is based on review of literature and data on Indiana bat roosting requirements. Other species may be added as identified.

During non-hibernation season, all shagbark and shellbark hickory trees over 6 inches dbh and all live trees, of any species, over 6 inches dbh that are hollow, have major splits, or have broken tops, unless they are a safety hazard. Additionally, a minimum of 12 live trees per acre over 6 inches dbh, of any species, with large areas of loose bark, unless they are a safety hazard. Harvesting of shagbark and shellbark hickory is allowed on the Forest during the Indiana bat hibernating season (after September 15 and before April 15) except as might be restricted by Standards & Guides listed above.

Conservation Recommendations

Create upland waterholes for Indiana bats, as funding allows.

2. Protection of Individuals

Forest Management Goals

Protect all known Indiana bat hibernacula on the Wayne National Forest.

Forest-wide Standards and Guidelines

If additional Indiana bat hibernacula are discovered on the Wayne National Forest, bat-friendly gates shall be installed, as funding allows, to prevent unauthorized entry.

Human access to areas surrounding known hibernacula will be deterred by closing or relocating trails that lead to or pass within easy viewing distance of known hibernacula.

A one-quarter mile of undisturbed forested buffer should be retained surrounding all known hibernacula where the Forest Service has jurisdiction. Undisturbed forested buffer is defined as an area where trail and road construction and tree harvesting activities are prohibited.

Prescribed fires should not occur within one-quarter mile of all known hibernacula on the Wayne National Forest, where the Forest Service has jurisdiction, during the fall swarming and hibernation period of the Indiana bat. When developing prescribed burn plans, ensure that smoke management in the vicinity of known hibernacula will prevent smoke from entering into the known hibernacula.

Before backfilling any mine openings, such as a portal entrance or subsidence depression with a developed opening, a survey for potential bat presence will be required during the fall swarming period. This period usually falls between mid-August to mid-October. The survey is optional if the closure will be accomplished by installing a bat-friendly gate.

Conservation Recommendations

A quarter mile of undisturbed forested buffer should be retained surrounding all openings that are known Indiana bat fall swarming sites, where the Forest Service has jurisdiction. Undisturbed forested buffers should be maintained by reducing or eliminating human disturbances whenever possible.

3. Inventory, Analysis and Monitoring

Conservation Recommendations

Conduct a mist netting and radio telemetry study of Indiana bats on the Marietta Unit of the Wayne National Forest, as funds are available.

In consultation with the U. S. Fish and Wildlife Service, continue to identify and support Indiana bat studies to gain a better understanding of the bat on the Wayne National Forest and throughout the range.

4. Education and Awareness

Conservation Recommendations

In consultation with the U. S. Fish and Wildlife Service and the Ohio Division of Wildlife, conduct training for employees of the Wayne National Forest on bats (including Indiana bat) occurring on the Wayne National Forest. Training should include sections on bat identification, biology, habitat requirements, and sampling techniques (including instructions on applicability and effectiveness of using mist net surveys vs. Anabat detectors to accurately determine the presence of various bat species). The proper training of Wayne National Forest biologists on bat identification and a reliable methods for counting roosting bats will enable the Wayne National Forest to continue to monitor the status of this species independently of other agencies and research institutions.

B. Bald Eagle (*Haliaeetus leucocephalus*)

Background Information

Bald eagles have been occasionally sighted on or near the Wayne NF, mostly in the winter along the Ohio River in the Marietta unit, and Burr Oak Reservoir. During summer months, bald eagles are sighted along the Ohio River near the Ironton and Marietta units. No nests have been found in the area. Thus, at this time, bald eagles on the Wayne NF are probably migrating through or wintering here. The bald eagle is expanding its nesting range, however, and has made one known, unsuccessful nesting

attempt within a few miles of the Wayne NF. (Please reference the Biological Assessment if additional background information is required)

Administrative Requirements

By June 1 of each year, provide an annual report to the U. S. Fish and Wildlife Service Reynoldsburg Field Office and the Ohio Division of Wildlife, that includes the following information: (1) results of any winter searches for communal bald eagle night roosts and concentrations, including mid-winter bald eagle surveys conducted in cooperation with the U. S. Fish and Wildlife Service and the Ohio Division of Wildlife, and (2) discovery of any bald eagle nesting territories on the Wayne National Forest. If no surveys have been conducted and no nesting territories discovered on the Wayne National Forest during an annual reporting period, an annual report should be submitted with a statement to this effect.

By June 1 of each year, provide an annual report to U. S. Fish and Wildlife Service Reynoldsburg Field Office, that includes any documented case of a prescribed fire that behaved contrary to predicted movement patterns and which resulted in a confirmed adverse impact to bald eagles.

For any prescribed fire that could potentially impact Bald eagles, provide the U. S. Fish and Wildlife Service Reynoldsburg Field Office with the opportunity to review burn plans with the Wayne National Forest Fire Management Officer prior to the burn plan being approved.

In order for the U. S. Fish and Wildlife Service to be kept informed of actions for minimizing or avoiding adverse effects or benefiting federally listed species or their habitats, the Forest Service will notify the U. S. Fish and Wildlife Service of the implementation of any conservation recommendations.

If, after adhering to the standards and guidelines, it is determined that activities on a project level are likely to adversely affect the bald eagle, the U. S. Fish and Wildlife Service requests that formal consultation be initiated (BO page 47).

1. Habitat Protection and Improvement

Forest Management Goals

Reduce the potential of removing unknown communal night roosts.

Discourage continuous and/or repeated human disturbance where wintering bald eagles (November 15 to March 15) are known to have communal night roosts or form daily congregations (as defined in the Northern States Bald Eagle Recovery Plan) on all lands or waters managed by the Wayne National Forest.

Use appropriate smoke management techniques to minimize potential impacts of smoke inversion to occupied communal night roosts, daytime concentrations, or occupied breeding territories.

In association with the predicted removal of this species from the list of endangered and threatened wildlife, assist the U. S. Fish and Wildlife Service and the Ohio Division of Wildlife in monitoring the status of the species on the Wayne National Forest up through the five years following delisting, according to requirements outlined in the Endangered Species Act.

Forest-wide Standards and Guidelines

Protect super-canopy or other identified congregation roost trees along major river corridors, lakes and lands managed by the Wayne National Forest, in addition to adhering to Forest Plan Standards and Guidelines for riparian areas.

2. Protection of Individuals

Forest-wide Standards and Guidelines

Any bald eagle communal night roosts and concentrations (including nests) discovered during winter surveys or during any additional field surveys of proposed project areas, shall be protected following guidelines outlined in the Northern States Bald Eagle Recovery Plan.

Any bald eagle nests discovered on Wayne National Forest lands shall be immediately reported to the U. S. Fish and Wildlife Service and to the Ohio Department of Natural Resources, Division of Wildlife.

Consider all bald eagle communal night roosts, daytime concentration sites, or breeding sites (if and when discovered on the Wayne National Forest) as occupied bald eagle sites.

Prescribed fires should not be conducted within ½ mile of occupied bald eagle sites.

In order to prevent smoke inversion from occurring at all occupied bald eagle sites, any planned prescribed fire should be conducted (in areas outside the ½ mile radius of occupied sites) only when the following have been considered: wind direction, speed, mixing height and transport winds needed in burn planning and implementation, to minimize smoke from drifting toward and occupied sites.

3. Inventory, Analysis and Monitoring

Forest-wide Standards and Guidelines

Should the bald eagle be found on the Wayne National Forest, populations should be monitored and managed as directed by the biological opinion and the species delisting monitoring plan for a period of five years.

Conduct a minimum of three annual winter (early, middle, and late) searches, as funds are available, (aerial and/or ground) to locate any previously unknown communal night roosts or eagle concentrations on areas of the Wayne National forest where actions are being planned that may affect the species following criteria outlined in the Northern States Bald Eagle Recovery Plan. Searches will focus on areas eagles are known to frequent, where congregations of eagles have been previously documented, or where there are concentrated food sources near lands or waters managed by the Wayne National Forest.

4. Education and Awareness

Conservation Recommendations

Provide field training for new Wayne National Forest employees so they will be able to recognize bald eagle signs at night roosts, even when eagles are absent.

C. American Burying Beetle (*Nicrophorus americanus*)

Background Information

Athens, Hocking, and Vinton counties have current, recent (within 25 years) known or possible occurrences of the American burying beetle. The beetle has been reintroduced to Athens County. The last known naturally occurring collection was a single beetle near Old Man's Cave in Hocking County in 1974. The species was reintroduced in 1998 in an area in Athens County, Ohio within a few miles of the Wayne NF in the Waterloo Wildlife Research Station. This reintroduction was successful in that a follow-up trapping found 2 newly emerged individuals (one male and one female). On June 9, 1999, 20 pairs and 16 single females were released in a recently mowed field near bordering woods at the same location as the 1998 reintroduction and also at one-half mile distances from that location. Within 2 weeks, approximately 66 larvae were found. There was a 2000 release of 36 pairs of beetles. A single large male was captured on October 3, 2000. The populations will be monitored annually for the foreseeable future. There will possibly be other releases to other areas in the future. There are no known populations of American burying beetle within the proclamation boundaries of the Wayne NF. (Please reference the Biological Assessment if additional background information is required)

Administrative Direction and Requirements

In order for the U. S. Fish and Wildlife Service to be kept informed of actions for minimizing or avoiding adverse effects or benefiting federally listed species or their habitats, the Forest Service will notify the U. S. Fish and Wildlife Service of the implementation of any conservation recommendations.

1. Habitat Protection and Improvement

Conservation Recommendations

New road construction, within 10 air miles of known occupied American burying beetle habitat, could be planned in such a way as to involve the least amount of ground disturbance, measured in terms of the area compacted to the point it is no longer American burying beetle habitat, and designed with the minimum safe width necessary for planned use of the road.

The U. S. Fish and Wildlife Service recommends that ground disturbance during the reconstruction and maintenance of existing roads be kept to a minimum within 10 air miles of known occupied American burying beetle habitat. Width of road, ditches, and surface materials could be the minimum necessary to allow safe movement of all permitted vehicular traffic.

To limit American burying beetle habitat loss, the U. S. Fish and Wildlife Service recommends that improved areas, such as campgrounds, recreation area, and trails, should be planned for and constructed outside areas with known American Burying beetle populations.

The U. S. Fish and Wildlife Service recommends that wildlife and forestry management practices for the Wayne National Forest continue to incorporate the principals of forest ecosystem management and that management for the American burying beetle be included among the high priority species and goals of the Wayne National Forest. Forestry management should implement activities, which benefit the American burying beetle, when this is compatible with the overall productivity and vitality of the Wayne National Forest.

2. Protection of Individuals

Conservation Recommendations

Because of the sensitivity of most insects to chemical applications, the U. S. Fish and Wildlife Service recommends that the use of pesticides could be restricted within the known range of the American burying beetle on the Wayne National Forest. Restriction could be in the method of application, the location, and the type of pesticide or herbicide used.

3. Inventory, Analysis and Monitoring

Conservation Recommendations

Develop and carry out a monitoring strategy to evaluate the reintroduction of the American burying beetle, as funding allows. The monitoring strategy should follow approved American burying beetle monitoring guidelines, and focus of the monitoring should be within 10 air miles of the release site where the Forest Service has jurisdiction.

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