



## The 2011 Osprey Project in New Jersey

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The New Jersey osprey population had another amazing year. We recorded an average of 2.07 young per active nest, a new record. While we have not done a statewide census since 2009, when we documented 486 nesting pairs, new pairs found in the last few years would put the statewide population above 500 pairs. This is a gratifying recovery of a majestic bird that was decimated by chemical accumulation in the DDT period of 1946-1972. We credit the early recovery efforts, environmental and water-quality improvements, and efforts by concerned groups and citizens who work to accommodate ospreys across their range in the state.

With the continued improvements in the osprey population, ENSP will be reducing the monitoring effort, at least the part that is most financially demanding. The aerial survey will be dropped to once every four years, so it's now scheduled for 2013. However, we are able to keep "our finger on the pulse" of the population by annual nest checks at the major colonies. This year, dedicated volunteers, ENSP biologists, and Conserve Wildlife Foundation (CWF) staff conducted surveys that covered about 70% of the known population range. These surveys, recording the active nests and number of chicks produced, are one of the best ways to identify emerging problems at the earliest stage.

An important factor in the successful reproduction of ospreys is the weather. It affects both nesting success and foraging success. Temperatures during the nesting season (April through July) were well above normal and precipitation was below average in the May-July period when young are vulnerable. Nest success was high in almost all colonies (see all the details in Table 1). Not only are the mild temperatures good for ospreys, but calm conditions made for improved water clarity and visibility of fish. Good fishing generally means larger broods, which was proven out this year. Banders recorded four nests that produced four young each, quite a rare occurrence.

In late June and early July volunteers and staff surveyed all the major nesting colonies along the Atlantic Coast and Delaware Bay. We checked a total of 345 nests this year, more than usual. Data from 295 known-outcome nests (237 on the Atlantic Coast and 58 on Delaware Bay) were recorded. Productivity averaged 2.07 young per active nest, which is well above the minimum for a stable population (which is 0.80 young/active nest). A record-setting 612 young were produced from 295 known-outcome nests. A total of 414 young (another record) were banded by volunteers and staff with USGS leg bands for future tracking. On July 3<sup>rd</sup> two nestlings were found below a nest that was damaged during a strong storm in Monmouth County. They were rescued by local animal control officers and brought to Toms River Avian Care for treatment, where they were found to be healthy with no major injuries. We quickly identified two nests where we could safely foster the young. The next day we banded and placed the two birds in nests, one in Tuckerton and one in Absecon. A future visit revealed that the foster parents had accepted the young and raised them as their own.

For the past two years staff and banders have collected feather samples from young ospreys to assist a study being conducted by the Academy of Natural Sciences in Philadelphia. A researcher is using stable isotopes to look into the diet of ospreys and changes in the natural environment over time (from 1860 to present). The study will examine the isotope profiles across the local range of ospreys and how they have changed over time. We contributed 102 samples in 2010 and another 79 in 2011. This study may shed light on how osprey diets vary among inland, Delaware Bay and Atlantic coast regions of New Jersey.

In other news, we are excited to be working on a wireless high resolution osprey cam that we are planning to install before the 2013 nesting season. Conserve Wildlife Foundation staff have raised half of the funds needed for the project, which would also help develop an educational program and a working group to help better manage the growing number of osprey nest structures in New Jersey. For more information or to donate to the project, visit: [www.ConserveWildlifeNJ.org](http://www.ConserveWildlifeNJ.org).

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

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Visit [http://www.NJFishandWildlife.com/ensp/osprey\\_nest\\_plcmnt.htm](http://www.NJFishandWildlife.com/ensp/osprey_nest_plcmnt.htm) for detailed plans on how to construct and properly place a nesting platform for ospreys.

**Thanks to everyone who 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 2011 in all major nesting areas. Productivity was determined by ground surveys in June-July. Productivity rates in 2008-2010 provided for comparison.

Nesting Area	# Nests	Known-Outcome Nests	# Young	# Banded	Production 2011	Previous Years		
						2010	2009	2008
Delaware River & North Jersey				n/a		n/a	n/a	n/a
Hackensack-Hudson Rivers	3	3	8	n/a	2.67	n/a	n/a	n/a
Raritan Bay area (w/Cheesequake)	16	13	20	11	1.54	1.64	1.54	1.67
Monmouth County	17	14	28	n/a	2.00	1.86	1.25	n/a
Barnegat Bay	28	25	47	27	1.88	1.91	1.78	2.25
Sedge Islands WMA	25	21	50	40	2.38	1.29	1.57	1.75
Great Bay to Atlantic City	49	43	91	75	2.12	2.05	1.53	2.09
Great Egg Harbor/Ocean City	49	44	107	67	2.43	2.38	1.71	1.72
Sea Isle City	13	11	21	10	1.91	2.07	1.06	1.55
Avalon/Stone Harbor Bays	53	45	91	68	2.02	1.88	1.45	1.76
Wildwood Bays & Cape May	20	18	27	5	1.50	1.50	1.39	1.88
Maurice River & Estuary Marshes	64	50	103	102	2.06	2.10	1.78	2.11
Salem Co./ Artificial Island / Delaware	8	8	19	9	2.38	2.50	1.81	1.80
<b>TOTAL of Study Areas</b>	<b>345</b>	<b>295</b>	<b>612</b>	<b>414</b>	<b>2.07</b>	1.97	1.58	1.88
Atlantic Coast only	273	237	490	303	2.07	1.92	1.53	1.82
Delaware Bay only	72	58	122	111	2.10	2.18	1.78	2.05
<b>Total Checked Statewide</b>	<b>345</b>	<b>295</b>	<b>612</b>	<b>414</b>	--		486	--

**Figure 1.** Osprey nesting population (bar) and productivity (heavy line) 1984-2011 in New Jersey.

