# The 2017 Osprey Project in New Jersey

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*Sixteen year old male osprey (band # 788-45514) who nests on the Delaware Bay. April 2017. photo by Brian Kushner*

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NEW JERSEY DIVISION OF
**Fish and Wildlife**

CONSERVE WILDLIFE
FOUNDATION OF NEW JERSEY

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This year a statewide census of nesting ospreys was conducted. It followed the same successful census of 2013, without the use of manned aircraft, where citizen scientists or "Osprey Watchers," biologists, and specially trained volunteers recorded activity at nest sites. As you may know, all known osprey nests are published online, via **Osprey-Watch.org**. Our goal for the census was to collect as much data as possible, to determine a more accurate size of the statewide population. This work would not be possible without the hard work and determination of our Osprey Project volunteers and many Osprey Watchers. We can't thank them enough for all their efforts.

Historically speaking, previous censuses were conducted using manned aircraft (in the 1980s to 2009) to survey large areas of the coast twice during the nesting season. Today, surveys begin upon spring arrival, where citizen scientists record activity at known nest sites. Osprey Watchers help contribute data on nests outside of our typical ground survey areas and help fill in data gaps. Ground surveys (by boat) of more densely populated nesting colonies occur in late June and early July. These surveys are timed to occur during the nestling period, or when the young are old enough to be visible from the ground (around 3-4 weeks old) and not capable of flight. Nests are typically accessed using an extension ladder or viewed from a distance with optics. The presence of adults and young is recorded and the young are banded for future tracking.

*WCC Volunteer Wayne Russell carries a ladder on the salt marsh in Wildwood, NJ.*

Despite New Jersey being the most densely populated state, it holds tremendous diversity in preserved open space, especially our coastal salt marshes. The preservation of these wetland areas has played a huge role in the recovery of the osprey population in New Jersey. Today, they are home to the majority of ospreys (86%) who nest along the Atlantic Coast. Osprey nests define our coast and colonies are located along the entire coast from Sandy Hook to Cape May and west on the Delaware Bayshore up the Maurice River to Salem. This year a total of 668 active nests were recorded in New Jersey, with 75 of those being new nests from various regions of the state. This is well above the historic pre-DDT estimate of 500 nesting pairs and goes to show that ospreys and humans can coexist in New Jersey as long as we continue to protect wetland areas and conserve our natural resources, like forage fish, that ospreys need to thrive. The largest population gains in the state, from 2013 to 2017, were observed in both Monmouth and Ocean Counties, from 130 in 2013 to 207 in 2017.

*Osprey Project intern, Tony K. checks a nest on Herring Island, B. Bay during a ground survey.*

This is largely due to the increased survey effort from Osprey Project intern Tony Kono, who conducted this work as a project for the Rutgers Environmental Steward program. He surveyed 150 nests in Monmouth and N. Ocean Counties, an area where traditional ground surveys were not conducted every year. Tony recorded a total of 82 active nests (15 of which were new) that produced a total of 91 young. It's clear that without Tony's dedication to surveying all nests in this region, this years's census would not have been successful.

During ground surveys, our team of specially trained volunteers record data on nests in their respective survey areas, including the number of young, age, band #, and condition of the nesting platform. If the young are old enough to be banded, a USGS aluminum, lock-on bird band is fitted on their leg. On Barnegat Bay, young who are old enough to be banded (>3 weeks old) are fitted with a red auxiliary band with an alpha-numeric code, on their right leg. Red bands have been used since 2014, with 261 fielded to date. Lastly, during surveys, persistent plastic marine debris is removed and collected from nests to avoid potentially life threatening entanglement or suffocation of adults or young.

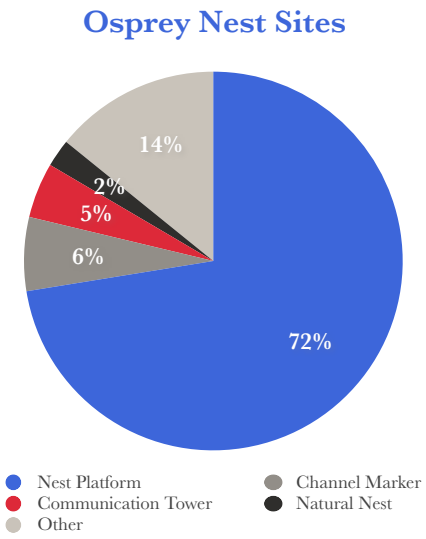
## Highlights

*A new nest in High Bar Harbor, NJ.*

As with previous years' surveys, all major nesting colonies, along the Atlantic Coast and Delaware Bay, were surveyed by specially trained volunteers and staff from late June to mid-July. In 2017, a total of 668 active nests were recorded, a new all-time state record, up from 542 recorded during the last census in 2013. Nest outcome was determined in 78% of the active nests surveyed, 449 on the Atlantic Coast and 70 along the Delaware Bay. With this data, we can calculate the productivity rate, which is a measure of the health of the population. In 2017, the statewide productivity averaged 1.72 young/active (known-outcome) nest, down slightly from 2016 (1.78), but consistent with what we've observed over the past decade. The Delaware Bay productivity remained above the Atlantic Coast average at 2.01 vs. 1.67 young/nest, both well above the minimum of 0.8 young/nest to maintain the population.

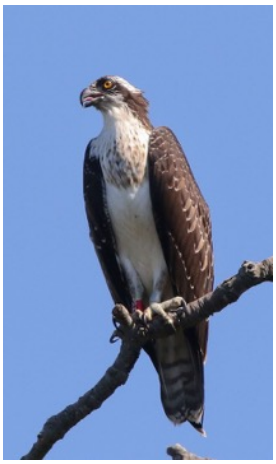
*CWF Student Intern Adam Cartwright climbs up to a nest on a man-made nesting platform in Little Egg Harbor, NJ.*

An astounding 892 young (751 in the Atlantic region and 141 in the D. Bay region) were recorded this year, a new milestone in the Project's history. A total of 408 (46%) were banded (302 in Atlantic region and 106 in D. Bay) by volunteers and staff with USGS aluminum leg bands for future tracking. Nineteen banded birds were encountered in 2017 from New Jersey, Maryland, and Virginia; in Aruba, Antilles, and Venezuela. The most exceptional find was a 16 year old male who is the oldest living osprey to ever be reported in New Jersey (see front cover).




The productivity of nesting ospreys can be influenced by many different factors, including age/experience of the adults, nest site/location, prey availability and weather. As we've mentioned in previous years, weather plays a leading role in the overall success of a nest attempt. Cool, wet conditions during egg laying and incubation can affect hatching rates and strong storms during nestling period may reduce fledging success. This year weather did not play a large role. Temperatures this spring and summer were above average to normal, with April being the warmest ever recorded. Precipitation was slightly above the average during all summer months except June. Luckily there were no significant severe weather events this summer which can cause isolated nest failures. We've worked hard to ensure that nest platforms are built to withstand severe weather events.

*Osprey 79/D: Banded on July 5 behind LBIF in Loveladies, NJ. Photographed in Navarre, Florida on Sept. 7, 2017 by Ron Norton.*



*Osprey 55/H: Banded on July 18 at a nest on a channel marker off LBI. Photographed in Cape May on Sept. 15, 2017 by Michael O'Brien.*


*Osprey 25/H: Banded on July 9 off LBI. Photographed in Cape May on Oct. 8, 2017 by C&C Saladin.*

Around 72% of all ospreys nesting in New Jersey rely on these man-made nesting platforms. It is our mission to ensure that these platforms are maintained to ensure ospreys have secure sites to nest and raise their young. It is extremely important that everyone who wants to help ospreys, follow our nest platform plans to ensure that the structure is built to withstand the harsh weather conditions found along the coast of New Jersey.

## Project RedBand

Our osprey re-sighting project continued this year as we enlisted another 106 more Barnegat Bay ospreys into the elite, Project RedBand group. This year we were intent on deploying more bands than any other year in the Projects history and we succeeded. Of the 106, 43 young were banded at nests inside Sedge Island WMA. The remaining 63 were banded in areas which surround Sedge on Barnegat Bay from Mantoloking south to Tuckerton. During nest surveys we also attempted to identify red banded birds with the naked eye and then use binoculars and telephoto lenses to read the band; however, this year, we did not encounter any red banded adults. Since this project has only been active since 2014 with only 261 total bands used, we aren't surprised by the lack of re-sightings of adults yet.

Four "hatch year" red banded ospreys were re-sighted or recovered during fall migration. Osprey 79/D was re-sighted (live) in Woodlawn Beach, Florida on 9/7; osprey 55/H was re-sighted (live) in Cape May on 9/15; osprey 25/H was re-sighted (live) in Cape May on 10/8; and osprey 78/D was recovered (dead) on 10/8 in High Bar Harbor. Some might recall the trials and tribulations of 78/D, named "Chump" who was **rescued, rehabilitated, and released**. As always, bands should be reported to USGS here: **reportband.gov** an on our website to receive a reward: **conservewildlifenj.org/redband**

For updates from the field, check out the New Jersey Osprey Project on Facebook at **facebook.com/njospreyproject**. For platform plans, a platform construction tutorial, project info, or to donate to help fund this project visit: **conservewildlifenj.org**.

**Project Staff:** Kathy Clark, Ben Wurst, and Larissa Smith

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*Three osprey hatchlings in their nest on Barnegat Bay. photo by Northside Jim.*

*Thanks to everyone who donates to Conserve Wildlife Foundation of NJ, contributes to the Endangered and Nongame Species Program through the Check-Off for Wildlife on their NJ State Income Tax, and by purchasing Conserve Wildlife License Plates!*

*Funding also provided by the U.S. Fish & Wildlife Service through State Wildlife Grants, with matching contributions from Osprey Project volunteers.*

**Table 1.** Osprey nesting and productivity in 2017 in all major nesting areas. Productivity was determined by ground surveys in June-July. Productivity rates in 2014-2016 provided for comparison.

| | | | | | | *Previous Years* | | |
|---|---|---|---|---|---|---|---|---|
| Nesting Area | # Nests | Known-Outcome Nests | # Young | # Banded | Production 2017 | 2016 | 2015 | 2014 |
| Delaware River & North Jersey | 12 | 10 | 15 | n/a | 2 | 2 | 2.00 | n/a |
| Hackensack-Hudson Rivers | 10 | 8 | 11 | n/a | 1.38 | 0.60 | 1.00 | 1.20 |
| Raritan Bay area (w/ Cheesequake) | 43 | 26 | 47 | 5 | 1.81 | 1.77 | 1.93 | 1.92 |
| Monmouth County | 66 | 52 | 76 | n/a | 1.46 | 1.91 | 1.27 | 2.00 |
| Barnegat Bay | 112 | 86 | 115 | 63 | 1.34 | 1.78 | 1.33 | 1.48 |
| Sedge Islands WMA | 29 | 27 | 55 | 43 | 2.04 | 2.18 | 1.65 | 1.05 |
| Great Bay to Atlantic City | 81 | 48 | 70 | 24 | 1.46 | 2.05 | 1.46 | 1.84 |
| Great Egg Harbor/Ocean City | 77 | 71 | 135 | 89 | 1.90 | 2.12 | 1.83 | 2.30 |
| Sea Isle City | 31 | 21 | 41 | 20 | 1.95 | 1.46 | 1.87 | 2.43 |
| Avalon/Stone Harbor Bays | 74 | 63 | 119 | 56 | 1.89 | 1.51 | 1.75 | 2.12 |
| Wildwood Bays & Cape May | 59 | 37 | 67 | 2 | 1.81 | 1.28 | 1.88 | 2.46 |
| Delaware Bay & Maurice River | 74 | 70 | 141 | 106 | 2.01 | 1.93 | 2.11 | 2.30 |
| TOTAL of Study Areas | 668 | 519 | 892 | 408 | 1.72 | 1.78 | 1.74 | 2.02 |
| | | | | | | | | |
| D. River Basin/N. Jersey | 22 | 18 | 26 | n/a | | | | |
| Atlantic Coast only | 572 | 449 | 751 | 302 | 1.67 | 1.66 | 1.66 | 1.97 |
| Delaware Bay only | 74 | 70 | 141 | 106 | 2.01 | 2.11 | 2.11 | 2.32 |
| | | | | | | | | |
| Total Checked Statewide | **668** | 519 | 892 | 408 | **1.72** | 1.78 | 1.74 | *542 (# nests)* |

**Figure 1.** Osprey nesting population (bar) and productivity (line) 1984-2017 in New Jersey.