

APPENDIX J: BIOLOGICAL OPINION – INCIDENTAL TAKE STATEMENT

Source: Extracted from U.S. Fish and Wildlife Service's Biological Opinion, June 12, 2013, as modified by letters of March 5, 2014 and April 21, 2014, issued for the 2013 Revised George Washington Land and Resource Management Plan, Virginia and West Virginia, Project #2012-F-1762.

INCIDENTAL TAKE STATEMENT

Sections 9 of the Endangered Species Act (ESA) and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the U.S. Fish and Wildlife Service (FWS) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by the FWS as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be undertaken by the Forest Service (FS) so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The FS has a continuing duty to regulate the activity covered by this incidental take statement. If the FS (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the FS must report the progress of the action and its impact on the species to the FWS as specified in the incidental take statement.

AMOUNT OR EXTENT OF TAKE

The 2013 Revised George Washington Land and Resource Management Plan (GWL RMP) is a comprehensive landscape level document to guide management decisions. All project level activities will undergo National Environmental Policy Act review when the project is proposed, as well as assessment of project effects to federally listed and proposed species and designated and proposed critical habitat in compliance with section 7 of the ESA. For any projects that may affect federally listed or proposed species or designated or proposed critical habitat, the FS will consult with the FWS on a project-by-project basis. The management prescriptions and standards in the 2013 Revised GWL RMP considerably reduce the potential for adverse effects and incidental take to occur. However, the FWS anticipates incidental take of the Indiana bat from implementation of gas leasing, prescribed fire, timber harvest, salvage activities, wildlife habitat management, and special use activities.

The FWS anticipates incidental take of the Indiana bat will be difficult to detect for the following reasons: the bat's small body size, individuals are widely dispersed, individuals are difficult to detect under loose tree bark, bats utilize different parts of the GWNF depending on the season, and the lack of understanding of how Indiana bats utilize the GWNF. Additionally, it would be virtually impossible to know if a maternity colony or roosting Indiana bat(s) is utilizing an area unless all potential roost trees are inspected prior to habitat disturbance, there was evidence such as bats leaving the tree as it is being felled, or a post disturbance inspection of all potential roost trees was conducted. Therefore, the amount of potential roosting, foraging, or maternity sites affected will serve as a surrogate to assess incidental take of the Indiana bat.

The FWS anticipates up to 3,513 acres of potential Indiana bat habitat will be affected as a result of access

roads and well pads for gas leasing (39 acres), timber harvest and salvage activities (3,400 acres), wildlife habitat management (50 acres), and special use activities (24 acres) annually. Up to 20,000 acres of potential Indiana bat habitat will be affected as a result of prescribed fire annually. Access roads and well pads for gas leasing, prescribed fire, timber harvest, salvage activities, wildlife habitat management, and special use activities in total are expected to result in an annual removal or disturbance of up to 23,513 acres of potential Indiana bat habitat, or 2.2% of the GWNF.

The 2013 winter surveys counted 131 Indiana bats in hibernacula on or near the GWNF. If we assume the percent of potential Indiana bat habitat disturbed equates to the percent of individual bats disturbed ($131 \times 2.2\% = 2.88$), then 3 adult Indiana bats would be disturbed. Two additional bats were added to this total since there is potential of disturbing pups in addition to a mother. Therefore, the FWS anticipates incidental take of up to 5 Indiana bats on an annual basis as a result of access roads and well pads for gas leasing, prescribed fire, timber harvest, salvage activities, wildlife habitat management, and special use activities. The incidental take is expected to be in the form of kill, harm, or harass.

The Bureau of Land Management (2012) estimates an average completion time for a vertical well is 14 days and 28 days for a horizontal well. The likelihood of drilling impacting a roost tree depends on the proximity of the activity in relation to the roost tree. If 39 acres of disturbance are associated with exploratory and development access roads and well pads for gas leasing and we assume the percent of potential Indiana bat habitat disturbed equates to the percent of individual bats disturbed, it is likely that less than 1 roosting bat will be impacted. However, if drilling occurred near a roost tree, it would affect the bats for the majority of their summer time use. We assume the incidental take is a function of both time (number of days during which drilling occurs) and the likelihood of impacting a roosting bat. Therefore, 1 adult Indiana bat would be disturbed and there is potential of disturbing a pup in addition to a mother. Therefore, the FWS anticipates incidental take of up to 2 Indiana bats from drilling for gas exploration near an active roost tree when bats are not in hibernation. The incidental take is expected to be in the form of harassment.

EFFECT OF THE TAKE

In the accompanying programmatic biological opinion, the FWS determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The FWS believes the following reasonable and prudent measure is necessary and appropriate to minimize take of the Indiana bat:

- During implementation of the 2013 Revised GWLRMP, the FS in cooperation with the FWS and the Virginia Department of Game and Inland Fisheries shall continue efforts to determine use of the GWNF by Indiana bats during the hibernation, summer roosting, maternity, and pre-hibernation seasons. As efforts to determine Indiana bat use of the GWNF provide a clearer understanding of how Indiana bats use the Forest, management activities described in the 2013 Revised GWLRMP shall be directed to areas and times of minimal bat use.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the ESA, the FS must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline the required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. The FS will continue efforts to determine use of the GWNF by Indiana bats during the hibernation, summer roosting/maternity, and pre-hibernation seasons by implementing the monitoring outlined below. Selection of sites for monitoring and research will be left to the discretion of the FS biologists in consultation with the FWS and/or Virginia Department of Game and Inland Fisheries. The FWS believes that implementation of this term and condition is necessary to evaluate the underlying assumptions made on Indiana bat presence and characterized use on the GWNF. Implementation of this term and condition will, in turn, provide a more site-specific measure of the protective adequacy of the conservation measures for the Indiana bat on the GWNF.

- a. Continue monitoring by working with the FWS, universities, the Virginia Department of Game and Inland Fisheries, the Virginia Department of Conservation and Recreation, and other experts to locate and survey caves and mines that may contain Indiana bats. Surveys of all known Indiana bat hibernacula shall continue every two years following the protocol of the Indiana Bat Recovery Team. After any new gating of a hibernaculum, yearly surveys shall be conducted to determine the effects of the gates. This effort will be conducted for the first three years after gating and then continue with biennial monitoring according to the Indiana bat Recovery Team protocol.
 - b. Continue monitoring efforts to refine the distribution and abundance of the Indiana bat on the GWNF. Survey efforts shall be focused on those areas which, based on habitat characteristics (percent canopy closure, presence of suitable roost trees, proximity to water, etc.) and/or previous survey results, appear to be conducive to maternity colonies. These surveys shall be designed to determine the distribution of the species on the GWNF and its habitat use and movements during the spring through fall periods. Monitoring should occur at least every three years and shall cover an area identified by the collaboration of FS and FWS biologists with the input of Virginia Department of Game and Inland Fisheries biologists and other species experts. Surveys shall be designed by FS bat biologists or qualified bat biologists and should be submitted to the FWS for review and approval prior to implementation. If any Indiana bats are captured during mist-net surveys, the FWS and the Virginia Department of Game and Inland Fisheries must be notified within 24 hours. The habitat at identified maternity sites will be characterized and quantified, and these habitat data will then be used to assist in identifying additional sites. Information gained during these studies can be used to refine FS strategies for the protection and management of the species.
 - c. Habitat at all sites where Indiana bats are documented on the GWNF shall be characterized and quantified at both local and landscape levels.
 - d. The FS shall provide the results of these surveys to the FWS within six months of completion.
2. The amount of incidental take as measured by acreage (both total and by management activity) must be monitored on an annual basis. The FS will report the number of acres disturbed on a fiscal year basis, to include regeneration harvest, salvage, prescribed burns, and other actions such as special use permits and will report the estimated number of trees removed for personal firewood. This information is to be provided to the FWS no later than March 1 following the end of the previous fiscal year. Monitoring the above activities will be implemented as follows:
- The FS will conduct and report normal inspections of projects such as, prescribed burns, and personal firewood programs to ensure that the management prescriptions and forestwide standards outlined in the 2013 Revised GWLRMP have been implemented. Timber sale administrators will conduct normal inspections of all timber sales to administer provisions for protecting residual trees (residual trees are those trees not designated for cutting under provisions of the timber sale contract). Unnecessary damage to residual trees will be documented in sale inspection reports and proper contractual or legal remedies will be taken. The FS will include this information in their annual monitoring reports to the FWS.
3. The FS shall provide all required monitoring reports and any other additional information to the FWS in digital format at the following address:
- Sumalee Hoskin
Virginia Field Office
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
Phone: (804) 693-6694
Fax: (804) 693-9032
sumalee.hoskin@fws.gov
4. Care must be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the

finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the FWS to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, notify the FWS's Virginia Law Enforcement Office at 804-771-2883, 5721 South Laburnum Avenue, Richmond, Virginia 23231, and the FWS's Virginia Field Office at 804-693-6694 at the address above.

The FWS believes that no more than 23,513 acres of potential Indiana bat habitat will be disturbed and no more than seven Indiana bats will be incidentally taken on an annual basis as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, as measured by the total amount of habitat disturbance or the number of injured or dead Indiana bats, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the FWS the need for possible modification of the reasonable and prudent measures.