

**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 January 2014 to 31 December 2014

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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ABSTRACT This project monitors osprey (*Pandion haliaetus*) nesting activity in Pennsylvania. Increasing geographical distribution and population numbers suggest that the species may soon justify upgrading to another conservation status appropriate to its improving security. Nesting observations were opportunistically collected from staff, volunteers and e-bird contributors for the 2014 breeding season, identifying 83 active nests in 20 counties. Osprey activity is concentrated near reservoirs as well as flowing water and tended to use artificial structures such as communications towers, transmission towers and osprey platforms for nesting. This species benefits opportunistically from some human activities and habitat modifications. The public's interest in this charismatic raptor is demonstrated by 5,895 views of the agency's osprey web pages during 2014.

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 until 2005 from sources that monitored locally nesting pairs, including East Stroudsburg University, the Moraine Preservation Fund, the Army Corp of Engineers in both the Tioga/Hammond-Cowanesque Office and Pittsburgh District, and volunteer observers. The Second Pennsylvania Breeding Bird Atlas (PBBA) collected nesting osprey observations statewide, but was not a comprehensive nesting survey nor documented productivity. The most recent comprehensive survey was conducted in 2010, with opportunistic documentation of active nests compiled other years.

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.

Pennsylvania e-bird, <http://ebird.org/content/pa/>, provides a new opportunity to identify osprey nests that individuals have located but not submitted to the Pennsylvania Game Commission (PGC). For 2014, 49 nests were reported directly to PGC, an additional 34 were identified in e-bird including 7 additional counties with breeding activity. Pennsylvania eBird reports don't necessarily provide all the essential information but they provide locations that can be added to regional lists for future monitoring.

RESULTS

The Second PBBA provided a major revision of osprey nesting through 2009 (Brauning 2012). During that 6-year project, ospreys were 'confirmed' breeding in 90 atlas blocks, many of which contained multiple nests. There was a tenfold increase in the number of blocks (9) with confirmed osprey nests from the first to second Atlas. Osprey were recorded in 142 blocks during the first Atlas and increased to 269 blocks in the second Atlas. Increases in block records do not indicate population change as well as confirmed nesting data. Interpreting results is further complicated by osprey mobility, nesting adults foraging over long distances and non-breeding adults.

In 2014, 83 active nests were reported in 20 counties (Table 1). 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 2014 these results are helpful to evaluate osprey recovery and success in the state. There were several areas in the state with a history of osprey nesting, but no activity reported in 2014, specifically Chester, Clearfield, and Lehigh counties. 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, especially Monroe County. Every effort will be made to survey these sites in the future.

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, Haffner and Gross 2010, Poole 1989).

Osprey recovery appears to be progressing well. However, to justify changing the conservation status of osprey requires a robust data set, clearly showing current population and distribution. In addition, it is important to develop an understanding of potential conflicts and how they can most easily be minimized.

The PGC's website hosts osprey specific pages. During 2014, these pages were viewed 5,895 times. The target audience for these pages is educators, students, and adults interested in wildlife and conservation. In addition an osprey distribution from Second Pennsylvania Breeding Bird Atlas is available at: <http://www.pabirdatlas.psu.edu/>.

RECOMMENDATIONS

1. Finalize and approve management plan including recovery objectives and technical content.
2. Review and assess all osprey survey data to identify gaps in coverage.
3. Develop a volunteer monitoring program for osprey productivity in Pennsylvania.
4. Evaluate nestling mortality and its impact on osprey population dynamics.
5. Assess osprey status in Pennsylvania, with the Ornithological Technical Committee.
6. Reduce threats associated with osprey use of structures for nesting and resting, especially energy and communication structures.
7. Evaluate current permitting procedures to determine effects on future nesting of osprey in immediate area of activity.
8. Incorporate osprey nest and habitat protection in comprehensive game land plans.
9. Determine sufficient survey effort, both temporally and geographic, to monitor nesting activity and population trend.

LITERATURE CITED

- Brauning, D. W. 2012. Osprey, *Pandon 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.
- Haffner, C. and D. Gross. 2011. Project Annual report number 71701, Osprey Nest Surveys. 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 2014 breeding season

County	Nests
Alleghney	3
Bucks	5
Butler	6
Carbon	2
Centre	2
Crawford	3
Dauphin	1
Delaware	9
Elk	3
Erie	1
Forest	1
Lancaster	7
Mckean	6
Mercer	8
Northampton	16
Philadelphia	2
Tioga	3
Wayne	1
Westmoreland	1
York	3
Total	83