

Goal 2: Conserve and manage migratory birds with an emphasis on declining species in the North Carolina Piedmont, Sandhills, and Coastal Plain.

Migratory birds are federal trust species which we have been charged to conserve and manage. Migratory birds comprise many different guilds, have varying needs, use myriad habitat types, and are faced with an array of threats and a variety of limiting factors. For example, strategies to manage loggerhead shrikes and Wilson's plovers have very little in common yet both are migratory birds which we are charged to conserve and manage. To further complicate matters, conservation of some species is accomplished to the exclusion of others because of their contrasting needs. The Service has an entire division devoted to migratory birds. The National Wildlife Refuge System also has goals for migratory birds. Most North Carolina refuges were established for the conservation of migratory birds, namely waterfowl and other birds. It is important for Ecological Services to support the migratory bird offices, refuges, and law enforcement in addressing the conservation needs of migratory birds.

The RFO will work cooperatively with these other divisions as well as our outside partners to take actions to maintain sustainable populations of migratory birds. Comprehensive plans have been developed for specific bird guilds and habitat types. Those plans include the North American Waterfowl Management Plan, U.S. Shorebird Conservation Plan, North American Waterbird Conservation Plan, and North American Landbird Conservation Plan. There are also opportunities to collaborate on conservation strategies through the North American Bird Conservation Initiative (NABCI) and North Carolina Partners in Flight (NC-PIF). The NABCI is an unprecedented effort to align the conservation community and society at large in the task of conserving this continent's bird life. The NC-PIF is a more localized cooperative effort to further bird conservation by involving government agencies, conservation organizations, private industry, the academic community, and citizens. The primary focus of NC-PIF is to coordinate and promote education, habitat conservation, and research efforts among its partners. The NC-PIF has developed a "North Carolina Bird Species Assessment" describing bird species that are in greatest need of conservation and management in North Carolina and the habitats and geographic regions that they use (Appendix A). This assessment provides an excellent reference to help the RFO focus on a subset of those species that are in the most need for conservation attention by conserving and managing their habitats within selected priority areas. Overall, the biggest threat to those declining species identified by NC-PIF is loss of habitat due to conversion, habitat fragmentation, or the lack of habitat management on private lands. While the RFO will continuously work with others to achieve benefits to migratory birds, we expect to benefit migratory birds in the next five years by the following specific habitat restoration/enhancement actions:

- 1) The RFO will support longleaf pine restoration as described in the America's Longleaf Initiative by continuing to play a leadership role in the NC Longleaf Coalition and the NC Prescribed Fire Council. Through Partners for Fish and Wildlife, Safe Harbor, and RCW recovery actions, the RFO will also provide technical and financial assistance for on-the-ground longleaf pine restoration projects. In the next five years we expect to restore 3,000 acres of longleaf pine habitat across the Greater Uwharrie, Sandhills, Cape Fear Arch, and Onslow Bight landscapes for the benefit of species such as Bachman's sparrow, brown-headed nuthatch, and pine warbler.

- 2) The RFO will continue to participate in the Corp of Engineers' John H. Kerr 216 study to reduce the impacts of their flood control operations upon the Roanoke River's floodplain, of which over 99,000 acres are in conservation ownership, including over 20,000 acres which make up the Roanoke River National Wildlife Refuge. Migratory birds such as Cerulean warblers, Swainson's warblers and American black ducks will benefit from a decrease in frequency and duration of flooding during the growing season.
- 3) The RFO will help establish a review board consisting of representatives from state and federal agencies, the private sector, non-governmental organizations, and universities to govern the Atlantic White Cedar (AWC) Initiative's efforts. This effort will disseminate information in educational outreach, promote commercial utilization of AWC, encourage AWC research, identify and promote AWC BMPs, and encourage restoration of AWC to its historic range. Restoration of AWC will benefit migratory bird species such as black-throated-green warbler, Swainson's warbler, and hooded warbler.
- 4) The RFO will continue to support peatland restoration on refuges by providing 1) technical and financial assistance to priority restoration actions identified by peatland refuges, and 2) technical expertise on the science of peatland carbon sequestration as a tool to expand partnerships and resources to implement priority restoration needs. Within five years we anticipate restoring a minimum of 500 acres of drained peatlands annually (2500 acres total) on NWR (Pocosin Lakes, Alligator River, and Great Dismal Swamp NWRs) and other conservation lands for the benefit of priority migratory bird species including red-cockaded woodpecker, black-throated green warbler, and Swainson's warbler.

The RFO has identified the following objectives for migratory birds based on our legal responsibilities, the resources and opportunities available to us, and the expertise and strengths of our staff and partners. The following strategies reflect our Strategic Habitat Conservation approach for achieving these priority objectives over the next five years.

Objective 2.1: *(Biological Planning)* Although lists of priority species currently exist, we will assist others in further refining a list of focus species and/or guilds and their habitats in order to better target our efforts to help arrest declining population trends of these species within the lower Piedmont, Sandhills, and Coastal Plain of NC.

Strategy 2.1.1: Work with the Service's Migratory Bird Division, North Carolina Wildlife Resources Commission, Partners in Flight, South Atlantic LCC, ENC/SEVA Team and others to identify a subset of migratory bird species and/or guilds which could be measurably benefitted by the actions of the RFO.

Strategy 2.1.2: Review relevant data (to include modeling data) to determine current population trends of indicator/surrogate species/guilds and assist in identifying limiting factors and threats to the species within the RFO work area.

- Strategy 2.1.3: Within the RFO’s scope and ability, identify management and conservation actions to address declining population trends of focus species/guilds.
- Objective 2.2: (*Conservation Design*) While applying existing modeling data to spatial data, utilize decision support tools (currently being developed by the Designing Sustainable Landscapes Project of the SALCC and Atlantic Coast Joint Venture for 43 species of migratory birds and their associated habitats) to help determine priority management/conservation areas for focus species/guilds, and assist in determining a coarse estimate of amount of habitat to be managed, conserved, restored, enhanced, or created.
- Strategy 2.2.1: Establish a short-term RFO Migratory Bird Conservation Design Team to address strategies of Objective 2.2.
- Strategy 2.2.2: Using available information and input from our governmental and nongovernmental partners, select priority management/conservation areas of which the RFO has effective means to help arrest the decline of focus species/guilds.
- Strategy 2.2.3: In collaboration with our partners, use available information to help determine the relevant baseline habitat conditions of the priority management/conservation areas and identify deficiencies contributing to the decline of the focus species/guilds.
- Strategy 2.2.4: Formulate quantitative and qualitative habitat objectives for priority areas.
- Strategy 2.2.5: Incorporate climate change effects (stressors) into conservation design analyses for near-term impacts (e.g. sea-level rise) and more long-term impacts (e.g. rising temperature) to create more robust decision support tools.
- Strategy 2.2.6: Develop a map of priority management/conservation areas to be used by all RFO staff.
- Objective 2.3: (*Conservation Delivery*) Working with governmental and nongovernmental entities, manage, restore, enhance, create and conserve important habitat within selected priority areas to arrest the decline of the selected focus species/guilds.
- Strategy 2.3.1: Provide targeted technical and financial assistance to landowners, State partners and others to manage, restore, enhance, create and conserve important habitat within selected priority areas.

- Strategy 2.3.2: Use Safe Harbor agreements and Farm Bill conservation programs to manage, restore, enhance, create and conserve important habitat within selected priority areas.
- Strategy 2.3.3: Engage the ENC/SEVA Team, South Atlantic LCC, and other partnerships to identify opportunities to leverage efforts on a larger scale to manage, restore, enhance, create and conserve important habitat within selected priority areas.
- Strategy 2.3.4: Work with land trusts, the State, The Nature Conservancy, and others to identify and permanently protect (either by conservation easement or acquisition) important habitat within selected priority areas.
- Strategy 2.3.5: While reviewing development projects early in the project planning process, identify projects that have the potential to significantly impact focus species and offer/negotiate recommendations which will avoid, minimize, and mitigate impacts.
- Strategy 2.3.6: For non-focus species of migratory birds in or outside of priority areas, opportunistically provide technical and financial assistance and recommendations which will benefit migratory birds.
- Strategy 2.3.7: When feasible, align priority migratory bird conservation delivery efforts with priority migratory bird conservation actions contained within the North Carolina Wildlife Action Plan.
- Objective 2.4: (*Assumption-driven Research*) Since the RFO has limited ability to directly conduct research, it will rely upon existing research data and work with researchers to direct future research to provide data and recommendations to help arrest the decline of the focus species within priority areas.
- Strategy 2.4.1: Using existing research and monitoring data, make appropriate assumptions regarding selection of focus species, priority areas, necessary management/conservation actions, and the extent of those actions needed to arrest the decline of migratory birds.
- Strategy 2.4.2: In concert with our partners, engage research institutions and potential funding sources to direct research which will benefit focus species within priority areas.
- Objective 2.5: (*Outcome-based Monitoring*) Because the RFO has limited ability to conduct population monitoring, the RFO will utilize future monitoring data acquired by others and recommend future targeted data collection.

Given this dependence upon others for data, there may be a significant time lag in assessing accomplishments in arresting the decline of focus species.

- Strategy 2.5.1: In units of acres affected, determine RFO accomplishments.
- Strategy 2.5.2: In units of technical assistance or recommendations made, determine RFO accomplishments.
- Strategy 2.5.3: In qualitative terms, determine landscape level accomplishments made through partnerships.
- Strategy 2.5.4: Use monitoring data of population trends of focus species within priority areas, and when compared to baseline conditions, help determine if accomplishments have contributed net progress towards arresting the decline of focus species.
- Strategy 2.5.5: Identify gaps in monitoring data and seek to fill those gaps.
- Strategy 2.5.6: If monitoring data demonstrates that current RFO conservation delivery efforts have not contributed net progress towards arresting the decline of focus species, then the RFO will reevaluate all strategies.

