



Wildlife Diversity Program 2017

Pennsylvania's conservation of all birds and mammals

The Pennsylvania Game Commission manages all wild birds, wild mammals, and their habitats for the benefit of all Pennsylvanians. Federal funding through the State and Tribal Wildlife Grants Program has provided core, although inadequate, support for the agency's diverse mission for the past 15 years. The 2015-2025 Pennsylvania Wildlife Action Plan, required to receive these funds, is the Commonwealth's blueprint to implement this broad vision by identifying the most important stressors and focusing appropriate actions on priority species and habitats. The following stories provide a few examples of these actions in 2017.

The come-back kid: Piping Plovers return to Lake Erie after 60-year absence

An historic milestone was achieved in 2017 when federally-endangered piping plovers nested in Pennsylvania for the first time in 60 years. Two pairs nested at Presque Isle State Park in Erie County, successfully fledging four young with considerable assistance. These beach-dwelling birds are dependent on natural lakeshores and are sensitive to disturbance. This conservation victory was a result of regional and local conservation investment, the culmination of nest-site protection efforts at the other four Great Lakes shorelines for decades and active habitat restoration in the Gull Point Natural Area over the past six years. We documented this event through intensive monitoring and habitat restoration that began in 2012. Cathy Haffner, Game Commission wildlife biologist, deployed nest-protection measures approved by the Great Lakes Recovery team shortly after eggs were found. The first nest, containing three eggs, hatched on June 25 and two of these chicks survived to fledge in late July. Four eggs in the second nest were washed-out by strong waves and were rescued on the same day the first nest hatched. Two young from that nest subsequently fledged in Michigan. We were encouraged by the sightings of three of the four Pennsylvania chicks and one of the breeding males on their wintering grounds. Such a high re-sighting rate further demonstrates the strength of bird-monitoring network and interest in these diminutive birds; this raises hope for the birds' spring 2018 return. The restoration of plovers to Lake Erie represents an international milestone, as this was the first time since 1955 that piping plovers nested on every Great Lake. Once widespread, but now one of the nation's rarest birds, the Great Lake piping plover population contains only 76 breeding



Piping plover by Cathy Haffner

pairs. This story was selected by National Audubon as one of the nine national successes 2017, provided here: <http://www.audubon.org/news/nineaudubons-biggest-conservation-wins-2017>.

Pennsylvania Wildlife Action Plan guides conservation initiatives of partners

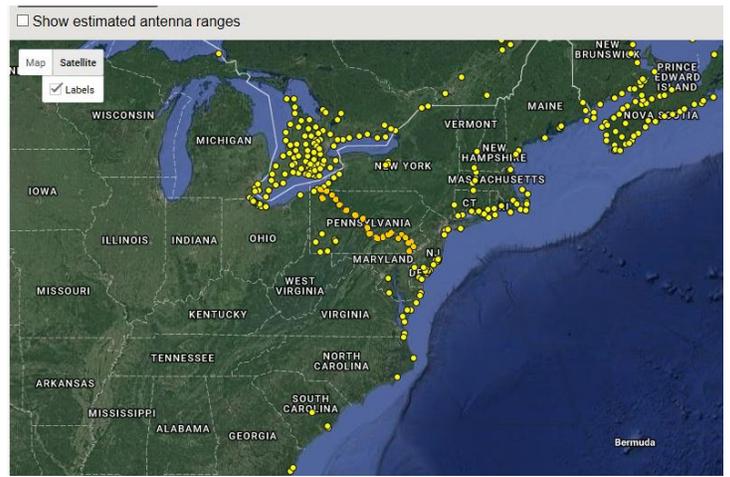
Conservation of the state's Species of Greatest Conservation Need will be accomplished only through collaboration by many partners.

A multi-million-dollar, multi-year initiative started in 2017 by the National Fish and Wildlife Foundation (NFWF) targets the unique and globally-significant species and habitats identified by Pennsylvania's Wildlife Action Plan for restoration. Partnering with the R.K. Mellon Foundation and the William Penn Foundation, conservation of golden-winged and cerulean warblers, and other priority species on public and private lands is enhanced through this dynamic public-private partnership. A complete list of the 2017 grants awarded through the NFWF Central Appalachia and Delaware River Restoration initiatives can be found at their web site <http://www.nfwf.org>. Ongoing habitat conservation on private lands, through USDA Natural Resource Conservation Service's Farm Bill programs (Regional Conservation Partnership Program and Working Lands for Wildlife for cerulean warbler and golden-winged warblers, respectively) are examples of broad-scale, habitat-based implementation of priorities established by Pennsylvania's Wildlife Action Plan. <https://www.nrcs.usda.gov/wps/portal/nrcs/main/pa/programs/farmbill/rcpp/>

Public Input: Hundreds of volunteers donate thousands of hours annually toward Wildlife Diversity Program surveys. For example, highly-skilled birders, mainly volunteers, annually conduct Breeding Bird Surveys. Current observers have accumulated more than 840 person-years of service to this survey, tallying more than 78,000 individual birds in one year of these structured surveys. The top 25 observers averaged 25 years of service, providing invaluable continuity for robust population trends. Other volunteers donate many hours to monitor rare birds, such as nesting peregrine falcons. And the broad public interest in wildlife as a whole, and endangered species in particular, is demonstrated by thousands of pageviews of the Game Commission's threatened and endangered species pages in 2017.

Small but mighty: Nanotag tower arrays give us essential glimpse into wildlife travel routes

Collaboration is at the heart of a new monitoring network of 18 automated monitoring stations, called the Motus Wildlife Tracking System, deployed across Pennsylvania in 2017. Completed with Department of Conservation and Natural Resources, Wild Resource Conservation Program funding, these stations closed a gap in this international network (map). Motus enables researchers to detect movements of small animals tagged with very small tags at precise locations across the Continent. The results help us pinpoint threats to vulnerable species and identify priority habitats and conservation actions. Pennsylvania's new stations, deployed to complete the infrastructure that will benefit many projects, has already detected several shorebird species, Swainson's thrushes, and silver-haired bats tagged in Canada and New England. Operating continuously through local collaborators organized by the Williston Conservation Trust, data are freely available at the web site, <https://motus.org>.



Motus receiver map

Expert technical assistance helps landowners support Species of Greatest Conservation Need

Since 2004, regional wildlife diversity biologists have provided free technical assistance for Species of Greatest Conservation Need to 1,565 landowners who collectively owned 259,016 acres. Landowners have enhanced 24,094 acres through self-funded habitat improvement projects.

In 2017, 84 private properties totaling 31,787 acres received this assistance including 1,011 acres of grassland, 1,178 acres of agricultural land, 18,283 acres of forest, 1,051 acres of early successional habitat, 262 acres of wetlands, and 49.33 miles of riparian corridor. Targeted species include American woodcock, Allegheny woodrat, several bat species, barn owls, golden-winged warbler, cerulean warbler, Henslow's sparrow, red-headed woodpecker, and scarlet tanager.

This team also guided habitat implementation projects from several funding sources, most notably the Farm Bill, for 56 projects encompassing 1,969 acres. Volunteer Public Access and Habitat Improvement Program (VPA-HIP) funding enabled 43 of these projects, totaling 1,598 acres that support high priority Species of Greatest Conservation Need within caves/mine, coniferous forest, early-successional forest, mature forest, and wetland habitats.

Regional wildlife diversity biologists also contribute to the Game Commission's Comprehensive state game lands plans, which benefit many Pennsylvania Wildlife Action Plan Species of Greatest Conservation Need and set the stage for years of proactive improvements by agency to benefit grassland birds, cerulean warblers, golden-winged warblers, ruffed grouse, Allegheny woodrats, cave bats, and other species. These biologists also participated in 26 prescribed fires on public and private land for the benefit of grassland, forest, shrub, and scrub oak habitats, serving in positions including ignition, fire effects monitor, weather monitor, hand crew, and engine crew.

Cave-hibernating bats: Barely hanging on

The bat's reputation has come a long way this past decade. Once met with shriek and horror, most people now appreciate the vital ecosystem services bats provide, such as insect control. Unfortunately, this appreciation is largely because we have been losing cave-hibernating bats to a devastating, non-native fungus known commonly as white-nose syndrome.

First detected in 2006, this disease has spread over half the continent and caused massive species declines in its wake; we have lost an estimated 5 million individual bats nationally and the number continues to rise. In Pennsylvania, more than 98 percent of the six hibernating bats species have died, with four of these species having a decline more than 96 percent. While these severe declines truly threaten the persistence of these valuable animals, survivors remain for each species. Our response to this crisis has focused on protection of survivors, improving their habitat conditions, and research to solve this problem.

Dunbar gate air dam



Knowing that survivors are choosing colder sites, the Game Commission protected colder sites from local human disturbance as well as changed air-flow to trap in the cold temperatures through gating at the Dunbar mines on State Game Lands 51 in Fayette County and at Ruth Cave. Indiana Bat Conservation Funds were used to purchase a decommissioned commercial cave, Indian Caverns (Huntingdon Co.). Additionally, Consol Energy recently transferred to the Game Commission more than 200 acres in Lawrence County containing a large limestone mine that once housed over 30,000 bats, including Indiana bats (federally endangered). Each of these actions was designed to protect and enhance the conditions of an established winter bat residence. We continue research on a direct disease treatment of wild populations to even further enhance these beleaguered populations. These efforts keep us on the long path to recovery of these species.