

**PENNSYLVANIA GAME COMMISSION  
BUREAU OF WILDLIFE MANAGEMENT  
PROJECT ANNUAL JOB REPORT**

**PROJECT CODE NO.:** 06797

**TITLE:** Regional Wildlife Diversity Research/Management

**JOB CODE NO.:** 79701

**TITLE:** Regional Wildlife Diversity Program

**PERIOD COVERED:** 1 January to 31 December 2014

**COOPERATING AGENCIES:** U.S. Fish and Wildlife Service

**WORK LOCATION:** Statewide

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**ABSTRACT:** Pennsylvania has a rich diversity of wildlife including 429 species of birds and 66 species of mammals. Twenty species of birds and seven species of mammals are listed as state threatened or state endangered. An additional 125 species are listed as species of greatest conservation need (SGCN) as identified in the Wildlife Action Plan. Before the establishment of the Private Landowner Assistance Program (PLAP), the Pennsylvania Game Commission (PGC) provided minimal habitat assistance for SGCN, especially on private lands, which comprise over 80% of Pennsylvania's land. With the establishment of the Regional Wildlife Diversity Biologist (RWDB) positions and PLAP, the PGC is specifically targeting the conservation of SGCN on private lands. From 1 January 2014 to 31 December 2014, RWDBs consulted 117 private properties totaling 16,798 acres. Regional Wildlife Diversity Biologists produced 95 written management plans providing recommendations for the conservation of SGCN on 15,061 acres. Written management plans included recommendations for 1,143 acres of grasslands, 491 acres of agricultural land, 10,697 acres of forest, 1,201 acres of early successional habitat, 1,586 acres of wetlands, and 26.27 miles of riparian corridor. Regional Wildlife Diversity Biologists have documented implementation of 10,228 acres of private lands habitat improvements since 2005. The RWDBs contributed to 23 comprehensive State Game Lands plans, which comprise 131,741 acres. Six landowner workshops were conducted by RWDBs, and 71 presentations were given at various speaking engagements. In addition, RWDBs assisted with numerous research and planning activities involving species of greatest conservation need. Notably, the RWDBs continued their work on the Barn Owl Conservation Initiative and continued statewide bat acoustic transect survey project.

## **OBJECTIVES**

1. To provide management guidance for 75 acres of wetlands and 27,000 acres of upland habitat inclusive of at least 225 sites for Species of Greatest Conservation Need (SGCN) by providing technical assistance to private and public landowners.
2. Assist landowners with finding funds to implementation conservation recommendations.
3. Conduct assessments and conservation implementation to enhance SGCN on private and public properties and collect and evaluate population data to review and update conservation priorities for SGCN.
4. Conduct at least 22 presentations and workshops to promote conservation of SGCN. Represent the Pennsylvania Game Commission (PGC) on committees and teams that will guide implementation of the Wildlife Action Plan.

## **INTRODUCTION**

This program has enabled the agency to target SGCN on public and private lands for the past 10 years. It has created a network of regional biologists working with private landowners to enhance conservation practices on thousands of acres annually. Because over 80% of Pennsylvania land is in private ownership, the future of many of the species at risk in Pennsylvania is dependent on land-use decisions made by private landowners. Private Lands Assistance Program (PLAP) is critical to helping stabilize or reverse population declines of mammal and bird SGCN in Pennsylvania.

The PLAP has continued to grow through consultation with landowners and managers of both private and public lands, demonstrating its potential to enhance management of SGCN with the intention to forestall the listing of additional species as endangered and threatened. This work addresses several needs identified in the Pennsylvania Wildlife Action Plan (WAP). Specifically, it addresses management guidance, including the call for conservation planning for priority birds and mammals listed. In addition, PLAP addresses the PGC Strategic Plan, specifically Strategic Objectives 1.4, 4.1 and 4.8 which deal with the management of SGCN and their habitats.

## **METHODS**

Since 2004, the PLAP has been funded with State Wildlife Grant (SWG) administered by Region 5 of the U.S. Fish and Wildlife Service (USFWS). These funds concentrate efforts on SGCN by supporting Regional Wildlife Diversity Biologists (RWDBs) and assigning them to work within the regional structure of the PGC. In 2011, the 6 RWDB positions were converted from limited-term to permanent status.

Each position is evaluated according to the objectives section of this report. The positions report to Regional Wildlife Management Supervisors and receive direction from the Wildlife Diversity Program of the Bureau of Wildlife Management (BWM). Staffing was initiated on 10 May 2004 under the Private Lands Program funded by SWG (T-10) and the federal Landowner Incentive Program (I-2-1,2). Grant TI-1-2 supported the RWDB positions from 1 July 2007

through 30 June 2010. A subsequent SWG grant (T2-8-R) currently funds these positions.

The RWDB work closely with PGC biologists, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) staff, conservancy staff, and others via providing technical assistance to landowners on SGCN, developing management plans for interested landowners, and identifying and evaluating lands for conservation protection and management. Private lands activities do not fall below 50% of time and expenses allocated for this program. The PGC, in partnership with these conservation organizations, will 1) support 6 RWDB positions to assist private and public landowners by developing management plans for SGCN; 2) conduct workshops and presentations on managing for priority species for private landowners, USDA NRCS, the Pennsylvania Department of Conservation and Natural Resources (DCNR) Bureau of Forestry, County Conservation Districts, non-profit organizations and PGC and Pennsylvania Fish and Boat Commission staff; 3) coordinate with USDA and other local entities on applicable Farm Bill Programs to ensure SGCN are considered in private lands programs administered by USDA; 4) conduct conservation activities and carry out surveys statewide for priority species; 5) develop prioritization criteria and methods to ensure the most cost-effective expenditure of financial assistance to private landowners; 6) monitor management plan implementation on private lands; 7) in all related tasks, target SGCN associated with wetlands, riparian areas, old fields, shrublands, grasslands, forests, caves and other rock communities, vernal pools, and other sensitive habitats.

### **Location and Personnel**

The RWDB positions are strategically located throughout the state, 1 in each of PGC's 6 regions. All 6 regional positions were staffed for the entirety of 2014. The team consisted of Stacy Wolbert (northwest), Tammy Colt (southwest), Mario Giazon (northcentral), Clayton Lutz (southcentral), Rich Fritsky (northeast), and Dan Mummert (southeast).

Focal habitats for improvements are wetlands, riparian areas, old-field shrublands, grasslands, caves, vernal pools, and interior forests throughout Pennsylvania. Specific sites, offered voluntarily by landowners for improvement, are evaluated based on current habitat conditions; potential for improvement; habitat targets; regional, statewide, and local species priorities; and potential integration with funding or implementation partners, such as Chesapeake Bay Financial Assistance Program and NRCS. In all cases, species and habitats of greatest conservation concern are the priority for habitat protection, improvement, or restoration efforts.

## **RESULTS**

### **Private Lands Management Planning**

In 2014, RWDBs consulted 117 private landowners (Fig. 1 and Fig. 2) totaling 16,798 acres (Table 1). For the year, 95 written management plans were produced, totaling 15,061 acres. Management plans included recommendations for 1,143 acres of grasslands, 491 acres of agricultural land, 10,697 acres of forest, 1,201 acres of early successional habitat, 1,586 acres of wetlands, and 26.27 miles of riparian corridor (Table 2).

### **Implementation**

Implementing habitat treatments through PLAP is not a stated deliverable in the grant, and funding never has been allocated directly or indirectly by PGC to assist PLAP participants in this

way. RWDB have, however, leveraged substantial funds through external sources such as USDA Farm Bill Programs (e.g., Working Lands for Wildlife, Conservation Reserve Enhancement Program, and Environmental Quality Incentives Program). Tasks included selecting treatment sites, developing treatment proposals, initiating contracting procedures (soliciting bids, conducting site inspection tours), designing and marking treatments, contract administration (monitoring contractors and work progress), follow-up site visits, technical assistance, consultations with NRCS and other program partners (e.g., DCNR, Indiana University of Pennsylvania, National Wild Turkey Federation), certification of completed practices to satisfy NRCS contracts, and providing additional information (e.g., maps, acreages, seeding rates, soil amendments, and recommended plant species). In 2014, approximately 25 projects were approved through Farm Bill Programs as a result of technical assistance provided by RWDBs. Approved projects included control of invasive plant species, early successional habitat management and creation, tree and shrub establishment, riparian buffer establishment, rotational grazing and associated watering systems, and deer exclosure fencing.

Acquiring implementation data from third parties such as USDA has been inconsistent and difficult to track due to information-sharing issues and documenting multiyear projects. Importantly, funded acres reflect only a portion of actual implementation conducted by PLAP participants. While methods varied slightly between regions, treatment acres implemented via PLAP were estimated based on returned implementation surveys completed by participating landowners, subsequent conversations with USDA regarding funded projects, or interactions with landowners that provided this information through other means. RWDBs have documented implementation of 10,228 acres of private lands habitat improvements since 2005 (365 acres/year/region).

The RWDBs coordinated with the Bureau of Wildlife Habitat Management (BWHM) to improve habitat on Public Access Cooperator properties through the use of Pittman-Robertson funds. In 2014, 3 Pittman-Robertson funded projects were implemented on cooperator land, for a total of 289 implemented acres. Habitat improvement practices for these projects included creation of early successional habitat through tree felling, shrubland creation, wetland restoration with associated buffer plantings, and invasive species control.

### **Public Lands Management Planning**

The RWDBs continued to make contributions to PGC's Comprehensive Game Lands planning process. This comprehensive planning takes advantage of interdisciplinary expertise to create long-term management plans for approximately 1.48 million acres in the Commonwealth. The RWDBs contribute to these plans by determining likely habitat use by SGCN, providing guidance on habitat management, and assisting with marking and conducting treatments. They also have written narratives for comprehensive plans (predominantly Wildlife Resources and Management Priorities sections), created bird and mammal species lists, provided modifications to forestry prescriptions, identified opportunities for research (linking biological research to land management practices), incorporated management guidance for sensitive areas and critical habitats previously identified by County Natural Heritage Inventories, and have edited completed plans.

In 2014, RWDBs contributed to this process on 23 State Gam Lands (SGLs) that comprise 131,741 acres. Examples of species benefitting from RWDB involvement in SGL planning include

American woodcock, northern goshawk, grassland birds, cerulean warblers, golden-winged warblers, ruffed grouse, Allegheny woodrat, cave bats, waterfowl, and beavers. Special management in which RWDBs were involved included barrens restoration, habitat prescriptions for golden-winged warbler and Allegheny woodrat sites, management and monitoring of four-toed salamanders, American chestnut restoration, and management of beavers as a keystone species to create palustrine shrub habitat. RWDBs have toured state game lands with land managers, foresters, and region office staff to observe and discuss management options to incorporate in comprehensive plans, as well as visits for specific projects such as reviewing timber sales.

The RWDBs have contributed to implementation of habitat improvements on SGLs by felling trees to improve woodrat habitat (5 acres on 3 sites) and participating in 15 prescribed fires for a total of 663 acres burned (346 acres grassland, 96 acres shrubland, and 221 acres forest) and RWDBs were consulted by DCNR for management of grassland habitat and for wetland restoration. One such consultation led to a wetland creation and improvement on DCNR land, funded by DCNR, USFWS and Partners for Wildlife.

### **Outreach**

Public education and outreach requirements are being met by RWDBs in a variety of ways. In 2014, the RWDBs conducted 6 landowner workshops. More than 150 people attended these workshops on topics including maintenance of tree plantings, managing young forest for wildlife, managing habitat for SGCN, creating young forest and palustrine shrubland, barn owl conservation and banding technique, and a BioBlitz. In addition, RWDBs gave 71 presentations, reaching over 3,000 people. Topics included PLAP and public access, wildlife in young forest habitats, barn owls (BOCI, banding), wildlife careers, bats (ecology, acoustic surveys, white-nose syndrome), golden-winged warblers, birding basics, Pennsylvania flora and fauna, forest succession, invasive species, small woodlot management, wildlife disease, and wildlife and timber harvests.

Audiences and venues for these presentations included local universities and schools, civic groups, state and local park events, Pennsylvania Mycological Society, PGC Training School, PGC Board of Commissioners, PGC staff, watershed groups, Baird Ornithological Club, Mengal Naturalists Society, Bradford Heritage Gardening Club, Pennsylvania Forest Stewards, Penn State Ag Progress Days, Forests for the Bay, woodland owners, Wildlife Leadership Academy, American Tree Farmers, and Pittsburgh Botanical Garden.

Lead by Dan Mummert, RWDBs successfully proposed, organized, and facilitated a barn owl symposium at The Wildlife Society (TWS) Conference in Pittsburgh. Regional Wildlife Diversity Biologists hosted, presented, and served as moderator for this symposium, which was attended by 75 fellow wildlife professionals.

During the year, RWDBs gave interviews for 12 newspaper articles and 1 magazine article, appeared on 1 television program, and contributed to 1 blog. Topics included barn owl conservation, peregrine falcons, bobwhite quail, bats (various subtopics), and young forest. Mario Giazon was interviewed by Bucknell University on landowner views on conservation in the Susquehanna Valley. Stacey Wolbert was featured in an article in *The Wildlife Professional*, and Tammy Colt co-authored an article for *The Wildlife Professional*. Regional Wildlife Diversity Biologists continue to support and enhance our profession by mentoring high school and college

students, assisting with undergraduate and graduate research projects, providing field experiences for students and interns, and assisting with county Envirothons.

### **Research and Conservation Activities**

In 2014, RWDBs assisted the BWM, university researchers, and other agencies with numerous research and management activities involving SGCN. This included bald eagle nest monitoring and winter surveys, osprey surveys, heron and other colonial bird rookery surveys, sandhill crane surveys, golden-winged warbler surveys, peregrine falcon banding and nest monitoring, grassland bird surveys, marsh bird surveys, woodcock surveys, purple martin management, relocation of short-eared and snowy owls from major airports, raptor trapping and banding, snowshoe hare surveys, Appalachian bat count, installation of gates on SGL caves to protect bats, installation of bat boxes, bat hibernacula surveys, stationary bat acoustic surveys, bat trapping and banding, white nose syndrome monitoring, northern flying squirrel monitoring, marsh bird surveys, Appalachian cottontail surveys, and woodrat surveys.

Other activities not directly related to SGCN but contribute to the mission of the BWM include bear check station (including archery, regular, and extended seasons), deer aging and CWD monitoring, elk check, ruffed grouse surveys, turkey trapping, goose and duck banding, hard mast surveys, and waterfowl surveys. In addition, RWDBs initiated and carried out regional research projects, including all-bird surveys on SGLs and testing methods of stilt grass control.

### **Training**

To continue to improve job-related skills and knowledge, RWDBs attended a variety of training events and workshops in 2014. Examples include Sonobat software training, occupancy modeling, waterfowl banding workshop, leadership trainings, SILVAH-Allegheny hardwoods, tree identification refresher, and stream restoration techniques. RWDBs attended PGC and Office of Administration required trainings such as deer aging, deer management, CPR and First Aid, wildlife disease, wildlife immobilization, emergency awareness, security awareness, and chemical safety training. Regional Wildlife Diversity Biologists continue to participate in prescribed fire and further their certification for this by opening task books, passing the pack test, and attending the annual fire refresher (RT-130).

### **Professional Development**

The RWDBs continue to build professional relationships with other biologists, agencies, and organizations through attendance at meetings and conferences. Examples include attendance at the Northeast Bat Working Group Meeting, Clarion County Forest Stewardship, Clarion County Forest Landowners Conference, French Creek Conservation Consortium, Pennsylvania Young Forest Council, Pennsylvania Golden-winged warbler foresters, state wildlife action plan species accounts webinar, Heritage Conservancy, Montgomery County barn owl restoration, NRCS local working groups, and various PGC meetings within regions and bureaus. All RWDBs attended TWS Conference in Pittsburgh, partaking in various meetings, concurrent sessions, and symposia, and serving on the arrangements committee and subcommittees, and as volunteers in many capacities.

Regional Wildlife Diversity Biologists served on boards or committees, including the Pennsylvania Chapter of TWS, TWS 2014 Annual Conference planning committees, Woodland

Owners of Clarion and Allegheny Valley, Clarion Forest Stewardship Committee, Pennsylvania Young Forest Council, Forestry Development Committee for Central Pennsylvania, Loyalhanna Watershed Association, and the Purple Martin Working Group.

### **Pennsylvania Natural Diversity Index Environmental Reviews**

In 2014, RWDBs assisted BWHM, Environmental Review section with Pennsylvania Natural Diversity Index (PNDI) reviews for gas development. The RWDBs conducted 56 PNDI reviews and 5 field surveys to evaluate potential impacts to threatened, endangered, and special concern species, and special concern resources.

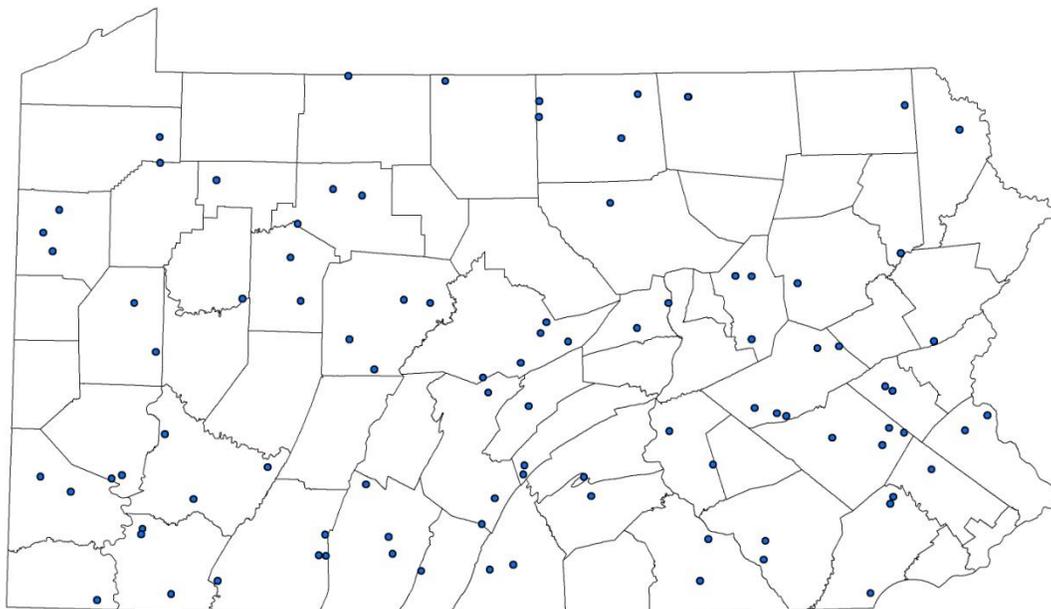
Table 1. Number of Private Landowner Assistance Program properties consulted and management plans written by Pennsylvania Game Commission Regional Wildlife Diversity Biologists, 1 January 2014 – 31 December 2014. Figures do not include properties and acreages consulted under other programs, including Working Lands for Wildlife Public Access, and others.

<b>Region</b>	<b>Properties Consulted (Acres)</b>	<b>Management Plans (Acres)</b>
Northwest	11 (776)	11 (776)
Southwest	15 (1,886)	15 (1,886)
Northcentral	29 (3,201)	21 (2,683)
Southcentral	18 (1,733)	16 (1,900)
Northeast	14 (2,051)	11 (1,143)
Southeast	35 (7,151)	21 (6,673)
<b>TOTALS</b>	<b>117 (16,798)</b>	<b>95 (15,061)</b>

Table 2. Number of acres per habitat type and miles of stream corridor in written PLAP management plan recommendations by Pennsylvania Game Commission Regional Wildlife Diversity Biologists, 1 January 2014 – 31 December 2014. Figures do not include properties and acreages consulted under other programs, including Working Lands for Wildlife, Public Access, and others.

<b>Region</b>	<b>Grassland</b>		<b>Forest Acres</b>	<b>Early</b>	<b>Wetland Acres</b>	<b>Riparian Miles</b>
	<b>Acres</b>	<b>Ag. Acres</b>		<b>Successional Acres</b>		
Northwest	25	6	527	188	30	4.00
Southwest	238	118	1,138	370	2	4.75
Northcentral	266	148	2,085	65	29	6.47
Southcentral	184	197	1,355	391	38	5.40
Northeast	86	0	835	138	13	2.80
Southeast	344	22	4,757	39	1,474	2.85
<b>TOTALS</b>	<b>1,143</b>	<b>491</b>	<b>10,697</b>	<b>1,201</b>	<b>1,586</b>	<b>26.27</b>

## Private Landowner Assistance Program (PLAP) Consultations in 2014



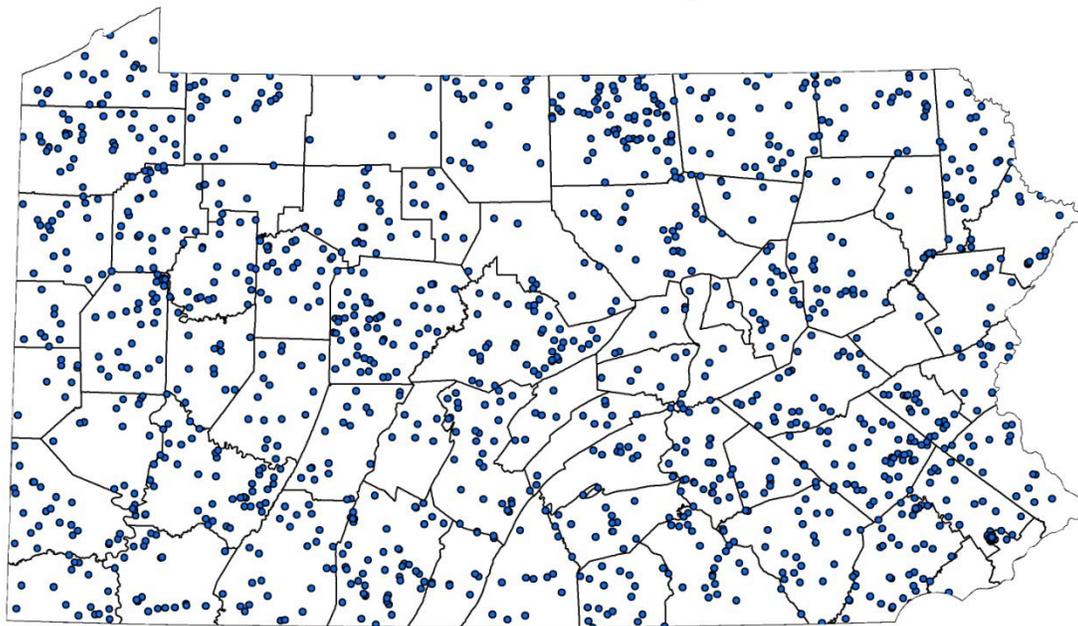
117 site visits

16,798 acres

Map created by:  
Mario D. Giazzon  
January 2015

Figure 1. Locations of landowners visited under the Pennsylvania Game Commission's Private Landowner Assistance Program, 1 January 2014 – 31 December 2014.

## Private Landowner Assistance Program (PLAP) Total consultations through 2014



**1,414 site visits      220,195 acres**

Map created by:  
Mario D. Giazzon  
January 2015

Figure 2. Locations of landowners visited under the Pennsylvania Game Commission's Private Landowner Assistance Program, 2004 – 2014.