Audubon Society of Rhode Island

Rhode Island Osprey

The Rhode Island Osprey Nest Monitoring Program was founded in 1977 by the Rhode Island Department of Environmental Management to collect data on the 13 nests that present in the state. Unfortunately, the Osprey population had suffered severe declines from 1940-1970 due to exposure to the harmful pesticide, dichlorodiphenyltrichloroethane (DDT). When DDT was federally banned in 1972, researchers saw the importance in observing local Osprey populations.

In 2010, The Audubon Society of Rhode Island assumed management of the program. Since then, volunteers have worked each summer to observe each nest in the state on a weekly basis, to note breeding behaviors and the number of young that are produced by each nest each year.

In 2024, 135 Osprey monitors collected data on 393 nests across Rhode Island! In this report, we will discuss the results of our monitoring, as well as highlight some interesting stories from the 2024 season.

If you are interested in becoming an Osprey monitor, please contact Program Coordinator Lincoln Dark at ldark@asri.org

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Parent feeding Fledgling Osprey. Photo by Christine Benson

2024 MONITORING RESULTS

Number of Monitors	135
Total Number of nests in RI	423
Number of Nests Monitored	393
Number of sites with no nest found	55
Number of inactive nests	22
Number of active nests (includes both active *and* successful nests)	313
Number of successful nests (a subset of the above category, counting only nests that produced young that survived the season)	223
Number of nests with unknown status	7
Number of Fledglings	379

Table 1. Summary of monitoring data.

Figure 1. Trends of the number of active nests and number of fledglings from 2010-2024.

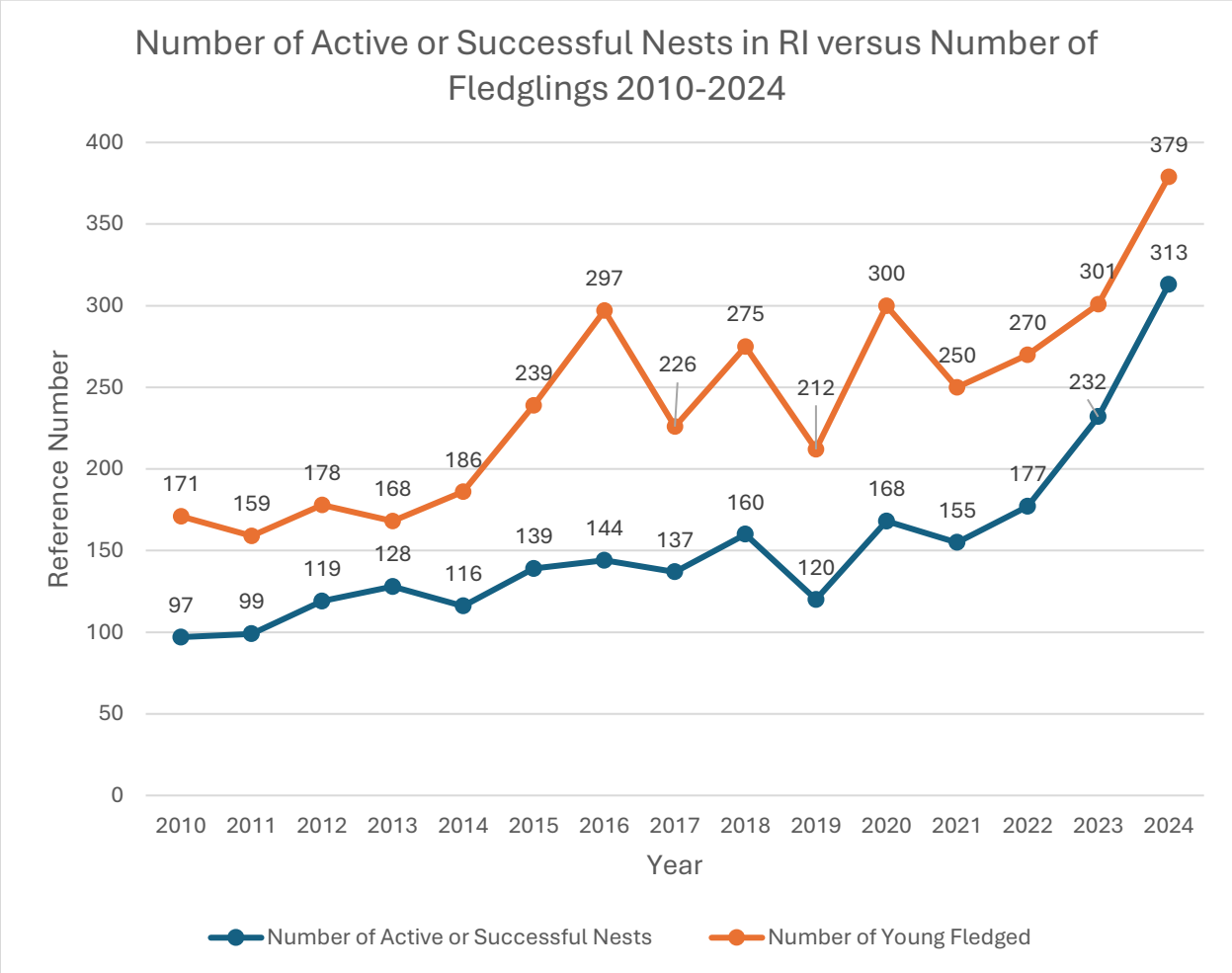


Figure 2. Trends of the number of active nests, number of volunteers, and number of nest sites visited from 2010-2024.

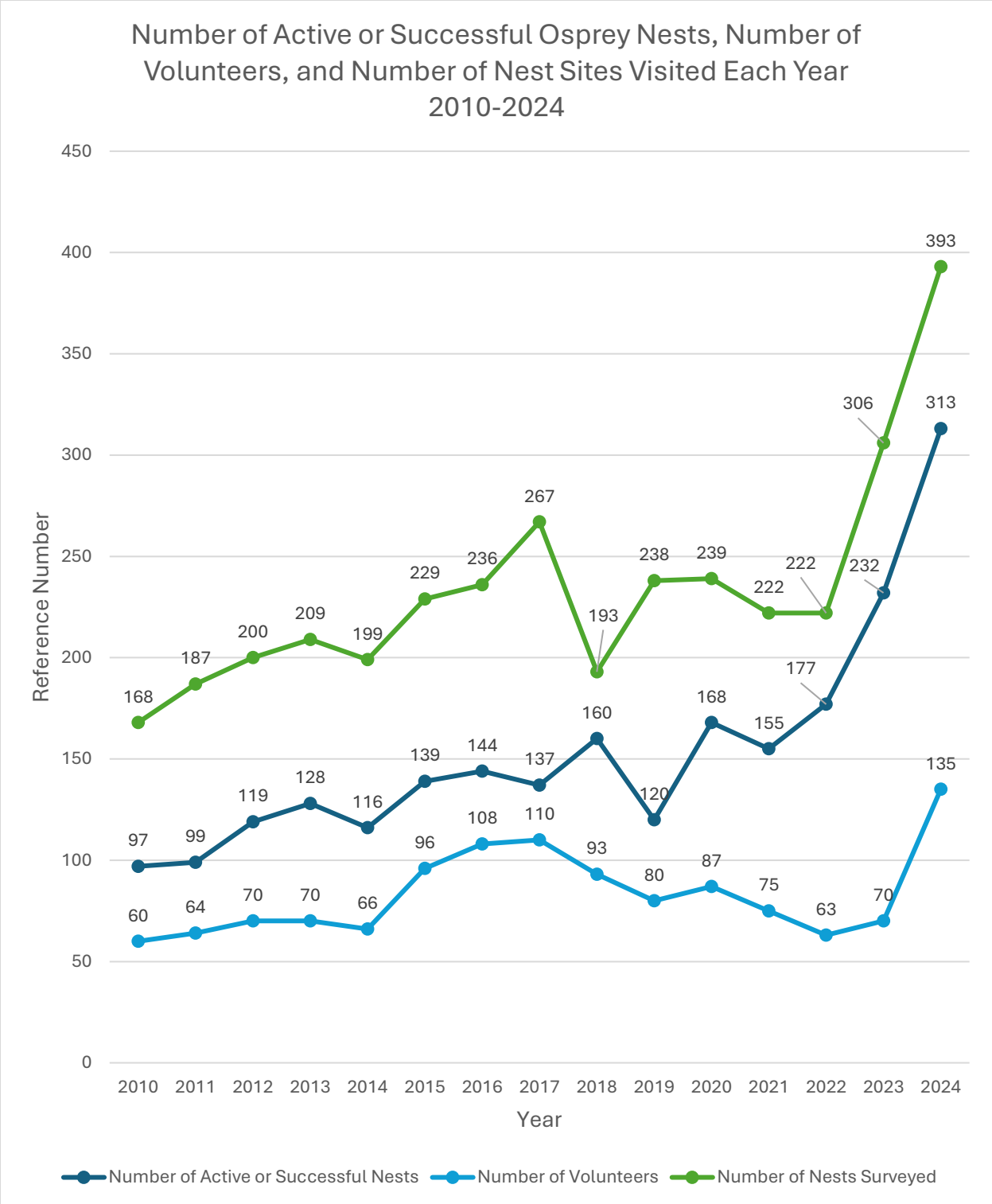
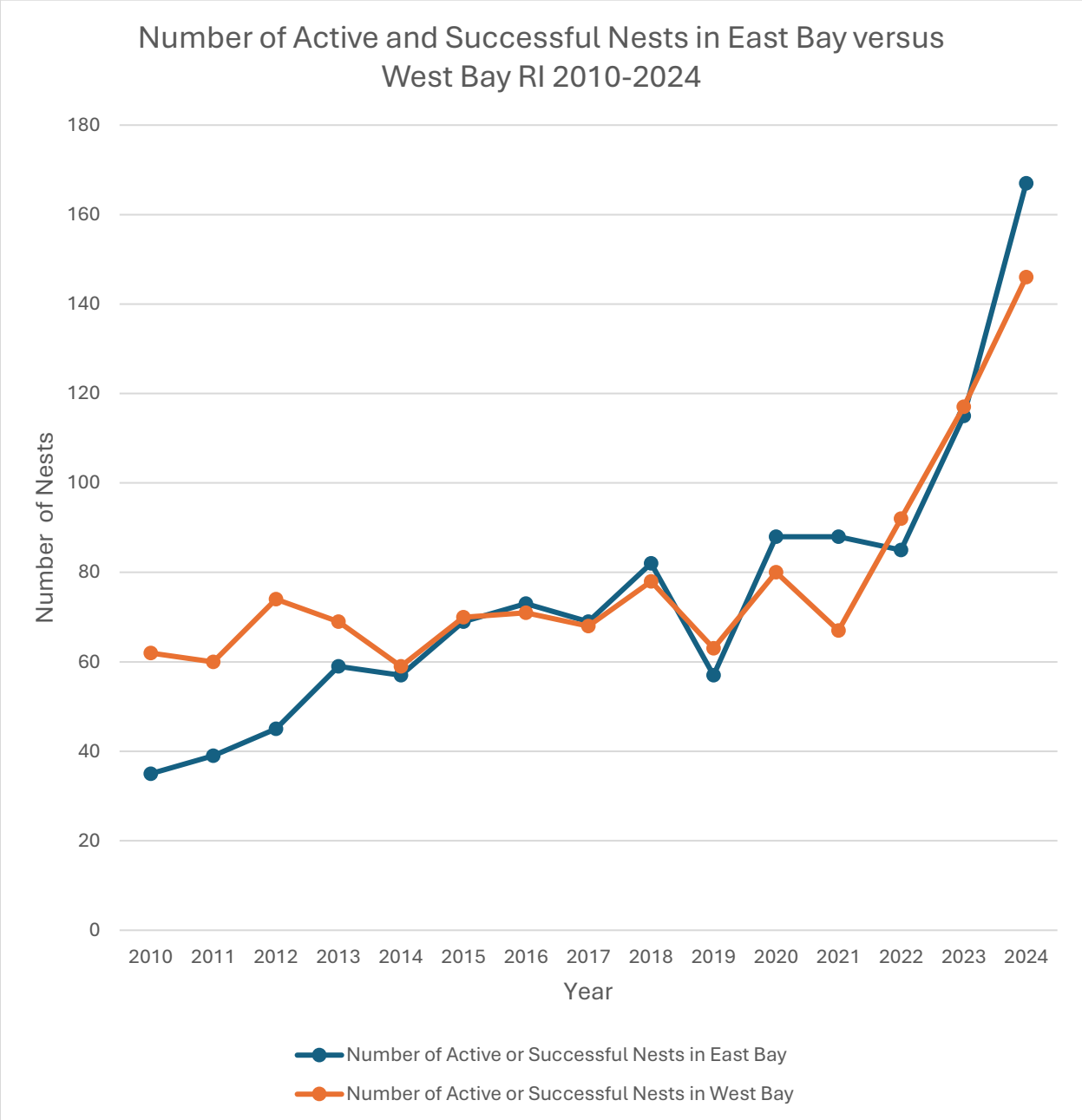


Figure 3. The trends of the number of active nests in the East Bay (Newport & Bristol Counties and East Providence) versus the number of active nests in the West Bay (Providence, Kent, and Washington Counties) from 2010-2024.



DISCUSSION

2024 was a record-breaking year for the Osprey population, nest numbers, and monitor support! In 2024, we observed 379 young Osprey fledge, which breaks the previous record (2023) by 78 (Figure 1). We observed 313 active or successful nests, breaking the record for the third year in a row (Figure 1). We surveyed 393 nests across Rhode Island and southern Massachusetts, breaking the previous record (2023) by 87 (Figure 2). Now, the most impressive record to be broken in 2024 was not bird-related at all, but rather it was the number of active monitors! This year, 135 monitors volunteered their time collecting data on our wonderful Osprey. This breaks the previous record (2017) by 25 (Figure 2), and *almost doubles* the number of active monitors in 2023 (70). The increase in monitors this year allowed us to increase the number of nests we surveyed; in 2023, we monitored 306 nests, and in 2024 we monitored 393 nests!

Interestingly, there were 21 more active or successful nests in the East Bay than West Bay this year, while in 2023, there were 2 more active nests in the West Bay (Figure 3) than the East Bay. The nests in the East Bay fledged 196 young, while the nests in the East Bay fledged 183 young. Out of an abundance of curiosity for these birds, I calculated the average number of fledglings per nest in each bay. To calculate this, I divided the number of fledglings in either bay by the number of successful nests *only* in the same bay. I only used the number of successful nests in each bay because these were the only nests to raise young birds, while active nests are nests that had pairs of birds in them during the season, but did not raise any young. In the East Bay, the average number of fledglings per successful nest was 1.77; in the West Bay, the average number of fledglings per successful nest was 1.68. This tells us that not only were there more nests in the East Bay than the West Bay this year, but also that the successful nests in the East Bay produced slightly more young per nest than those in the West Bay. However, more research will need to be done to determine if this is a statistically significant difference.

This year, we repeated our Osprey Nest Roundup from 2023, an initiative during the last week of July for established Osprey monitors, local birders, and new volunteers to visit each nest that did not have a full-time monitor assigned to it, so we were able to have one data point for each of these nests. During these surveys, monitors visited 45 nests and observed 23 fledglings that would not have been accounted for if not for this effort!

In 2024, we also started a new initiative to survey areas around the state for new nests. We created this because each year, we only add new nests to the list when we incidentally find them. We could be leaving out many unknown nests from our data set that are in places that we are not already monitoring. In this initiative, we identified 75 locations around the state where we did not have record of any Osprey nests but did have suitable Osprey habitat. These are areas close to shallow water, salt or fresh, and have adequate nesting substrate nearby, such as trees, utility poles, or cell towers. Monitors then signed up for one or more of these locations and visited them, surveying the area for Osprey nests. Of the 75 locations identified, 34 sites were visited. During these surveys, a small handful of nests were found, and of those, only one or two could be confirmed as being active this season. Despite finding a small number of nests, there is no reason to be discouraged. First off, it is just as important to know where Osprey are *not* nesting

as it is to know where they *are* nesting. This helps us as researchers to identify key Osprey nesting areas. Second, there are still 41 locations that we did not survey this season that we can return to in future seasons. However, there are reasons to suspect that there still are more nests for us to find in the other 41 locations that we did not survey. I would like to give a big shout-out to monitor Meagan Ferreria, who during this initiative, found a nest on the cell tower at the Scituate Police Department, which is the first active Osprey nest in Scituate in eleven years! This indicates that there could still be several nests in the non-coastal towns in RI that we are not currently monitoring.

Example of an Osprey nest and nest pole from high-resolution satellite imagery. The red circle indicates the nest aka the "donut", and the shadow of the nest pole can be seen cast northwest of the nest.

Moving forward however, there may be another process for us to find new nests. While I enjoy coordinating the Osprey Monitoring program as a volunteer, my career is in spatial data analysis, using software to study the science of "where". In recent years, there have been many efforts to apply Artificial Intelligence (AI) into the field of spatial data analysis. In our case, I hope to create and teach an AI to identify Osprey nests from high-resolution satellite imagery. To do this, I will use ArcGIS Pro mapping software and the GeoAI tool package in the software to create the AI. It can then be programmed to identify Osprey nests, which from above appear as light on the outside and dark in the middle where the deeper part of the nest is, or as I like to call them "donuts" because of this ring-like appearance. The AI will then scan the entire state's satellite images and identify what it thinks to be Osprey nests. It will likely take a few rounds of fact-checking its findings for it to have a better understanding of what it is we are looking for. As you can tell from the photo on the left, there may be many false positives in the beginning. The benefit of using this AI tool is that we will be able to identify Osprey nests in places that we have not surveyed before in-person and identify Osprey nests that may be in inaccessible areas, such as rough terrain or private properties.

All of this said, it is important to know that this is *not* a generative AI, the type of AI that we see creating images on the internet or as the basis of many great Science-Fiction movies. This is a learning but contained form of AI, so it only will have the ability to identify Osprey nests. I am hoping to have this complete by our mid-season Osprey Nest Roundup, so we can ground truth any nests that this AI identifies to see how accurate it is in "real life".

STORIES FROM THE SEASON

During our hundreds of hours in the field each season, monitors frequently come across interesting situations in the world of the Osprey. Some of these situations are heartwarming, while others are more critical and require us to step in. In this section, I would like to highlight some of these fascinating happenings from the 2024 season.

While we often think of ourselves as only observers of Osprey, our first story is one where our monitoring community were the voice of the Osprey. In March of 2024, The RI Marine Fisheries Council held public comment to move forward on allowing for greater catch limits of Menhaden in the Narragansett Bay, and allowing for harvest to continue even when the bay is "closed" for harvest. Menhaden is a common fish in coastal and salt marsh areas of the Atlantic Ocean. Despite how common it is, it is also one of the most important prey fish in our region for other fish, mammals, and many birds, including the Osprey. Unfortunately, these types of proposals have a history of having negative impacts on the Osprey. A similar proposal passed in Chesapeake Bay in the 2000s and caused a near total collapse of the local Osprey population due to a reduction in available prey. Many of us monitors were alarmed by such a proposal, and we felt the need to stand up for the many Ospreys that call the Narragansett Bay home. We collaborated with Audubon's Advocacy staff to submit letters and testimonies to the RI Marine Fisheries Council, urging them not to pass this dangerous proposal. Because of our efforts, the council unanimously voted not to change the current rules, continuing to keep the current limits on Menhaden harvesting in the bay.

An artistic rendering of a Menhaden, one of the Osprey's most common prey fish in our region.

The next story is one that shows the persistence of the Osprey. Ospreys have high nest-site fidelity, meaning that year after year, pairs of Osprey prefer to re-nest in the *exact* same spot that they did in the year prior. This is the same behavior that allows us to reliably visit each nest site year after year and observe Osprey. However, sometimes the Osprey's persistence can get it into a bit of trouble.

Photo of the pair of Ospreys perched on the utility pole on Memorial Boulevard, Newport where their nest had been removed. Photo by Mike Bernarsky.

On Memorial Boulevard in Newport, monitor Mike Bernarksy observed a pair of Ospreys whose nest was removed by the electric company from the utility pole that it had been built on (see left). The next day, the birds attempted to rebuild their nest on the cones on the adjacent utility pole but were ultimately unsuccessful. Meanwhile, another pair of Ospreys began building a nest on a nearby utility pole (named Memorial Boulevard 3), approximately 30 meters from the first pair's original nest (see below). Unfortunately, the female of this pair was found dead, presumably electrocuted by the high-voltage power lines. Thankfully, the electric company came back and installed a brand-new nest pole four days later, so a pair could have a safe place to build a nest away from the power lines. In situations like these, it is important for us to be vigilant in our observations, so we can speak up for the Osprey and ensure they have safe nesting structures to raise their young. To Mike, we are all so appreciative of your astute record-keeping on Memorial Boulevard!

Photo of the original pair's nesting location (marked by the letter A) and the second pair's nesting location (marked by the letter B). Photo by Mike Bernarsky.

Our third story is one where we made headlines! In early August, I was contacted by a reporter from our local WPRI 12 news station. She told me that the station had been fielding many calls regarding the Osprey nest on the crane above the Washington Bridge in Providence. She asked me a few questions regarding the life history of the Osprey, and if this nest being present would impact the ongoing work on the bridge. I was excited to share that despite being built on one of the state's busiest sections of highway, the pair of Ospreys in this nest had successfully raised young for two years in a row! I also shared how this nest can only be removed when the season is over, the Osprey are no longer using the nest and the proper permits are obtained from the United States Fish and Wildlife Service (USFWS).

Photo of the WPRI 12 headline when I was asked questions regarding the Washington Bridge Osprey Nest. I am flattered that they called me an "expert", but I would definitely describe myself as more of an Osprey "enthusiast"! The full article can be found on WPRI.com.

Since my conversation with WPRI 12, Aetna, the company that will be doing work on the bridge, obtained the proper permits and removed this nest along with the crane it was built on. If you drive along the bridge now, you will see many new cranes along the north side of the bridge, but nowhere particularly safe for a pair of Ospreys to raise young. The reason that the previous crane was a good nesting spot was that the crane hadn't been moved or operated in many years. Now, with active work going on here, the future for this pair is uncertain. I am currently working with Rhode Island Energy (RIE), formerly National Grid, to determine if there is a safe nearby location to install a platform on a utility pole to re-house these birds next year. With hope, these birds will have a safe place to nest next year.

CONCLUSION & ACKNOWLEDGEMENTS

To those who generously donated their hard work, effort, and time to monitoring Osprey with Audubon this season, I extend my deepest thanks. This season brought many changes and challenges with it, but we all worked together for a great cause. Our data reflects the importance of what we do. Just as the Ospreys are the sentinels of the coastal ecosystem, *we* are the sentinels of the Osprey population. During this season, we were able to coordinate with the Rhode Island Department of Environmental Management (RIDEM) to report multiple illegal nest removals. By being the eyes, ears, and voice of these birds, we are actively contributing to their conservation.

I would also like to extend a few extra special thanks to some volunteers who helped our program both in the field and outside of the field. This year, Susan Dey-Sigman generously donated her time to helping connect the public with Osprey at this year's Raptor Weekend program. Notably, this is Susan's second year in a row helping at our table at Raptor Weekend, and helped sign up 50 new monitors for the 2025 season! Thank you so much Susan!

Monitors Lincoln Dark (left, also yours truly) and Susan Dey-Sigman (right) volunteering at Audubon's Raptor Weekend 2024. Our taxidermized Osprey does a much better job of staying still than a live one would!

I would also like to thank Serena Entezary and Mary Lueder, our remote team of volunteers for their many hours of hard work and effort they spent "behind-the-scenes" of the Osprey program. Serena and Mary worked diligently to create this year's new data submission form. These forms were personalized to each monitor, and contributed greatly to how data is organized once submitted. These two stellar volunteers also created our brand-new website, asri.org/osprey. This new website is not only more visually pleasing than our previous WordPress website, but also has pages for new and returning monitors, links to live-stream cameras of Osprey nests around the state, previous year's reports, and an abundance of information on the Osprey. These efforts also save Audubon money on the annual subscription fees of other website hosting services. However, that is not all they did. Serena and Mary also helped organize all 4,595 submitted observations this year to determine the final status of each nest. Serena and Mary, we *all* thank you so deeply for helping modernize our Osprey monitoring program!

I also want to extend a special thank you to some of our supporters, such as Jon Mitchell, the Land Stewardship Coordinator for the Narragansett Bay National Estuarine Research Reserve on Prudence Island, for collecting data on all of the Prudence Island nests, Kim Gaffett of The Nature Conservancy on Block Island who collects data on all of the Block Island Nests, and Tom Correia of Exxon-Mobil who generously coordinates with Audubon Osprey monitors to collect data on all of the nests in the East Providence Exxon-Mobil facility.

Again, thank you all for your hard work this year. I appreciate you all welcoming me back this year to coordinate the Osprey Monitoring Program. I am so excited for the 2025 season and all we will continue to accomplish together.

Alanna Oconnell	Donna DiGangi	Joan Gorman	Martha Ullman	Rebecca Midler
Alyssa Houlis	Doris Higgins	John Carney	Martina Graziano	Renee Haggerty
Amanda Manso	Elizabeth Clare	John Hartley	Mary Arakelian	Rick Watrous
Andrew Croan	Elliot Waterman	John Michopoulos	Mary Di Cecco	Roberto Tornatore
Barbara Costa	Emily Monsini	Judith Russell	Mary Reis	Rock Singewald
Barbara Seith	Erin Walsh	Julian Ventres	Meagan Ferreira	Ron Loeser
Birger Wernerfelt	Finn Brudevold	Karen Wojichowski	Mercedes Rivero	Ronan Long
Bob Kenney	Fiona Morrison	Kate Pilson	Michael Bernarsky	Roxanne Stern
Bonnie England	Frank Leddy	Kate Roberts	Michael Jolicoeur	Samantha Sgourakes
Bonnie Turano	Gail Browning	Kathy Melbourne	Mike Browne	Sandy Fahey
Brittany Velikaneye	Gary Carlson	Kathy Schnabel	Mike Gerhardt	Sharyn Lawler

RI OSPREY NEST MONITORING REPORT 2024				
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Christine Ariel	Georgia Fico	Keri Brule	Neal Carpenter	Shawen Williams
Christine Benson	Ginger Brown	Kim Gaffett	Niall Howlett	Sherry Lehane
Dalynna Soeung	Hannah Dilliplane	Kimberly Sommariba	Norm Grant	Steve Zambarano
Dave Delano	Heather Gordon	Kristin Scharf	Olivia Feyrefebonio	Susan Dey-Sigman
David Anderson	Herman Martin	Laurie Chronley	Pam Mead	Susan Dey-Sigman
David Fulton	Hope Kelley	Leigh Hood	Pamela Green	Susan Dey-Sigman
David Jones	Hugh Tucker	Lelia Stokes-Weinstein	Patricia Colucci	Susan Gibbons
David Keane	Jake Mumme	Lenny Long	Patsy Sanford	Susan Kelley
David Krauss	James Chase	Lincoln Dark	Patty Galagher	Susan Williamson
David Winsor	Jana Hesser	Linda Evans	Paula DeSano Santos	Ted Holly
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Deborah Delmonico	Jennifer Brett	Luis Mendes	Phil Lewis	Therese Zink
Diane Frost Whitman	Jim Marsden	Marge Peppercorn	Rachel Schoonmaker	Tim Pratt
Diane Kerins	Jim ONeill	Marianne Chronley	Rayna Ciano	Tom Meade
				Victor Castriotta
				Will Drier

Osprey 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.

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. Audubon Society of Rhode Island is not affiliated with National Audubon.

Report written by Lincoln Dark for The Audubon Society of Rhode Island.