

**Conservation Plan**  
**For**  
**Federally Listed Threatened and**  
**Endangered Species**



USDA Forest Service

Wayne National Forest

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**Conservation Plan  
for  
Federally Listed Threatened and Endangered Species**

**Wayne National Forest**

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.**

| <b>Species</b>                  | <b>Common Name</b>        | <b>Status</b> |
|---------------------------------|---------------------------|---------------|
| <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.

1. Northern Monkshood Recovery Plan (USFWS 1983a)
2. Northern States Bald Eagle Recovery Plan (USFWS 1983b)
3. Pink Mucket Pearly Mussel Recovery Plan (USFWS 1985)
4. Running Buffalo Clover Recovery Plan (USFWS 1989)
5. Fanshell Recovery Plan (USFWS 1991a)
6. American Burying Beetle Recovery Plan (USFWS 1991b)
7. Small Whorled Pogonia Recovery Plan (USFWS 1992a)
8. Virginia Spiraea Recovery Plan (USFWS 1992b)
9. 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 and 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 which 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 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. An Indiana bat was captured during the 2002 fall swarming season at an abandoned mine portal.
- 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.

### **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.*

### **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” .

### **Forest-wide Standards and Guidelines**

Biologist/ecologist/botanist 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. 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:*

| <i>Activity</i>  | <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>            | <i>2250 acres</i>   |
| <i>Pine thinning and uneven-aged cuts</i>                | <i>250 acres</i>  |
| <i>Timber stand improvements (TSI)</i>                   | <i>2500 acres</i>   |
| <i>Prescribed fire</i>                                   | <i>2500 acres</i>   |
| <i>Permanent road construction</i>                       | <i>32 acres</i>   |
| <i>Temporary road construction</i>                       | <i>37 acres</i>   |
| <i>Oil and gas wells road construction</i>               | <i>25 acres</i>   |
| <i>Trail construction (hiking, horse, ORV)</i>           | <i>160 acres</i>  |
| <i>Creation of wildlife openings</i>                     | <i>352 acres</i>  |
| <i>Mineral development</i>                               | <i>2125 acres</i>   |
| <i>Special use permits (roads and utility corridors)</i> | <i>125 acres</i>  |
| <i>Hazard tree removal</i>                               | <i>125 trees</i>  |
| <i>Closing of underground entrances</i>                  | <i>25 acres</i>   |

*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).

## **A. 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.

## **B. 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.

## **C. 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.

## **D. 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).

## **A. 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.*

### **B. 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.*

### **C. 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.*

#### **D. 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.

## **A. 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.

## **B. 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.

## **C. 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.

## Literature Cited

(USFS 2001) USDA Forest Service. 2001. Programmatic Biological Assessment for the Wayne National Forest Land and Resource Management Plan.

(USFWS 1983a) U. S. Fish and Wildlife Service, Region 3. September 1983. Recovery Plan for the Northern Monkshood (*Aconitum noveboracense*). 80 pp.

(USFWS 1983b) U. S. Fish and Wildlife Service. July 29, 1983. Northern States Bald Eagle Recovery Plan.

(USFWS 1985). U. S. Fish and Wildlife Service, Atlanta, GA. 1985. Pink Mucket Pearly Mussel Recovery Plan. 47 pp.

(USFWS 1989) U. S. Fish and Wildlife Service, Twin Cities, MN. 1989. Running Buffalo Clover (*Trifolium stoloniferum*) Recovery Plan. 26 pp.

(USFWS 1991a) U. S. Fish and Wildlife Service, Southeast Region. July 9, 1991. Recovery Plan for Fanshell (*Cyprogenia stegaria* (= *C. irrorata*)).

(USFWS 1991b) U. S. Fish and Wildlife Service. September 1991. American Burying Beetle (*Nicrophorus americanus*) Recovery Plan.

(USFWS 1992a) U. S. Fish and Wildlife Service, New England Field Office, Newton Corner, MA. November 1992. Small Whorled Pogonia (*Isotria medeoloides*)

(USFWS 1992b) U. S. Fish and Wildlife Service, New England Field Office, Newton Corner, MA. 1992. Virginia Spiraea (*Spiraea virginiana* Britton) Recovery Plan. 47 pp.

(USFWS 1999) U. S. Fish and Wildlife Service. March 1999. Indiana bat (*Myotis sodalis*) revised Recovery Plan. Agency Draft.

(USFWS 2001a) U. S. Fish and Wildlife Service memo to the Forest Service regarding Federally listed species in vicinity of Wayne National Forest.

(USFWS 2001b) U. S. Fish and Wildlife Service. September 20, 2001. Biological Opinion for the Land and Resource Management Plan, Wayne National Forest, Ohio. 52 pp.

(USFWS 2002). U. S. Fish and Wildlife Service County Distribution List for Federally Listed and Candidate Species, Ohio.