

**SUMMARY AND CLARIFICATION OF:  
BIOLOGICAL RESOURCES EVALUATION REPORT  
UNION COUNTY TARGET RANGE PROJECT  
BLUE RIDGE RANGER DISTRICT  
CHATTAHOOCHEE-OCONEE NATIONAL FOREST**

**I. INTRODUCTION**

The purpose of this document is to provide a summary and clarification to the US Fish and Wildlife Service (USFWS) of potential effects on species protected under the Endangered Species Act described in the Biological Resource Evaluation Report (BE) for the Union County Target Range Project. A Biological Resource Evaluation Report (BE) to assess impacts to resources from the Union County Target Range Project was prepared and revised August 2019 by Nutter and Associates, Inc. (Nutter 2019). The Proposed Action includes establishing and operating a rifle and pistol target range at a selected site in Union County, Georgia (see Appendix A). The original BE conducted an effects analysis for six (6) federally-listed (threatened, endangered or candidate) species (including the Indiana bat, *Myotis sodalists*). These species were determined after submitting the project area into IPaC and receiving an updated list of species from the USFWS on July 17, 2019 (see Appendix C).

Since the original BE was completed, information has changed about the range of specific federally-listed species. After re-submitting the project area back into IPaC (October 24, 2019), the Indiana bat was considered extirpated from the project area, the list of species determined to need an effect analysis completed for the Union County Target Range Project, is listed below:

- Bog Turtle, *Clemmys muhlenbergii* (Similarity of Appearance (Threatened))
- Green Pitcher-plant, *Sarracenia oreophila* (Endangered)
- Northern long-eared Bat, *Myotis septentrionalis* (Threatened)
- Small Whorled Pogonia, *Isotria medeoloides* (Threatened)
- Swamp Pink, *Helonias bullata* (Threatened)

This report is written to comply with the Endangered Species Act by ensuring the Union County Target Range will not result in adverse impacts to Federally-listed species.

**II. PROJECT AREA DESCRIPTION AND LOCATION**

The proposed Union County Target Range site is located on an approximately 15-acre tract in Union County, Georgia. The site is located in the Level IV Southern Crystalline Ridges and Mountains ecoregion, within the Level III Blue ridge ecoregion of Georgia. This ecoregion is described as having “the highest and wettest mountains in Georgia” (Griffith et al., 2001). These mountains occur primarily on Precambrian-age igneous and high-grade metamorphic rocks. The common crystalline rock types include gneiss, schist, and quartzite, covered by well-drained, acidic, brownish, loamy soils. Some mafic and ultramafic rocks also occur here, producing more basic soils” (Griffith et al., 2001). The site is bordered to the west by Gillam Branch, a first order perennial tributary that drains into Powell Valley Creek, a tributary of

the Nottely River within the Hiwassee River watershed (HUC 0602002). Site elevations range between 2,300 and 2,400 feet with a northwest facing aspect (Appendix A). The proposed site includes approximately 5 acres of maintained wildlife openings surrounded by approximately 10 acres of mature mixed hardwood forest dominated by large oaks and hickories. Evergreen species, including white pines and immature hemlocks, are integrated throughout the overstory and midstory. The 5 acre wildlife opening was historically a homestead site that is maintained by mowing and is densely vegetated with grasses, sedges, and vine species. Based on the layout of the proposed project, the footprint of the range utilizes the wildlife opening as much as possible and therefore the removal and disturbance of mature forest trees are minimized (Appendix A). Interspersed throughout the site are boulders and boulder piles either naturally occurring or from anthropogenic sources. Terrestrial species utilizing the site include birds, mammals, reptiles, amphibians, and terrestrial invertebrates. Threatened, endangered, and candidate (T&E) species that potentially utilize the surrounding area are further described below.

### III. BACKGROUND

To determine which T&E species were known to occur, or may potentially occur, within the project area, we used the USFWS Information for Planning and Conservation (IPaC) <https://ecos.fws.gov/ipac/> to generate a list of T&E species that may occur in the project area (USFWS October 24, 2019), (Table 1). The IPaC system provides a list of those species that may occur in the general area of the project.

Table 1. Updated Threatened and Endangered Species

Group	Scientific Name	Common Name	Federal Status	State Status
Mammals	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Threatened	Threatened
Reptiles	<i>Clemmys muhlenbergii</i>	Bog Turtle	Threatened (Similarity of Appearance)	Threatened (Similarity of Appearance)
Flowering Plants	<i>Isotria medeoloides</i>	Small Whorled Pogonia	Threatened	Threatened
	<i>Sarracenia oreophila</i>	Green Pitcher-plant	Endangered	Endangered
	<i>Helonias bullata</i>	Swamp Pink	Threatened	Threatened

*Based on new information and the revision of the its current range, the Indiana Bat is considered extirpated from the project area, therefore, no evaluation is needed for this species.*

*There is no designated critical habitat within the project area, therefore, critical habitat is not evaluated in this report.*

Unique Habitats used by T&E evaluated in this report include Appalachian Highlands Riverine Vegetation and Bogs, Fens, Seeps, and Seasonal Ponds.

## Appalachian Highlands Riverine Vegetation

This habitat occurs on the western side of the project boundary but would be buffered by 125 foot stream buffer. This rare community is characterized by 1) sites adjacent to or within stream channels that are exposed to periodic flooding and scour, and 2) presence of significant populations or associations of species at risk. This community would be managed and protected under the Rare Community (9F) and Riparian Corridors (11) prescriptions of the Land Resource Management Plan (LRMP) wherever they occur on the Chattahoochee-Oconee National Forest (CONF). Primary management needs are protection from disturbance during development of **road crossings and maintenance of desirable instream flows.**

## Bogs, Fens, Seeps, and Seasonal Ponds

Identified as a high priority habitat by the State Wildlife Action Plan (GaDNR, 2015) as well as the LRMP, this community would be managed and protected under the Rare Community (9F) and Riparian Corridors (11) prescriptions of the LRMP wherever they occur on the Forest, however, this habitat doesn't occur within the project area. Bogs, Fens, Seeps and Seasonal Ponds are a habitat with several associated rare species that are analyzed in this report including: swamp pink and green pitcher plant and the bog turtle.

Bogs and fens are rare communities characterized by 1) soils that are semi-permanently to permanently saturated as a result of groundwater seepage, perched water tables, rainfall, or beaver activity, but otherwise are generally non-alluvial; and 2) presence of wetland associated species such as sphagnum, ferns, and sedges. Dominant vegetation may be herbs, shrubs, trees, or some complex of the three. Mountain bogs are one of Georgia's rarest natural communities. Bogs are characterized by mats of sphagnum moss and by deep, peaty, acidic soils that are usually saturated year-round by rain, downslope seepage, beaver impoundment, and overbank stream flooding. Historically, mountain bogs were kept free of shrubs and trees by occasional reflooding by beavers or by fire. Today, most bogs are densely vegetated by rhododendron (*Rhododendron maximum*), mountain laurel (*Kalmia latifolia*), and other shrubs, with a dense canopy of trees such as green ash (*Fraxinus pennsylvanica*), tulip tree (*Liriodendron tulipifera*), red maple (*Acer rubra*), and eastern hemlock (*Tsuga canadensis*) (Edwards *et.al.*, 2013 and Chafin, 2011). Where the understory is open, a variety of grasses, sedges, and herbs, including pitcherplants and orchids, dominate the ground layer, however a dense mid-story and overstory generally preclude the herbaceous layer under current conditions.

Springs and seeps develop where groundwater emerges from fractures in exposed bedrock, or where water is forced to the soil surface by shallow bedrock or an abrupt change in the steepness of a slope. There is usually year-round (although often nearly imperceptible) water flow, except in drought years, and little accumulation of peat around seeps and springs. Herbs and ferns, such as pale jewelweed (*Impatiens pallida*), umbrella leaf (*Diphyllia cymosa*), Turk's - cap lily (*Lilium superbum*), grass-of-parnassus, Canadian wood nettle (*Laportea canadensis*), royal fern (*Osmunda regalis*), and cinnamon fern (*Osmundastrum cinnamomeum*), may establish around spring or seepy areas. Base-loving plant species such as Virginia mountain mint, fringed gentian and swamp lousewort may thrive in or around spring runs and seeps that develop over mafic bedrock (Edwards *et.al.*, 2013 and Chafin, 2011).

#### **IV. PROPOSED MANAGEMENT ACTION**

See Appendix A for the construction details. The majority of construction would occur in the highly disturbed wildlife opening where soils have experience regular disturbance and there are no canopy trees. However, construction would result in some new soil disturbance and the permanent loss of some canopy trees for the access road to the wildlife opening, proposed buildings and range construction. The loss of canopy trees would be minimal compared to the 867,000 acres of the CONF.

The Modified Proposed Action would require the following stipulation:

- to limit harvesting (or cutting of trees) within the project area to August 1<sup>st</sup>-May 31<sup>st</sup> only, by avoiding the removal of trees in non-silvicultural activities during the pup season for Northern Long-eared Bat from June 1<sup>st</sup>-July 30<sup>th</sup>.

#### **V. EFFECTS AND DETERMINATION OF EFFECTS**

##### Northern Long-Eared Bat

**Existing Condition:** Northern Long-eared Bats were formerly widespread across their range, including the forests of north Georgia, but their numbers have been reduced range-wide due to losses from white-nose syndrome (WNS) (*Pseudogymnoascus destructans*). Northern Long-eared Bats utilize cracks and crevices in live trees of many species and sizes for summer roosts and maternity habitat. They are known to utilize a network of roost trees and switch between them every few days (Silvis et al., 2014). Due to the species' extreme population decline, Northern Long-eared Bats were Federally-listed as threatened with a species-specific 4(d) rule in 2015 that was finalized in January 2016.

GA-DNR non-game biologists stated that there are Northern Long-eared Bat records within Union County (GA-DNR correspondence, 2019a). However, the nearest location is a capture and associated summer roost that is located approximately 5 miles south of the project area. There are no records of hibernacula or roosts within 0.25 miles of the proposed target range.

Forest management has many benefits for this species; the primary benefit to the species is the perpetuation of forests on the landscape that provide a continuous supply of suitable roosting and foraging habitat (USFWS 2016). NLEBs have been documented preferentially utilizing thinned stands for roosting (Perry et al. 2007). Timber harvest typically results in temporary impacts to the habitat of NLEBs, but may also cause direct injury or mortality to individuals. This potential effect is minimized by the tendency for bats to move out of their roost tree when disturbed, switching between roost trees, but non-volant pups may not be able to escape harm. The effects of timber harvest on NLEB are discussed at length in the BO for the Final 4(d) Rule (USFWS 2016).

Although forest management may benefit the species, any Modified Proposed Action for the Union County Target Range Project activity which removes or destroys trees or snags could also

potentially affect NLEB. The Modified Proposed Action for the Union County Target Range Project would not affect known, occupied roost trees or those located in the future. Nonetheless, this project could result in some minor disturbance of bats and any trees that are removed would be lost to bats a potential roost trees. However, the small scale of this project compared to the 867,000 acres of the CONF combined with restricting the timing of the operations and retaining most snags to make certain they have roosting habitat in the future, effects would be insignificant and discountable.

The potential for direct effects to summer roosting habitat in the Union County Target Range Project is minimized by several factors:

- the current rarity of NLEBs throughout their range,
- seasonal restrictions of tree removal
- the abundance of potential roost trees,
- the tendency for NLEBs to use multiple roost trees and move when disturbed, and
- the retention of riparian buffers, snags, and some of the mature trees in all silvicultural activities (see PDFs FW-91, 237, and 238 in the BO for the Final 4(d) Rule (USFWS 2016)).

See Appendix C for the USFS Regulatory Review dated April 10, 2019 that determined that the proposed action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act.

**Determination of Effect:** With the minimization factors listed, impacts would be insignificant and discountable, therefore, Alternative 2 plus cumulative effects “*may affect, not likely to adversely affect*” Northern Long-eared Bat.

#### Small Whorled Pogonia

**Existing Condition:** Small Whorled Pogonia is an orchid federally-listed as Threatened under the Endangered Species Act of 1973. Although widely distributed, this species is rare. The determination of presence is limited given the orchid may lie dormant for long periods of time. It is found in 18 eastern states. Populations are typically small (between 1 and 50 plants). This species occurs on upland sites within canopy gaps in mixed deciduous or mixed deciduous/coniferous forests that are generally second-growth or younger successional stages, often with old logging roads and streams nearby. There are approximately ten known extant populations of small whorled pogonia on the Chattahoochee National Forest, all in the Blue Ridge Mountains ecozone. The proposed project site is within the potential historic range of this species; however, none of these populations are known to occur within the project area. The densely vegetated wildlife opening is not consistent with the more open forested setting with canopy gaps where this species would likely occur, and the forested area within the project site provides near full canopy closure that would not be considered suitable habitat.

The viability of small whorled pogonia is affected by the abundance and distribution Mature Mesic Hardwood Forest and Mature Hemlock Forest. Small whorled pogonia needs some limited disturbance. While the distribution and abundance of Mature Hemlock Forest is expected to remain in decline and Mature Mesic Hardwood Forest is expected to increase slightly, individuals of this species may benefit from selective removal of the mid-story. It often occurs in areas where disturbance regimes such as periodic fire creates and maintains favorable habitat. Protective efforts for this species on the national forest are likely to be important to moderate cumulative effects to populations on private lands where they may not receive protection. In addition, the activity would not occur within any of the existing or historic colony sites.

**Determination of Effect:** Due to the lack of suitable habitat where construction would occur, impacts would be insignificant and discountable, therefore, alternative 2 plus cumulative effects “*may affect, not likely to adversely affect*” Small Whorled Pogonia.

### Bog Turtle

**Existing Condition:** The bog turtle (*Clemmys muhlenbergii*) has a discontinuous and spotty distribution along its range in the eastern United States. Georgia bogs inhabited by the bog turtle are generally found along slowly flowing springs, creeks and seepages within low mountain valleys. Habitats capable of supporting a viable bog turtle population may be as small as an acre. Though the habitat type of this turtle varies from spring seepages, bogs, and wet meadows, the presence of soft, deep, mucky organic soil and open wet areas with shallow water are prerequisites to inhabitation by bog turtles. These bogs are ideally quite open and characterized by a rich growth of sedges, rushes, bulrushes, and, especially, sphagnum moss. Woody vegetation present often includes red maple, tag alder, willow, and swamp rose. This habitat does not occur within the project area.

**Determination of Effect:** Due to the lack of suitable habitat in the project area, alternative 2 plus cumulative effects would have “*no effect*” on bog turtles.

### Green Pitcher-plant

**Existing Condition:** Three distinct habitat types have been described for Green Pitcher-plant (*Sarracenia oreophila*). They are sandstone streambanks, mixed oak or pine flatwoods, and seepage bogs (USFWS, 1985). Woodland and bog soils are sandy clays and loams with an upper layer of organic material, while the streambank soils are composed almost purely of sand (USFWS, 1985). Restricted to wetland type habitats including bogs, springs, seeps, wet meadows, and swampy forests that border small streams (GaDNR, 2019b; Chafin, 2007; Patrick, 1995; USFWS, 1985). All these habitats exhibit generally moist soil conditions, but this plant species does not grow in areas where regular flooding occurs and the soils are continually saturated. Within the bog habitat, the Green Pitcher-plants grow away from wet sloughs and are typically found along stream banks. Thirty-five populations are known in Georgia, northeast Alabama, and southwest North Carolina. Historically, these pitcher plants also occurred in eastern Tennessee. Only one natural population is in Georgia and this population, as well as, out-planted sites for future safeguarding are not within the project area.

Additionally, the location of the known population or occurrence in Georgia is not within the project area.

**Determination of Effect:** Due to the lack of suitable habitat in the project area, alternative 2 plus cumulative effects will have “*no effect*” on Green Pitcher-plant.

### Swamp Pink

**Existing Condition:** Swamp Pink (*Helonia bullata*) is a federally threatened member of the lily family. Swamp pink was designated as federally threatened in 1988, but no critical habitat has been designated (USFWS, 1991). Restricted to wetland type habitats including bogs, springs, seeps, wet meadows, and swampy forests that border small streams (GaDNR 2019b; Chafin, 2007; Patrick, 1995; USFWS, 1991). Swamp pink is not known to naturally occur on the CONF; however, the Forest has two non-experimental populations that were established by the Georgia Plant Conservation Alliance (GPCA), in coordination with FWS and GaDNR, using propagated material from plants occurring several miles away on private land. The primary threat to this species on the Forest is loss of habitat due to altered hydrology, exotic species, and woody encroachment (NatureServe, 2019; GaDNR 2019b; Chafin, 2007; Patrick, 1995). Private landowners are not required to protect federally listed plants, and thus public land is critical in protecting and aiding in the recovery of swamp pink.

**Determination of Effect:** Due to the lack of suitable habitat in the project area, alternative 2 plus cumulative effects would have “*no effect*” on Swamp Pink.

### **Sensitive, Locally Rare and Management Indicator Species**

Sensitive, locally rare, and MIS were all addressed in the original BE and no changes have been made to the analyzed effects of the Modified Proposed Action or the determination of effects for these species. Therefore, these species will not be re-evaluated within this summary and clarification.

## **VI. ACTION IMPACTS FOR THREATENED, ENDANGERED, AND SENSITIVE SPECIES**

### Alternative 1: No Action

The wildlife opening would continue with current management and the forested area would not be altered. There would be no effects to the current botanical or terrestrial wildlife resources.

### Alternative 2: Modified Proposed Action

There are potential impacts to the Northern Long-eared Bat and Small Whorled Pogonia.

The risk of impacts to bat species can be minimized or avoided by use of best management practices including:

- the current rarity of NLEBs throughout their range,
- seasonal restrictions of tree removal

- the abundance of potential roost trees,
- the tendency for NLEBs to use multiple roost trees and move when disturbed, and
- the retention of riparian buffers, snags, and some of the mature trees in all silvicultural activities (see PDFs FW-91, 237, and 238 in the BO for the Final 4(d) Rule (USFWS 2016)).

In summary, based on this Summary and Clarification to the Biological Evaluation, the Modified Proposed Action for the Union County Target Range Project “*May Affect, but is Not Likely to Adversely Affect*” Northern Long-Eared Bat and Smooth Whorled Pogonia.

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