

## Threatened and Endangered Species and Species of Conservation Concern

### Background:

There are nine plants, seven terrestrial animals, and two aquatic animals listed as federally threatened or endangered (T&E) species with documented populations across the Nantahala and Pisgah NFs. Six additional plant and animal T&E species have overlapping ranges and suitable habitat and could be located on the Forest in the future.

308 species of conservation concern<sup>1</sup> (SCC) plants and animals were selected by the regional forester based on concerns for their continued persistence on the Forest.<sup>2</sup> The species were selected with input from species experts. Criteria used for persistence concerns were a) identification of significant threats to populations or habitats within or off the Forest, b) identification of declining trends in populations or habitat, c) low population numbers or few populations, d) presence of disjunct populations, e) presence of endemics, and f) where the planning area provides the vast majority of the species populations known across its range and therefore can dramatically secure its persistence.

All 332 T&E and SCC species were delineated in 48 separate species groups based on similar habitat, structural requirements or threats. The 48 groups includes several ecozones, rare habitats, forest structural components, broad species types, and threats. Plan components have been developed to maintain species groups.

### Desired Conditions

- Federally-listed Proposed (P), Endangered (E), and Threatened (T) species occur across their expected (i.e. historical) range on the Forests, with suitable habitat connectivity. The Forests contribute to the recovery of these species.
- Unoccupied PET species habitat within the known (or historical) range remains suitable for species recovery.
- Fire occurs with the severity and frequency needed to maintain fire-adapted PET and SCC species habitat.

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<sup>1</sup> The Planning Rule defines species of conservation concern as “a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area.”(36 CFR 219.9).

<sup>2</sup> Additional information about the identification of Species of Conservation Concern, including the list developed in consultation with the Regional Forester can be found here:  
[http://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprd3848122.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3848122.pdf)

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- Species of Conservation Concern (SCC) are dispersed across their expected (i.e. historical) range on the Forests, with suitable habitat connectivity, and at densities supporting species' persistence.

## Standards

- Management surrounding populations of PET species and SCC does not restrict their persistence across the Forest, and unoccupied PET species habitat remains suitable for species recovery.
- Delineate and maintain appropriate protection zones around known bald and golden eagle (*Haliaeetus leucocephalus* and *Aquila chrysaetos*, respectively) nesting and communal roosting sites until such sites are no longer occupied or suitable, as established in the Bald and Golden Eagle Protection Act and USFWS supporting documents.
- Rock climbing, repelling, hang gliding, and other nest disturbing activities on active peregrine falcon nesting sites are prohibited from January 15th to August 15th to control human disturbance and encourage successful nesting and fledging.
- Comply with regional cave and abandoned mine closure orders at known bat hibernacula to control human disturbance and prevent the spread of white-nose syndrome in cave-associated bats, including but not limited to, the endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*M. septentrionalis*).
- Do not issue permits for collection of federally-listed species or species of conservation concern, except for approved scientific purposes.
- At the project level, provide site-specific analysis of occurrence and effects on PET species and SCC as necessary to comply with the Endangered Species Act (ESA), Forest Service Manual 2670, National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), and other applicable laws, regulations, and policies.
- Additionally, if project-specific analysis determines no existing area-specific surveys have been completed in the last 5 years, or other existing data is more than 5 years old, conduct field surveys for appropriate PET species or SCC.
- Minimize the risk of incidental take of Indiana bat and northern long-eared bat during vegetation management projects by implementing all terms and conditions in the Biological Opinion for this plan revision.
- Within the documented range of green salamanders (*Aneides aeneus*), shaded rocks greater than 64 square feet in size shall be surveyed for species' presence. If present, project activities shall be designed to avoid direct and indirect disturbance of the species and habitat, and to protect thermal and moisture characteristics of the rocks (e.g., but not limited to the identification of a 100' no canopy tree removal buffer). If the rocks are determined to be unoccupied, design activities to maintain suitable habitat.
- Within spruce-fir and northern hardwood forests, maintain a 100' canopy tree buffer around rock outcrops greater than 300 square feet in size to protect spruce-fir moss spider and rock gnome lichen habitat. If structural or compositional restoration needs are identified within this area, appropriate field surveys and consultation with the USFWS to design and implement projects to meet multiple objectives shall be conducted.

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- Field surveys for protected rare habitats will be completed in project activity areas where these habitats potentially could occur.
- A field survey will need to be completed for potential SCC species represented by species groups, such as closed canopy forests, where project activities could result in impacts.
- Follow all USFWS direction concerning mitigation efforts for the effects of white-nose syndrome (WNS) on susceptible bat species, including decontamination protocols for people permitted to enter caves and mines for purposes identified in the closure.
- Post and enforce the regional cave and abandoned mine closure order at all known caves, rock shelters, and mines within the planning area to minimize human disturbance and the spread of WNS. If cave and mine closure orders are found to be ineffective, construct and maintain gates or other structures that allow for entrance and egress by bats.
- Similarly, follow all USFWS and NCWRC direction concerning mitigation efforts for the effects of non-native fungi and bacteria on susceptible animal species, including containment or decontamination protocols.

## Guideline

- Follow USFWS Recovery Plan guidance for federally-listed species.

## Management Approaches

- Maintain and periodically update a science based list of habitats associated with SCC and federally listed species. Use this list to help determine the need for fine filter or coarse filter management including protection.
- PET and SCC species management activities are done in cooperation with, at a minimum, the United States Fish and Wildlife Service (USFWS) and North Carolina Wildlife Resources Commission (NCWRC).
- The list of known bald and golden eagle nest locations and bat hibernacula contained in may change over the life of this plan; therefore, a shapefile of these locations is maintained and annually updated.
- Occurrences of all PET and SCC are mapped and assessed as to threats when encountered and maintained in a GIS database. The dataset is available and utilized in project level planning. Information on species locations at-risk from illegal gathering is not provided to the general public.
- Consider augmenting individuals of spreading avens (*Geum radiatum*) in high elevation rocky summits to address negative demographic modeling assessment from climate change.
- Consider overtopping shade and competing woody vegetation from Blue Ridge goldenrod (*Solidago spithamea*) and Roan bluet (*Houstonia montana*) subpopulations within high elevation rocky summits on the Appalachian Ranger District.
- Consider propagation and augmentation of PET and SCC plant populations with known declines such as Roan bluet (*Houstonia montana*), southern Oconee bells (*Shortia*

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*galacifolia* var. *brevistyla*), Greenland sandwort (*Minuartia groenlandica*), or divided leaf ragwort (*Packera millefolium*).

- Consider augmenting the Whiteoak Creek Virginia Spiraea (*Spiraea virginiana*) population on the Nantahala Ranger District with plants propagated from genetically similar germplasm.
- Consider development of a management plan, in coordination with the USFWS, for Southern Appalachian purple pitcher plant (*Sarracenia purpurea* var. *montana*).
- Consider removal of Appalachian ragwort (*Packera anonyma*) and its hybrid, *Packera memmingeri*, when co-occurring with SCC species, divided leaf ragwort (*Packera millefolium*).
- Consider introduction of new populations of Greenland sandwort (*Minuartia groenlandica*) on Roan Mountain in appropriate habitats with minimal recreational traffic.

### **Other sources of plan direction**

- National Bald Eagle Management Guidelines for compliance with the Bald and Golden Eagle Protection Act (BGEPA)
- Recovery plans for federally-listed species
- Existing conservation plans for PET species, SCC?
- Existing closure orders that will remain in effect through the life of the plan? e.g. cave and mine closure, peregrine nesting closure...
- Relevant Biological Opinions for federally-listed species (including the one for the plan revision)