



**Audubon Society
of Rhode Island**

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RHODE ISLAND OSPREY

Welcome to the Audubon Society of Rhode Island's (ASRI) annual Osprey Monitoring Report for the state of Rhode Island (and part of Massachusetts).

The Osprey Monitoring Program was initiated in 1977 by the Rhode Island Department of Environmental Management (RIDEM). The goal was to monitor the state Osprey population as it recovered from the effects of the pesticide DDT used in the 1940s through the 1960s in Rhode Island.

Although DDT had been banned in 1972 the chemical continued to have a negative effect on the Osprey population. In 1976 Osprey were designated as an endangered species. The first statewide count by RIDEM in 1977 yielded only 12 active nests. In the 1940s (before the DDT problem) it was estimated that there were over a thousand nests between Boston and New York. DDT took a major toll on the population of this fish-eating bird. The poison worked its way through the food chain, bio-accumulating in Osprey. The result was very weak eggshells which easily broke when incubated.

Since 1977 the Osprey Monitoring Program has been made possible by efforts of biologists, donors and volunteers who have observed known Osprey nests in Rhode Island and parts of Massachusetts; and carefully recorded data on the number of chicks fledged and status of each nest.

In 2010 RIDEM passed management of the project to the Audubon Society of Rhode Island. Today, over 60 volunteer monitors continue to observe the state's Osprey population. By watching these sentinels, we learn more about wildlife and natural habitats as well as the level of human impact on these special places and unique species. It is a great testament to the dedication of Audubon's volunteer monitors that this citizen-science program continues to thrive.

If you have questions regarding this report or are interested in learning more about the program please contact Jon Scoones at rhodeislandosprey@gmail.com

Photo 1: Betsy Staples, Barrington, RI 10/1/22



Photo 2: Chris Chrispy, 131 Ocean State Drive, 8/6/22

Rhode Island Osprey

The Osprey (*Pandion haliaetus*) population in southern New England has expanded at a rate of nearly 10% per year over the past 50-years. This amazing growth is much cause for celebration, as the species suffered heavily from the effects of DDT. In 1976, the population of this charismatic species plummeted throughout the region and here in Rhode Island. A low of two nests was documented in Rhode Island prior to the species being listed as an endangered species.

This fish-eating specialist nests in a variety of habitats, given that the requisite features of ample fish nearby and predator-free nesting sites are present. Birds are equally at home nesting near fresh and saltwater bodies. In Rhode Island, Osprey benefit from the extensive footprint of the Narragansett Bay, 3,000 acres of saltmarsh habitat bordering the water body and the myriad rivers and streams where shallow foraging grounds abound. The recently completed state bird atlas documented a 700% increase in the Osprey population in the state of Rhode Island in the years since the first atlas, conducted from 1982-1987. The large size and conspicuous nesting and foraging behavior of Osprey make it an ideal subject for monitoring.

ASRI volunteers have documented the number of active and successful nests in the state for the past 12 seasons. This year, volunteers documented 181 active Osprey nests in the state, which produced an estimated 270 fledglings. The most successful nests were detected in South Kingstown, with over 28 fledglings recorded. From a low of only two nests in Rhode Island in the late-1960s to the rapidly growing population we have in the Ocean State today, the Osprey is a shining example of how concerted conservation efforts and effective monitoring plans can lead to the recovery of imperiled wildlife.

Charles Clarkson, PhD. Senior Director of Ornithology, Audubon Society of Rhode Island

2022 Observation Detail

Throughout each season volunteer monitors gather quite a bit of information about Osprey. During the 2022 season monitors submitted over 2,500 observations. These observations covered the status of each nest site, the condition of each nest, the presence or absence of breeding behavior, as well as the number of nestlings and fledgling. At the end of the season the data was compiled by nest site. **For details regarding the breeding status of each nest in Rhode Island, head to www.riosprey.info and look under the heading "Osprey Monitoring Program Reports".**

Glossary of Monitoring Terms

Some terms used in the process of posting observations and summarizing data are unique to this program. Of special note are the terms "active" and "inactive". For the purpose of this program, a nest listed as "inactive" may have had Osprey present, however no breeding behavior was witnessed, or no Osprey were seen at the nest. Conversely, for a nest to be listed as "active" monitors must have witnessed some aspect of breeding behavior.

Breeding behavior: Nest building, copulation, incubation, food hand-off, feeding of nestling or fledgling,

Inactive: Osprey may have been present at the nest, but no breeding-related behavior was observed.

Housekeeping: Breeding behavior was observed but the nest was abandoned mid-season.

Active: Mating, incubation or other breeding behavior was observed.

Successful: Fledgling (s) were observed. This category is a subset of Active nests.

Fledgling: Young bird with flight feathers (as opposed to a chick) was observed.

RHODE ISLAND OSPREY

Summary of 2022 Monitoring Results

Throughout the 2022 Osprey breeding season 63 Osprey monitors from Audubon Society of Rhode Island volunteered a total of 966 hours while monitoring 222 nests across Rhode Island. Of the 222 nests that were monitored, 17 were classified as inactive (no breeding activity observed), and 24 were classified as housekeeping (breeding attempted but not sustained). Of the 181 nests showing breeding activity, 145 were successful, producing a total of 270 fledglings.

For details regarding the breeding status of each nest in Rhode Island, head to www.riosprey.info and look under the heading “Osprey Monitoring Program Reports”.

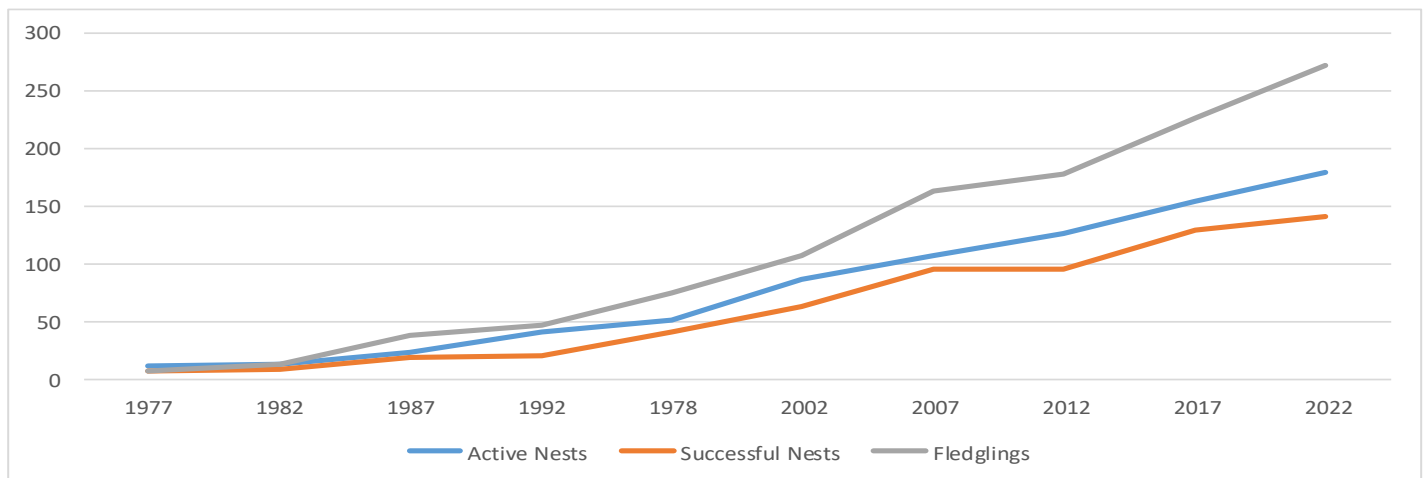
Rhode Island Osprey Program Data 2022

Monitors	63	*Each year some previously monitored nest sites are found to no longer have a nest present. Starting with this report we will no longer include these cases in the “nest sites monitored” category.
Hours Monitored	966	
Previous Sites: No Nest Found	33*	
Nest Sites: Status Known	255	
Nest Sites Monitored	222*	
Inactive Nest Sites (No breeding behavior observed)	17	
Housekeeping Nests (Breeding behavior observed, nest abandoned)	24	
Active Nests (Breeding behavior observed)	181	
Successful Nests (Subset of Active)	145	
Fledglings in RI	270	

Table 1: Summary of RI Osprey Program Data

Rhode Island Osprey Breeding Data 2017-2022

The following graph compares the number of active nests (breeding activity observed), successful nests (fledgling observed) and the number of fledglings observed over the life of the monitoring program. Given the volume of data, the results are shown in five year increments.

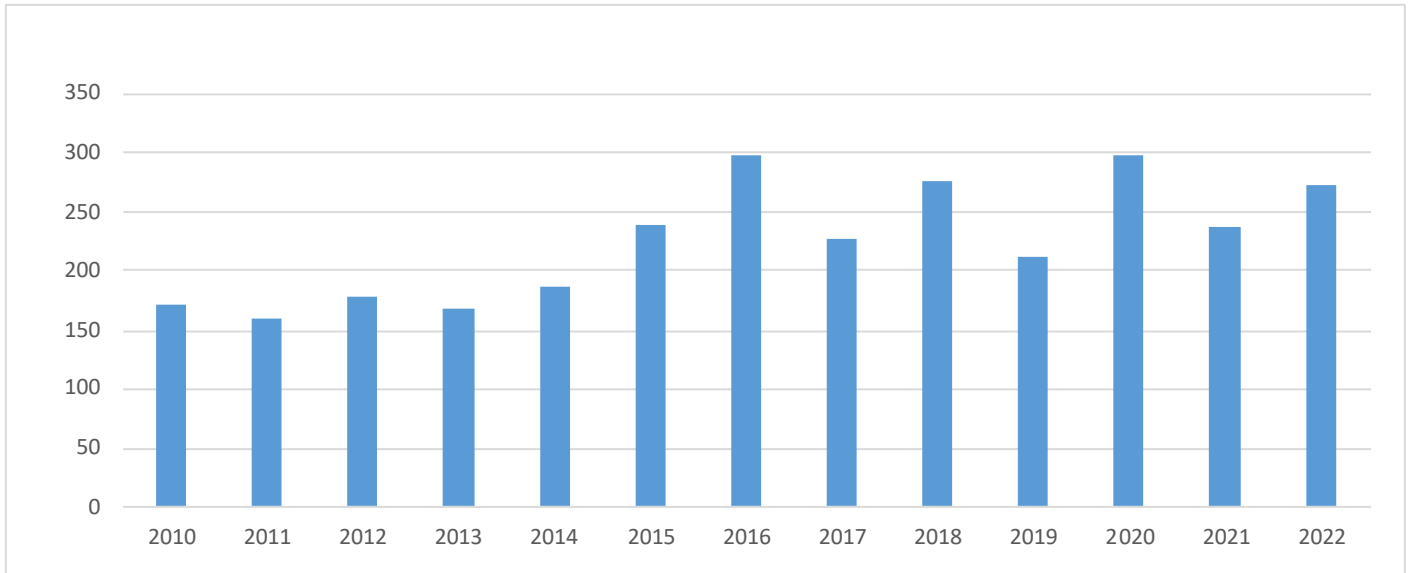


Graph 1: RI Osprey Breeding Data 1977-2022

Rhode Island Osprey

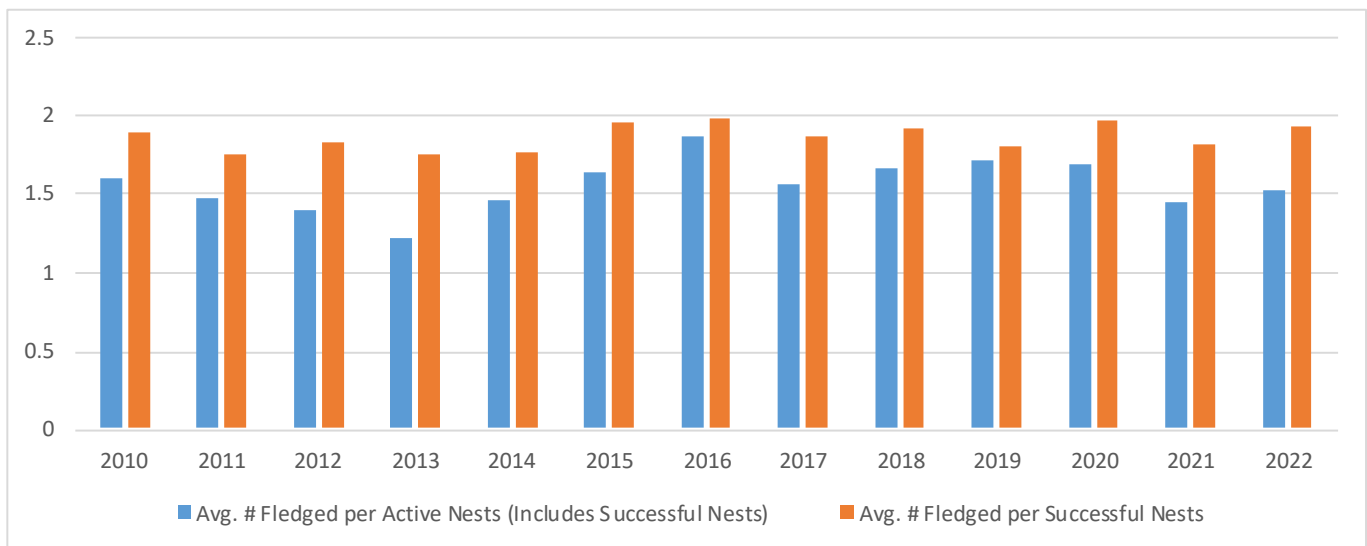
Osprey Breeding Status

During the 2022 breeding season, Audubon monitors observed 270 fledglings in Rhode Island. The number of fledglings observed is dependent on several factors such as the levels of available food (fish) and nesting locations. Other factors include the number of monitors, their access to nests, and their time spent observing nests. In 2022 the number of monitors decreased by 15, however their hours spent monitoring increased by 34 over the previous year. The number of fledglings observed this season (270) is similar to the 275 observed in 2018.



Graph 2: Number of fledglings observed since 2010.

Tracking the number of Osprey that fledge from year to year is important when determining the health of an Osprey population. Studies have estimated that the breeding rate needed to balance adult mortality in New England is between 0.8 and 1.0 fledged young per active nest. In 2022 there were 1.49 fledglings per active nest and 1.86 per successful nest. These results indicate that the Osprey population in Rhode Island is not only self-supporting, but growing.

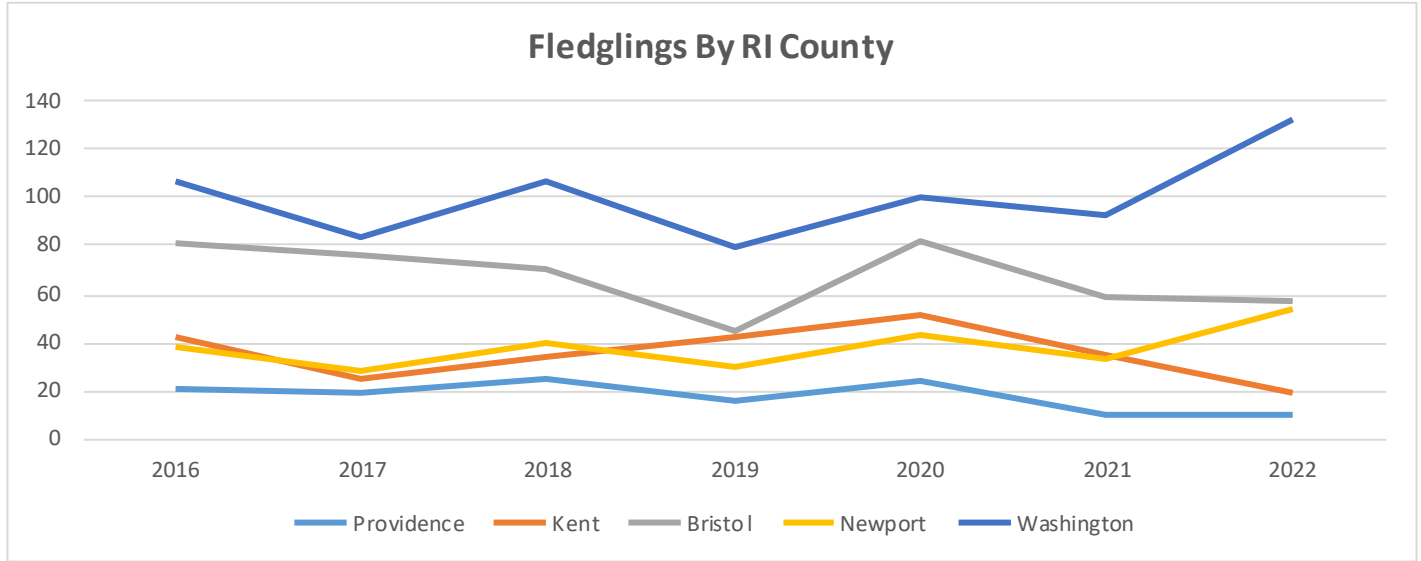


Graph 3: Average Fledglings per Active and Successful nests.

Rhode Island Osprey

Distribution of Osprey Fledglings ty

The graph below shows the distribution of Osprey fledglings across the five counties of Rhode Island from 2016 through 2022.



Graph 4: Osprey Nesting Activity Across Rhode Island 2016-2022



Photo 3: Claire Gruneberg,
Pawtuxet River Electronics Drive, 4/24/22



Photo 4: Jim O'Neil, Colt State Park Chimney, 7/25/22

Rhode Island Osprey

Highlight: Prudence Island Osprey

In this edition of the annual Osprey Report we have highlighted Osprey observations from Prudence Island. The island is home to a protected reserve in Narragansett Bay.

Staff of the Narragansett Bay National Estuarine Reserve (NBNERR) have monitored Osprey nests on Prudence Island for several years. NBNERR is a partnership between the National Oceanic and Atmospheric Administration (NOAA) and the state of Rhode Island's Department of Environmental Management (RIDEM) to promote informed management and sound stewardship of our coastal resources. The following graph shows nesting activity on Prudence Island for the past three seasons. This data was provided by Jonathan Mitchell, an employee of Rhode Island Department of Environmental Management and a NBNERR staff member.

Prudence Island Nest List	Structure	2020 Nest Status	2021 Nest Status	2022 Nest Status
Beach Avenue Chimney	Chimney	Successful	Successful	Successful
Blount East Cedar	Tree	Active	Active	Active
Coggeshall Central Treeline	Tree	Active	Active	Active
Coggeshall Cove North Platform	Platform	Active	Active	Successful
Coggeshall North Cedars	Cedar Tree	No Nest	Housekeeping	Inactive
Gull Point	Cement Block Foundation	Successful	Successful	Successful
Jenny Pond House Roof	House	Not Monitored	Not Monitored	Successful
Nag Marsh Central	Platform	Active	Successful	Successful
Nag Marsh East	Platform	Successful	Active	Successful
Potter's Cove Marsh Platform	Platform	Active	Successful	Active
Power Lines South	Telephone Pole	Active	Active	No Nest - Removed
Providence Point Roadside	Tree	No Nest	No Nest	Active
Prudence Island Ferry Dock	Pilings	Active	Active	Active
Prudence Park Water Tower	Old Water Tower	Successful	Active	Successful
Rossi Crane	Crane	Not Monitored	Not Monitored	Active
Sheep Pen Cove Platform	Platform	Active	Active	Inactive
Sheep Pen Rock	Boulder	Active	Successful	Active
T-Wharf	Telephone Pole	Housekeeping	Active	Active
Weather Station	Platform	No Nest	No Nest	Housekeeping
Wet Meadow North	Tree	No Nest	No Nest	Active

Graph 6: Prudence Island Nest Activity 2020-2022

Rhode Island Osprey

Highlight: Prudence Island Osprey - Nestlings & Fledglings 2020-2022

The following graph shows the number of nestlings and fledglings observed by NBNERR staff at each nest site on Prudence Island over the past three years. We are looking into reasons why the fledgling count almost tripled from 2021 to 2022. Prudence Island and the protected reserve is a unique research location and great place to observe Osprey. To find out more about the great work being done on Prudence Island, head to NBNERR.org.

Prudence Island Nest List	2020 # Nestlings	2020 # Fledglings	2021 # Nestlings	2021 # Fledglings	2022 # Nestlings	2022 # Fledglings
Beach Avenue-Chimney	3	3	1	1	2	2
Blount East Cedar	-	-	-	-	0	0
Coggeshall Central Treeline	0	0	0	0	0	0
Coggeshall Cove North Platform	2	0	0	0	3	3
Coggeshall North Cedars	0	0	0	0	0	0
Gull Point	2	2	1	1	1	1
Jenny Pond House Roof	-	-	-	-	1	1
Nag Marsh Central	0	0	1	1	2	2
Nag Marsh East	2	1	0	0	3	3
Potter's Cove Marsh Platform	0	0	1	1	0	0
Power Lines South	0	0	0	0	0	0
Providence Point Roadside	-	-	-	-	0	0
Prudence Island Ferry Dock	0	0	0	0	0	0
Prudence Park Water Tower	1	1	0	0	2	2
Rossi Crane	-	-	-	-	0	0
Sheep Pen Cove Platform	0	0	0	0	0	0
Sheep Pen Rock	0	0	1	1	0	0
T-Wharf	0	0	2	0	3	0
Weather Station	-	-	-	-	0	0
Wet Meadow North	-	-	-	-	0	0
TOTALS	10	7	7	5	17	14

Graph 7: Prudence Island Nest Activity 2020-2022

Rhode Island Osprey

2022 Monitoring Results: Seekonk & Swansea, Massachusetts

Although the primary mission of program is to survey nests in Rhode Island, for many years volunteer monitors have observed and reported on nests located in Swansea and Seekonk, Massachusetts. Starting in 2016, results for Rhode Island and Massachusetts have been recorded separately. A total of 5 nests were monitored in 2022. Of these 5 sites, 2 nests were inactive and 3 nests were successful. Three other sites were found to have no nests to monitor.

Nest Name	Town	2020 Breeding Status	2020 Fledgling Count	2021 Breeding Status	2021 Fledgling Count	2022 Breeding Status	2022 Fledgling Count
Leavitt / Runnins Road	Seekonk	Successful	1	Active	0	No Nest	
Marnoch Drive	Seekonk	Not Active	0	Unknown		Inactive	
Mink Street	Seekonk	Successful	3	Successful	3	Successful	2
Barneyville Rd	Swansea	Successful	3	Active		Unknown	
George St./Nockum Hill	Swansea	Active	0	Unknown		Successful	3
Merriman's Pond #3	Swansea	No Nest	0	Unknown		Unknown	
Merriman's Pond #2	Swansea	No Nest	0	Unknown		Unknown	
Merriman's Pond Dam	Swansea	-		-		No Nest	
Duebel 1	Swansea	Successful	2	Successful	1	Unknown	
Duebel 2	Swansea	Successful	3	Successful	2	Unknown	
Swansea Bachelor Pad	Swansea	Successful	1	No Nest		No Nest	
Swansea Golf Club N	Swansea	Successful	1	Successful	1	Inactive	
Swansea Golf Club S	Swansea	Successful	3	Successful	3	Successful	2
Fledglings			17		10		7

Table 2: Osprey Nesting Activity in Massachusetts 2016-2022

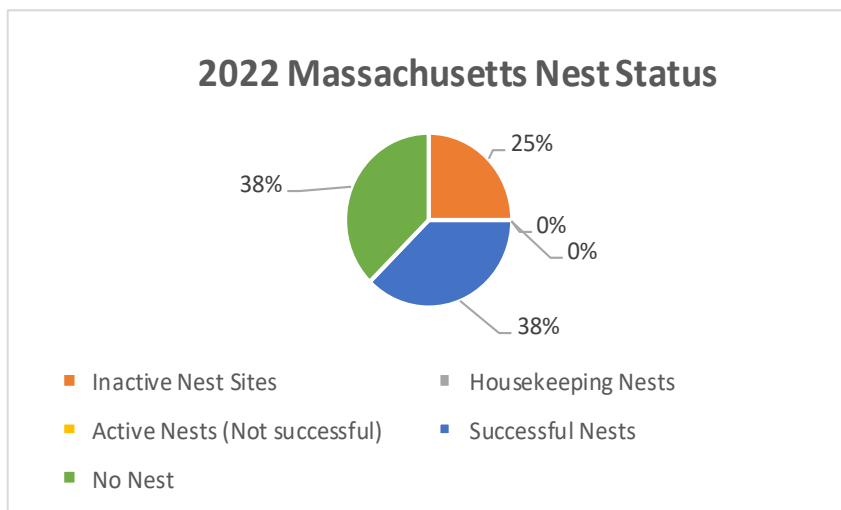


Photo 5: Barbara Seith, Cap'n Jacks, 8/17/22

Graph 6: Status of nests in Massachusetts in 2022.

Rhode Island Osprey

Osprey Program Monitors

Throughout the 2022 breeding season (April-August), 63 volunteers monitored 227 nests. (222 in Rhode Island and 5 nests in Massachusetts.) Monitors submitted over 2,504 observations and spent a total of 966 hours in the field, averaging 3.8 hours of monitoring per nest and 15.8 hours per monitor. The Audubon Society of Rhode Island thanks these dedicated volunteers for their continued support of the Rhode Island Osprey Monitoring program.

David Anderson	Nature Explorations	Sharyn Lawler	Jon Scoones	Barbara Watts
Mary Arakelian	Sandy Fahey	George Lewis	Barbara Seith	Birger Wernerfelt
Christine Benson	Kerry Foley	Butch Lombardi	Barbara Sherman	Geoff Whan
Maura Bonafede	David Fulton	Jerry & Donna Macomber	Susan Silvia	Jean Whatley
Mike Browne	Ted Furtado	Pam Mead	Tracy Silvia	Shawen Williams
Gail Browning	Kim Gaffett	Luis Mendes	Mary Alice Smith	Susan Williamson
Frank Carroll	Mike Gerhardt	Jon Mitchell	Betsy Staples	David Winsor
Marianne Chronley	Heather Gordon	John Mooney	Richard Staples	Steve Zambarano
Barbara Costa	Joan Gorman	Jim O'Neil	Leila Stokes-Weinstein	Therese Zink
Cindy Dibble	Martina Graziano	Elizabeth Paquette	Ann Telfer	
Mary DiCecco	Tyler Hertzwig	Ron Pelletier	Roberto Tornatore	
Donna DiGangi	David Jones	Margie & Mark Peppercorn	Bonnie Turano	
Jean Entezary	Brian Kirker	Teresa Sarli	Angela Valente	

Support Osprey With Your License Plate

Show your support for Osprey with Rhode Island Osprey license plates for your car! Purchase of an Osprey plate supports environmental conservation through education. The cost is only \$42.50 with \$20 supporting environmental education programs and \$22.50 for production of the plates. A link to the form may be found on the Audubon website at www.asri.org. Once you complete the form it is automatically forwarded to the RI DMV for processing.



AUDUBON SOCIETY OF RHODE ISLAND

12 Sanderson Rd.
Smithfield, RI 02917
www.asri.org

Phone: 401-949-5454 x3201
E-mail: j scoones@asri.org

About The Audubon Society of Rhode Island

The Audubon Society of Rhode Island is a membership-based, independent not-for-profit conservation organization. It is dedicated to protecting birds, wildlife, and their habitats through environmental education, advocacy, and land conservation. The state's first environmental organization, Audubon now protects nearly 10,000 acres in a network of refuges, pristine properties and wildlife habitats. One of the largest private environmental educators in the state, Audubon staff taught approximately 20,000 people in 2022. Audubon Society of Rhode Island is not affiliated with National Audubon.