

New Jersey Department of Environmental Protection
Fish and Wildlife
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**Peregrine Falcon
Research and Management Program
In New Jersey, 2022**

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New fledgling at the Hudson River, July 2022. Photo by Muhammad Faizan©.



Program Objective: *To enhance the population of the peregrine falcon (Falco peregrinus anatum), restoring them to a self-sustaining level throughout their range in New Jersey.*

Summary of Results

The 2022 New Jersey peregrine falcon population remained unchanged with 43 total pairs occupying sites, and 38 known to lay eggs. Successful pairs dropped slightly with 26 producing 61 young, for a productivity rate of 1.61 (known) young per active nest and a success rate of 68% (Table 1). A brief summary of data collected during the 2022 nesting season follows:

- ❖ The coastal region (Atlantic and Delaware Bay coasts) had 18 occupied sites but only 14 active pairs that produced 1.93 young/nest and 44% of the young produced statewide. Most coastal nests are on towers and buildings.
- ❖ The Delaware River region (Salem County and north) supported seven pairs that produced 2.29 young per nest (16 young). Most nests are on bridges, with one building and one “other” structure also in this region.
- ❖ The urban region of northeastern NJ supported eight nests that produced 1.25 young/nest with 10 young fledged. Most of these nests are on bridges with two on buildings.
- ❖ Natural cliff and quarry sites in northern NJ supported nine pairs that produced 0.89 young/nest (8 known fledged) and had the lowest success rate at 44%.

We were able to band 49 of the 62 young produced (61 fledged), with an aluminum federal band and a bicolor (black over green) band engraved with an alpha-numeric code. The 13 young we were unable to band fledged from sites that could not be accessed at the appropriate time.

In recent years we documented nestling mortalities from lead-poisoned prey. As a result, we have collected blood samples at banding time in 2018-2022, which Dr. Erica Miller tested for lead. The results ranged from <0.001 to 0.164 ppb. Nests with higher lead exposure tended to be urban sites (mean = 0.068 \pm 0.037 ppb) compared to coastal sites (mean = 0.024 \pm 0.026 ppb). These lead levels are relatively low but may affect health and development of very young chicks. We will continue monitoring to understand the risk and possible sources of lead for urban peregrines.

Pairs that nested on natural and quarry cliffs numbered nine this year with just four successful in fledging a total of eight chicks (known-outcome). Access to some sites has made close monitoring difficult or impossible. Weather and intense storms did not seem to cause widespread failures at cliffs, however, nest success and productivity remained lower than the other regions.

The [webcam](#) on the roof of Union County courthouse provided excellent views, and [cameras](#) on two Delaware River bridges were also active.

ENSP biologists monitored peregrine sightings near beach-nesting bird colonies throughout the season, on the lookout for individual peregrines that resided for extended periods. The ENSP is committed to monitoring for problem situations and devising corrective action to protect sensitive beach-nesting bird populations from predation.

Resightings and Recoveries

We used trail cams, cameras, and optics to read the leg bands on 40 nesting adults. A minimum of 14 adults were unbanded and thus unidentifiable to origin and age. The two oldest females were 13 years of age. The median age of males and females was 7.2 years for 14 males and 17 females. The information that these identifications provide is valuable for relating peregrine origin and age to nest success, site fidelity and turnover rate in the population.

In addition to resightings at NJ nest sites, we have reports of peregrines sighted here and elsewhere:

- 00/AM, a 2011 AC male, was found 8/25 in AC and euthanized for injuries. He may have nested near the inlet.
- 32/AM, a 2013 Union Co. Courthouse male, was sighted on cam at Parsonage Island nest, Long Island.

- 39/BC, a 2015 Long Island female, was photographed 1/4 in Ocean Gate.
- 56/AN, a 2013 Sea Isle female, was seen 3/20+4/17 in Manahawkin, and 4/1 at Egg Harbor Bay.
- 56/BC, a 2016 Manhattan female, nested on Ben Franklin Bridge (NJ) in 2021+2022.
- 60/Y, a 2006 Tuckahoe female, nested on Phila City Hall in 2022.
- BD/57, a 2017 Manahawkin female, was sighted in Stone Harbor 5/26.
- BD/66, a 2018 AC female, was photographed 4/3 on Surf City water tower, and Ship Bottom water tower.
- BE/14, a 2017 Tuckahoe male, was sighted in Stone Harbor.
- BE/27, a 2018 Whitman Bridge male, nested in Wilmington, DE, 2022.
- BE/50, a 2018 Seaview male, was territorial at AC Sheraton in 2022.
- BE/96, a 2020 Stafford male, was sighted 4/2 in Surf City and 5/9 in Manahawkin.
- BH/18, a 2021 Stone Harbor male, was photographed 9/20 at Cape May.
- BH/27, a 2021 Sedge Island male, was sighted 4/16 in Manahawkin.
- BH/33, a 2022 AC male, was photographed 8/22 at Forsythe.
- BH/45, a 2022 Seaview male, was photographed 11/4 at Marco Island, FL.
- BH/39, a 2022 Whitman Bridge male, was photographed 11/24 at Amico Island, NJ.
- BH/43, a 2022 AC male, was photographed 11/25 and 12/21 at Forsythe.
- BH/49, a 2022 Stafford male, was photographed 8/22 at Forsythe.
- BM/11, a 2019 Sedge female, was sighted in Manahawkin 4/16 and 4/21.
- BM/15, a 2019 Stone Harbor female, nested in Merrick, NY, in 2022.
- BM/16, a 2019 Stone Harbor female, was photographed 1/19 at Ponquogue Bridge in Southampton, NY.
- BM/18, a 2019 Jersey City female, nested on a cliff in MA in 2022.
- BM/31, a 2020 Ocean Gate female, was photographed 1/6, 1/16 and 2/13 at Great Bay Blvd.
- BM/37, a 2020 Atlantic City female, was photographed on 01/16 at Pt Pleasant Beach; observed 3/17 at Jones Beach, Long Island; and Brick 6/22. She remained in Point Pleasant in July-August.
- BM/42, a 2020 Bayside female, was sighted 2/3 in Assateague, VA.
- BM/50, a 2020 female, nested at the Tacony-Palmyra Bridge in in 2022.
- BM/54, a 2020 Manahawkin female, was photographed 2/23 at Holgate.
- BN/05, a 2022 Stafford female, was captured at Cape May on 9/12, and photographed 9/19 at Great Bay Blvd.

Conclusions

The peregrine population remained about the same in 2022 but nest success and productivity was lower than usual. Thirty-seven percent of nests were in the coastal region and produced 45% of chicks with an overall 71% success rate. The best success was in the Delaware River nests, most on bridges, where all 7 nests were successful in producing 16 young. Eight urban sites produced 1.25 young per nest with 63% successful nests. Natural sites had the lowest success rate at 44% and 0.89 chicks per active nest. The low success rate at cliff sites could not be explained by severe weather events, and some sites were simply unoccupied. This year proved again that proper management of nest sites are on buildings and bridges is important to annual success statewide, and providing safe, undisturbed nesting sites continues to be significant for a stable and productive population.

Staff and project volunteers continued to use our online data management system, *NestStory*TM. NestStory enables us to track all nests through each nesting season, and to track individually-marked birds resighted here and elsewhere. We documented banded birds wherever possible, and found relatively low turnover rate of nesting adults at NJ nests. Banding and resighting data will be used in the coming year to study the population demography and dispersal.

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Some Resightings:



Clockwise from top left: BD/98 in April 2022 by Mike Girone. BM/37 at Point Pleasant (by unknown). BH/33 in Aug 2022 by Rich Nicol. BH/49 in Aug 2022 by Erica Heusser.

Table 1. Site-specific results of peregrine falcon nesting in New Jersey by region, 2022.

Site Name	Occupied	Active	Eggs	Young Hatched	Young @ Band Age	Young Fledged	2022 Comments	Yng/Active @Fledging	% Successful
Atlantic City–Water tower	Y	Y	5	4	4	4			
Atlantic City-Sheraton	Y	N					Pair observed in S signs.		
Atlantic City – Taj/ Hard Rock	U						Not checked		
Bayside Prison Water Tower	Y	Y	U	U	2	2			
Drag Island 1	Y	Y	3	3	3	3	Re-nest successful.		
Drag Island 2	Y	Y	?	0			BL England		
Egg Island WMA/Dividing Creek	N	N					Igloo removed 2/17/21.		
Forsythe NWR/Barneget Tower	Y	Y	4	U	0		Suspect raccoon predation		
Forsythe /Seaview	Y	Y	4	4	4	4			
Hilton/Atlantic Club	Y	Y	4	2	1	1			
Marmora WMA	Y	Y	5	4	3	3	1 chick moved		
Ocean City-Longport Bridge	Y	Y	U	U	1	1			
Cape May Ocean Drive bridge	N	N							
Ocean Gate	Y	Y	5	3	3	3			
Route 35 Bridge-Belmar	N	N							
Route 72 /Bonnet Island	Y	Y	4	4	4	4			
Rumson-Oceanic Drive Bridge	Y	N?							
Sedge Island WMA	Y	Y	3	0					
Stone Harbor	Y	Y	3	0	1	1			
Swan Bay WMA	Y	N	U	0			Pair obs 5/15		
Tuckahoe WMA	Y	Y	4	0	1	1	Crow pred; fostered 1		
Wildwood Crest-Grand Condo	Y	N					Single female.		
SUBTOTAL COASTAL SITES	18	14		24	27	27		1.86	71%
Ben Franklin Br.	Y	Y	4	3	2	2	NJ anchorage ledge box.		
Betsy Ross Bridge	Y	Y	4	4	4	4			
Bordentown	Y	U							
Burlington-Bristol Br.	Y	Y	3	2	1	1	1sts nest failed.		
Logan Generating Plant	Y	Y	4	4	2	2			
Paulsboro Refinery	N	N							
Salem Nuclear	Y	Y	U	U	1	1	Nests on crane, pole		
Tacony-Palmyra Br.	Y	Y	4	3	3	2	1 died on bridge		
Walt Whitman Bridge	Y	Y	4	4	4	4	NJ tower (2 nd pr on PA).		
SUBTOTAL DELAWARE RIVER	8	7			17	16		2.29	100%
Natural Site C-1	Y	Y	0	0	0	0			
Natural Site C-2	Y	Y	0	0	0	0			
Natural Site C-3	N	N							
Natural Site C-4	N	N							
Natural Site C-5	Y	Y	U	U	0	0			
Natural Site C-6	Y	Y	4	4	4	4			
Natural Site C-7	N	N							
Natural Site C-8	N	N							
Natural Site C-9	Y	Y	U	1	1	1			
Natural Site C-10	Y	Y	U	U	2	2			
Natural Site C-11	Y	Y	0				Pair obs		
Natural Site C-12	Y	Y	U	U	U	1	June sighting of =>1 juv		
Natural Site C-13	U	U	U				eBird data in 2020.		
Natural Site C-14	Y	Y	U	U	0	0			
SUBTOTAL NATURAL SITES	9	9		U	7	8		0.89	44%
101 Hudson, Jersey City	N	N							
Boonton Bridge	Y	Y	U	0					
Elizabeth-Union Co Courthouse	Y	Y	4	3	3	3			
Geo. Washington Bridge	NY								
Route 80 Hackensack Bridge	Y	Y	U	U	1	1			
Newark downtown	Y	Y	U	U	1	1			
Newark Bay Br (NJTP or Conrail)	U	U							
NJTP Br/Rahway	N	N							
Pulaski Skyway Bridge	Y	Y	U	U			Pair obs on PS bldg.		
Route 1 Br./Raritan	Y	Y	U	U			Unk		
Route 3 Br./Hackensack (NJDOT)	Y	Y	U	3	3	2			
Rt 46 Br/Little Ferry-Ridgefield Pk	Y	Y	U	3	3	3			
Secaucus-Kearny NJTP Bridge	U	U							
Sewaren Generating Station	N	N							
Trenton-Roebling Bldg	N	N							
Vince Lombardi – NJTP Bridge	U	U							
SUBTOTAL URBAN	8	8		U	11	10	1.38	1.25	63%
TOTALS (NJ Only)	43	38			61	60		1.58	68%