

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

PROJECT CODE NO.: 06717

TITLE: Osprey Research/Management

JOB CODE NO.: 71701

TITLE: Osprey Nest Surveys

PERIOD COVERED: 1 July 2015 to 30 June 2016

COOPERATING AGENCIES AND ORGANIZATIONS: U.S. Department of Interior, Fish and Wildlife Service; U.S. Army Corps of Engineers; Audubon Pennsylvania staff and volunteers; Department of Conservation and Natural Resources; Pennsylvania Fish and Boat Commission; New Jersey Fish, Game and Wildlife; members of Pennsylvania Society for Ornithology, Three Rivers Birding Club, and Delaware Valley Ornithological Club; Allegheny National Forest; East Stroudsburg University, and many volunteers.

WORK LOCATION(S): Statewide

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DATE: 12 July 2016

ABSTRACT This project monitors osprey (*Pandion haliaetus*) nesting activity in Pennsylvania. Nesting observations were opportunistically collected from staff, volunteers and eBird contributors for the 2015 breeding season, representing an incomplete survey, but identifying 77 active nests in eight different HUC6 watershed drainages including 17 counties. Osprey benefit from some human activities and habitat modifications; activity is concentrated near reservoirs as well as flowing water and nests tended to be on artificial structures such as communications towers, transmission towers and osprey platforms. The public's interest in this charismatic raptor is demonstrated by its participation in the annual nest survey and the 5,460 views of the agency's osprey web pages during 2015. The osprey management plan was approved September 2015. Increasing geographical distribution and population numbers suggest that the species may soon justify upgrading to another conservation status that reflects its improving security, and specifies the geographic and numerical components needed for a healthy self-sustaining population, at least 50 nesting pairs total and clusters of at least 10 nesting pairs in 4 different watersheds with a stable or increasing breeding population.

OBJECTIVE

Inventory and monitor osprey nesting activity and assess the current status of osprey in

Pennsylvania, and use the current breeding information to evaluate its current conservation status.

METHODS

Reports of nesting osprey were compiled from submissions received through the osprey resource account, direct e-mail and supplemental reports. Game Commission staff were instrumental in coverage of the Lower Delaware, Upper Delaware, and Lower Susquehanna drainages. Army Corps of Engineers provided osprey nest data for the Tioga-Hammond Lake area of the Upper Susquehanna drainage area. The 2015 survey results are not intended to represent a comprehensive statewide inventory of the osprey nesting population. Nesting clusters are defined by secondary watershed drainages, specifically hydrologic unit boundaries (HUC6), reflecting the ospreys' close association with water and aquatic biological resources. Currently, osprey nesting clusters are in the upper Delaware, lower Delaware, upper Susquehanna (Tioga-Hammond and Cowanesque Lakes), lower Susquehanna, Allegheny, and the upper Ohio-Beaver drainages. There also are scattered nests in the West Branch Susquehanna and Monongahela drainages.

The Game Commission web pages provided educational material on osprey including natural history, Pennsylvania range, habitat, and conservation concerns. Additionally, the public is encouraged to report nests they find and share information essential to tracking nesting activity: nest location, in latitude and longitude coordinates when available; the closest waterway; nest substrate, nesting activities seen, number of young seen and observer contact information.

RESULTS

With an incomplete survey in 2015, 77 active nests were reported in eight different HUC6 watershed drainages including 17 counties (Table 1, Fig 1). This survey did not allow an evaluation of the population stability or growth, or progress toward the management plan objectives. Nearly all nests were associated with human modified habitat either near rivers, lakes and reservoirs, or built on a man-made structure, and often both. Although nests observations were only collected opportunistically in 2015 these results are helpful to evaluate osprey recovery and success in the state. There are clusters in the drainages of the upper and lower Delaware, and upper and lower Susquehanna while Chester, Clearfield, and Lehigh counties have a history of osprey nesting, but no activity reported in 2015 (Fig 1). The missing data are the likely result of a failure to survey these areas rather than a contraction of range. Some counties where clusters of osprey nests were found recently also were not covered well. The western counties in the Ohio drainage: Beaver, Allegheny, and Monongahela watersheds were not well-covered. An effort will be made to survey these sites in the future, but coverage is generally more thorough when there are staff available for surveys.

Osprey willingness to exploit human structures for nesting bodes well for their continued success around people, but also suggests there will be more conflicts as the recovery continues. A good understanding of osprey needs and tolerance to human activity is paramount to maximize osprey success while minimizing disturbance to people. Since the reintroduction of osprey to the state, the distribution of osprey nests has been decidedly clustered around human-dominated situations (Brauning 2012, Master et al. 2016, Poole 1989). Since ospreys are long distance migrants, they also are subject to more risks than species like bald eagle that are permanent residents or short-distance migrants in a state where there are protections for non-game migratory

birds.

Osprey recovery appears to be progressing well despite the limited inventory effort this year. However, to justify changing the conservation status of osprey requires a robust data set, clearly showing current population size and distribution. With only a partial survey, it is not certain that the population is stable or increasing. In addition, it is important to develop an understanding of potential conflicts and how they can most easily be minimized.

The Game Commission's website hosts osprey specific pages. During 2015, these pages were viewed 5,460 times. The target audience for these pages is educators, students, and adults interested in wildlife and conservation.

RECOMMENDATIONS

1. Develop a volunteer monitoring program for osprey productivity in Pennsylvania.
2. Evaluate nestling mortality and its impact on osprey population dynamics.
3. Assess osprey status in Pennsylvania, with the Ornithological Technical Committee.
4. Reduce threats associated with osprey use of structures for nesting and resting, especially energy and communication structures.
5. Evaluate current permitting procedures to determine effects on future nesting of osprey in immediate area of activity.
6. Incorporate osprey nest and habitat protection in comprehensive game land plans.

LITERATURE CITED

- Brauning, D. W. 2012. Osprey, *Pandion haliaetus*. Pages 138–139 in A. W. Wilson, D. W. Brauning, and R. S. Mulvihill, editors. Second Atlas of Breeding Birds in Pennsylvania. Pennsylvania State University Press, University Park, USA.
- Master, T, S. Cannon, P. Barber and D. Gross. 2016. Management of the Osprey (*Pandion haliaetus*) in Pennsylvania, Ten Year Plan (2015-2025). Pennsylvania Game Commission, Harrisburg, USA.
- Poole, A. 1989. Ospreys: a natural and unnatural history. Cambridge University Press, Cambridge, United Kingdom.

Table 1. Active Osprey nests identified in Pennsylvania during the 2015 breeding season.

Watershed Drainage		
HUC6	Nests	Observation sources
Upper Delaware	32	PGC staff and volunteers
Lower Delaware	12	PGC staff and volunteers
Upper Susquehanna	17	USACE and volunteers
West Branch Susquehanna	1	volunteer
Lower Susquehanna	10	PGC staff and volunteers
Allegheny	1	USACE
Upper Ohio – Beaver	3	volunteers
Monongahela	1	volunteer
Total	77	

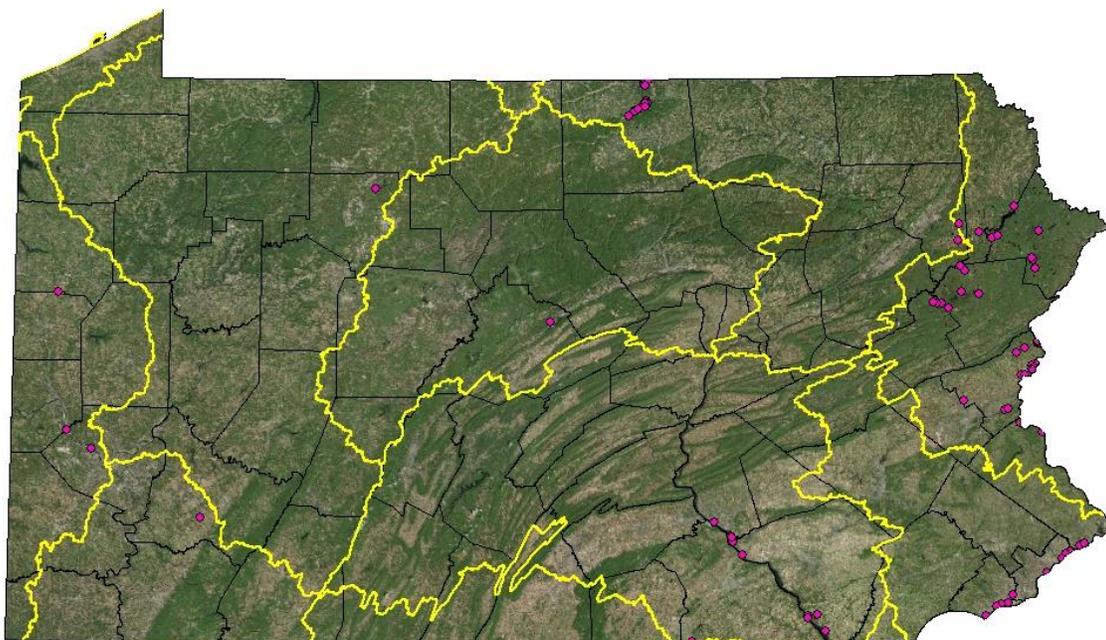


Figure 1. Osprey nests reported during the 2015 breeding season in Pennsylvania, yellow lines indicate the boundaries of the secondary drainages used to define clusters.