

2026 Osprey Survey & Tracking Report

In the Severn River Watershed

September 2026

OPERATION OSPREY
Severn River Watershed



www.operationosprey.org

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Presidents Message

Operation Osprey has completed its 2026 monitoring program thanks to the dedication of our staff and volunteers, and the generosity of our supporters. This year, our nonprofit continued to expand its citizen-science efforts and advance the vital work we conduct throughout the Severn River watershed. On-the-water nest observations using our mirror pole remain the foundation of our annual surveys.

In 2026, we strengthened this core monitoring work while expanding and launching several important initiatives:



We continue to be part of the Bay wide Osprey monitoring program coordinated by the Center for Conservation Biology. Thank you for supporting our mission to conduct an annual survey of the Osprey nesting population in the Severn River watershed and to engage and educate the public about these remarkable raptors, their behavior, and their migratory lives.

Sincerely,

Dr. Kenneth Green
President, Operation Osprey



Key Results

Our watershed contains around 200 Osprey structures. The survey focused only on nests classified as active under the Center for Conservation Biology's (CCB) criteria.

APRIL

75 ACTIVE NESTS • 61 EGGS

Of the 27 nests with eggs, 50% contained three eggs—the typical clutch size.

MAY

80 ACTIVE NESTS • 98 EGGS

Some April eggs were gone. Other nests showed continued nest-building or delayed nesting activity. Eggs were found in about one-third of monitored nests.

JUNE

20 CHICKS IN ONLY 16 OF 80 NESTS

The results indicate close to 90% nest failure or failure of eggs to reach the chick stage.

JULY

ONLY 13 FLEDGLINGS IN 11 NESTS

Only 2 nests contained two young birds

CONTINUING OBSERVATIONS

Many nests without young still had one or both adult Ospreys present.

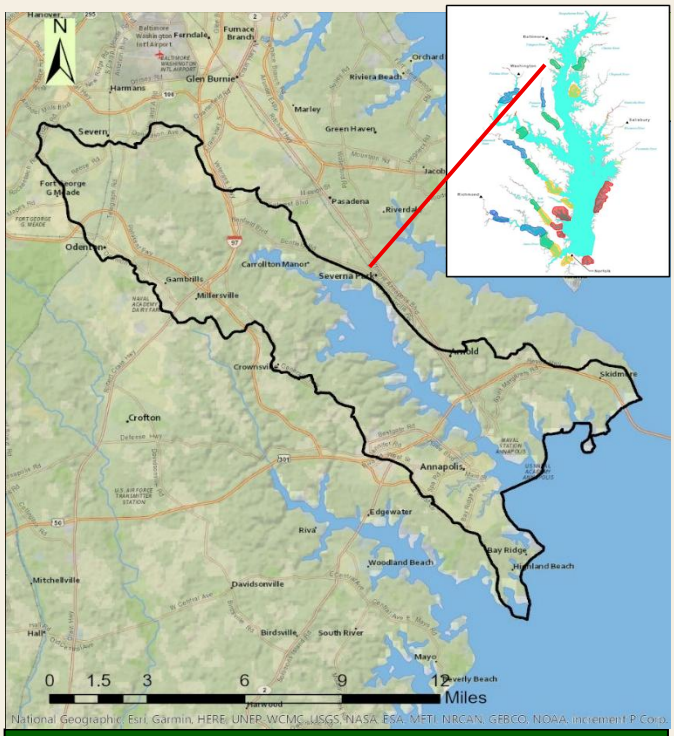
LESS THAN 15% OF ACTIVE CCB NESTS CONTAINED FLEDGLINGS, INDICATING A RELATIVELY LOW REPRODUCTIVE RATE PRIMARILY DUE TO NEST FAILURE.

The Severn River Watershed Study Area

The Severn River is a tidal estuary 14 miles (23 km) long, located on the Chesapeake's Western shore in Anne Arundel County, Maryland, south of the Magothy River and north of the South River. The Severn has a watershed area of 81 square miles (210 km^2), with 69 square miles (180 km^2) of land and 69 creeks and coves. The Severn watershed is tiny compared to the 67,000 square mile area of the Chesapeake Bay as a whole. The Severn is one fifth of the way down the Chesapeake from the Susquehanna at its northern end and is considered mid-Bay on the western shore.

Its total watershed area is 15% water. Its source is the beginning of the non-tidal, nine-mile-long Severn Run in northwestern Anne Arundel County in Severn, Maryland. The river enters the Chesapeake Bay near the city of Annapolis, the capital of Maryland. The Severn watershed extends in a northwest direction more than 12 miles from its mouth at the Bay and is entirely in the coastal plain. Some 20% of the watershed area is the tidal Severn River, while the other 80% is laced with many small freshwater creeks and streams that form a network flowing into the Severn.

On the south side of the Severn, the watershed is fairly broad, with some of the tributaries a mile long. On the north side the Severn watershed is fed by smaller streams. North of the mouth of the Severn River, three main creeks: Meredith, Whitehall, and Mill Creek drain into Whitehall Bay.



Severn River Watershed and location of the 23 Bay Osprey Studies

Common fish found in these waters include white perch, menhaden, anchovy, sunfish, carp, croaker, shad, needlefish, rockfish, bluefish, eels, chain pickerel, and channel catfish. There is clear presence of invasive species including snakeheads and blue catfish that have changed the trophic levels throughout these water bodies.

In nearshore shallow waters, submerged aquatic vegetation (SAV) has traditionally flourished in the Severn. Several different SAV species formerly grew in the Severn but died off completely throughout the 1980s. Starting in the 1990s, SAV has grown back in portions of the watershed and the Severn now has the largest and densest SAV beds in the mid-Chesapeake.

For years, the Severn River Association (SRA) has monitored water quality across the watershed. Operation Osprey analyzed key parameters at 14 representative sites, from shallow headwaters and major creeks to the river's mouth. Salinity ranged from 3.5 to more than 12 parts per thousand (ppt), with medians typically between 8 and 12 ppt. These results reflect greater freshwater influence upstream and higher salinity nearer the Chesapeake Bay.

Watershed land use ranges from dense development in the City of Annapolis to many shopping centers, subdivisions, and industrial parks. Single-family property is the dominate land use followed by forest areas. Turf farms, agriculture, and golf courses are found throughout the watershed. Heavily traveled roads, including Routes 50 and 97, and bridge crossings also crisscross the watershed.

2026 Survey Scope and Method

Operation Osprey began the 2026 nesting survey in March with boat- and road-based reconnaissance to update our baseline inventory of more than 200 Osprey nest structures throughout the Severn River watershed. The variety of structures supporting Osprey nests is shown in Figure 1.

The reconnaissance also helped us identify which structures would be included in the official survey, using nest-selection criteria established by the Center for Conservation Biology at William & Mary. The protocol excludes nests in trees, microwave towers, BGE-installed nest poles, recreational field-light poles, and telegraph poles. Eligible sites include nest poles with nest boxes and day or lighted navigation markers that are less than 20 feet above the waterline and can be safely approached by boat between half and full tide.

In 2026, survey coverage expanded into the lower portion of the watershed, including Bay Ridge, Arundel on the Bay, and Fishing Creek (see maps below). The structures observed in these areas included navigation markers, nest poles with nest boxes, trees, and utility poles.

Nests that did not meet the official survey criteria were documented when possible but were considered supplemental observations. Because these sites could not be monitored consistently, their reproductive outcomes were not included in the official 2026 survey totals.

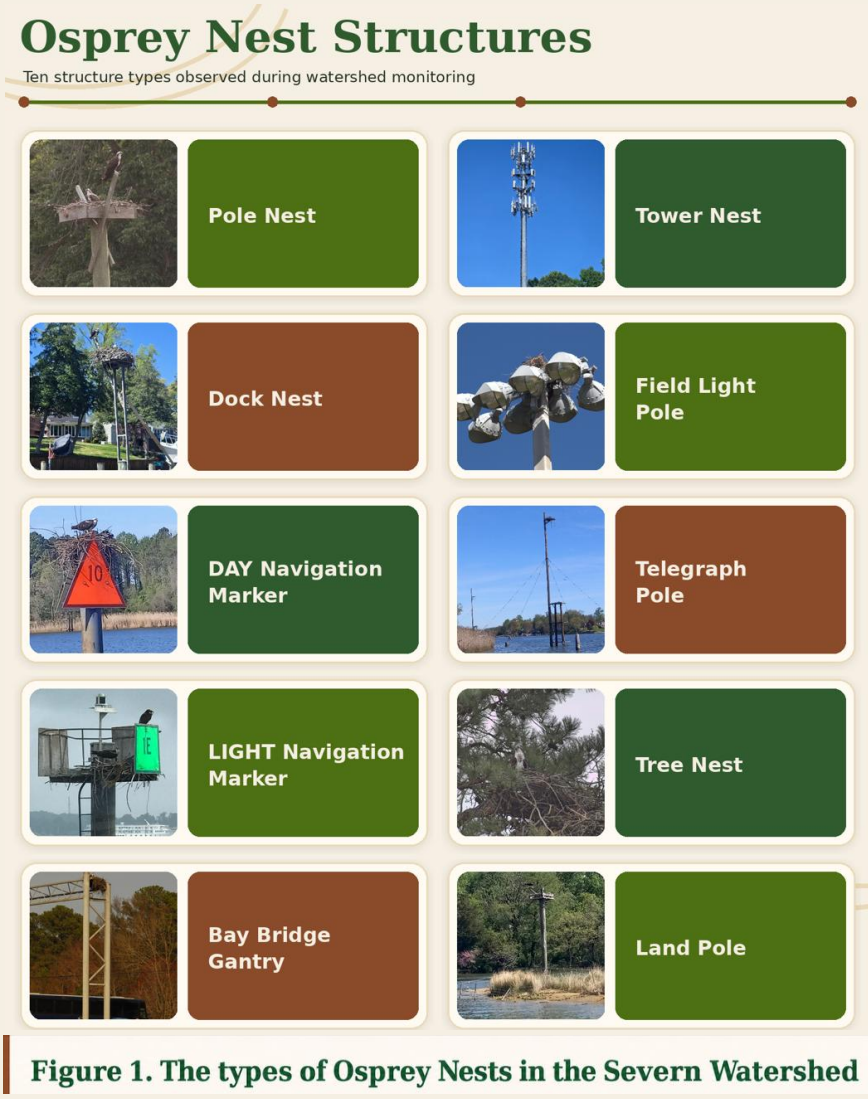
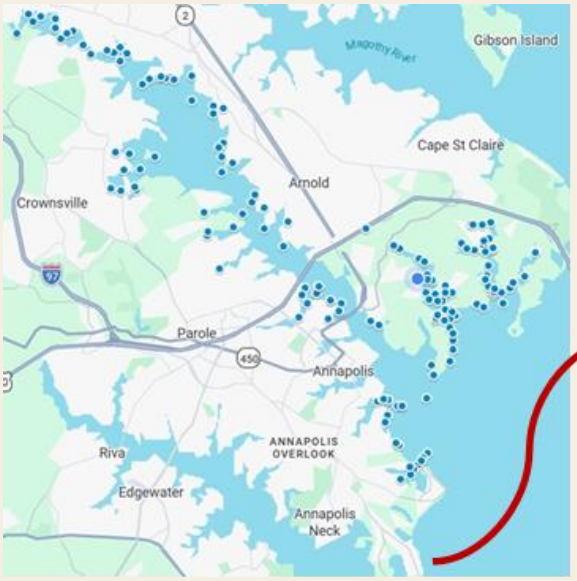


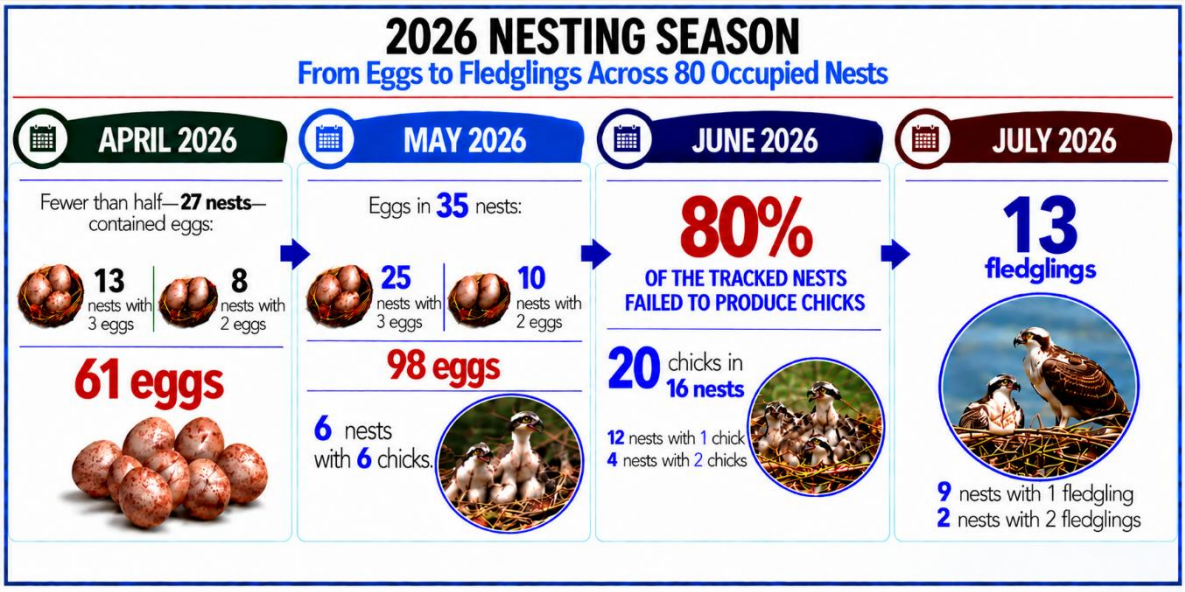
Figure 1. The types of Osprey Nests in the Severn Watershed





Above. Added nests in the lower portion of the watershed

2026 Survey Results



Across the 2026 nesting season, Operation Osprey observed 127 nest sites by boat or camera. In April, 75 nests were occupied by one or two adult Osprey. Twenty-seven of these nests contained a total of 61 eggs, including 13 nests with three eggs and eight nests with two eggs. By May, newly identified and rebuilt navigation marker nests, classified as "late nesters," increased the number of occupied nests to 80. We recorded 98 eggs and six newly hatched chicks. With egg production approaching 100, we were hopeful that the June survey would find substantially more chicks.

Instead, the June survey documented only 20 chicks in 16 of the 80 occupied nests monitored throughout the watershed. Twelve nests contained one chick, and four contained two chicks. In July, the final survey found only 13 healthy fledglings in 11 nests. Nine nests contained one fledgling, while two contained two fledglings. Therefore, fewer than 15% of the 80 occupied nests successfully produced fledglings. These results reflect another year of low reproductive success following similarly concerning findings in 2025.

Approximately three dozen additional nests outside the official survey protocol also appeared active based on adult behavior, including females sitting low in the nest, which may indicate the presence of eggs or chicks. Fledglings were observed at several of these sites. However, because the nests could not be monitored consistently, they are not included in the official 2026 totals.

Bay Wide Osprey Studies

Our findings align with 22 other 2026 Bay-wide Osprey surveys sponsored by the William & Mary's Center for Conservation Biology

- Many females laid incomplete clutches.
- Chicks showed stunted growth or starved.
- Pairs abandoned viable nests and breeding areas.

Productivity was alarmingly low, leading CCB Director Watts to project a 50% decline in the Bay's breeding population within a decade if food stress continues. He strongly believes that Osprey chicks in the saltwater study areas (including the Severn watershed) are starving due to reduced availability of Atlantic menhaden.

Fish Nest Delivery

What Osprey Are Eating in the Severn River

Osprey are expert fish hunters, relying almost entirely on surface-schooling fish to feed themselves and their young. Because they capture prey near the water's surface, changes in fish availability show up quickly in their foraging behavior and breeding success. We repeated our 2025 fish nest delivery study in 2026.

From June through August 2025 a high-resolution nest camera mounted on one of Operation Osprey Steward's nests stored video images to document which fish were delivered to the nest, how often prey was delivered and how those patterns changed over time. The analyzed videos showed 220 fish deliveries. Although brief, these recordings provide a focused, informative snapshot of prey-delivery patterns at a Severn River Osprey nest.

Fish Species Delivered to the Nest

Nest camera observations at the Kintgen nest provide direct evidence linking Osprey foraging behavior in the Severn River to prey availability. The Osprey diet was dominated by Atlantic menhaden, accounting for 36% of deliveries. Other species—including shad and herring, spot, American eel, white perch, gizzard shad, and flatfish—made up only a small share of total provisioning. The overall pattern was clear: small, schooling fish formed the backbone of Osprey provisioning at this nest.

Seasonal Changes in Fish Deliveries

Provisioning rates were highest in July, when nestlings grew rapidly, and energy demands were highest. By August, deliveries had declined to only one or two fish. Lower late season delivery rates may reflect reduced prey availability, longer foraging trips, or changes in demand as young Osprey approach fledgling. These seasonal trends are consistent with patterns observed in other Chesapeake Bay Osprey populations

What This Means for Osprey Reproduction

Three chicks hatched in May from the three eggs observed in April , but two nestlings died in June. Only 1 fledgling survived. Declining delivery rates later in the season and the dominance of small prey, suggest that food availability was limited during critical stages of development. Because Osprey depend on frequent deliveries of surface-schooling fish, especially Atlantic menhaden, changes in local forage fish abundance can directly influence breeding success. However, data is lacking on fish abundance, distribution and species availability.



Above. Croaker (left), Menhaden (middle), Spot(right), and American Eel (bottom)

Stories from Our Stewards

Meredith Creek: Holly Beach Farm Conservancy

Holly Beach Farm Conservancy, a large estate on the eastern side of Whitehall Bay near the mouth of Meredith Creek, was one of the earliest participants in our Osprey Stewards program. Four years ago, the property manager and owner installed a land-based nesting pole and platform, along with a video camera system.

Since then, they have regularly shared observations documenting mating, egg laying, incubation, hatching, and important aspects of reproductive success and failure. In April 2026, the female laid three eggs. By mid-May, however, all three had been destroyed. Video footage identified the culprits as crows attacking the nest and breaking the eggs



Saylor Nest Pole with cameras



April nest with 3 eggs



Crow destroying eggs and eating yolk

Arundel on the Bay

Al lives along the Bay in the southernmost portion of our watershed and has a nesting platform installed at the end of his dock. From the second story of his home, he closely observes the Osprey and documents their arrival in early spring and other major events throughout the nesting season.

This year, only one egg remained and successfully hatched. The chick survived and was still near the nest in mid-September. However, Al remains concerned because the fledgling has an injured leg and does not appear to be catching its own fish.



The pair sitting on their nest



The female incubating her eggs



The fledgling with injured right leg

Severn River: Wardour

Stephanie and her husband installed a solar-powered camera on their nesting platform, located approximately 50 feet from the end of their dock. Because the camera was installed fairly late in the 2024 nesting season, they did not expect much activity. To their amazement and delight, two Osprey claimed the platform the following day and immediately began building a nest. Although the pair did not lay eggs that first year, the camera has since regularly documented their nesting behavior. Three-egg clutches have been observed during each subsequent season, although only one fledgling has survived each year, including in 2026.

The camera has also captured several notable behaviors. During the week the chicks hatched, conditions were unusually cold and rainy. During a break in the rain, landscapers spread grass seed and dry straw in the yard. While they were still working, the male Osprey swooped down to collect some of the straw. Camera footage later showed the male and female arranging it inside the nest, apparently using it as additional insulation for their nestlings.



Camera on the Wardour nest



The 3-egg clutch in May



Mom feeding her hungry fledgling

Mill Creek: Providence

John's nesting pole has stood in front of his waterfront property for more than 20 years. In 2024, Operation Osprey installed its first Reolink camera on his nest, allowing him to monitor activity throughout each nesting season.In early May 2026, the camera showed a clutch of at least two eggs. Later that month, only one egg could be confirmed, and by June, no eggs remained in the nest. Throughout May, June, and July, the adults were regularly observed flying to and from the platform and appeared to remain in the Mill Creek area for the rest of the nesting season.



John's pole nest on Mill Creek



Our Team installing our first camera on John's nest



Camera image of the female tending to her 2 eggs

Ridout Creek: Amberley

Joe and Susie were among our earliest Osprey Stewards. They live in the Whitehall subbasin along a cove that flows into Whitehall Creek. After moving into their waterfront home, they were thrilled to see a breeding pair, Annie and Louie, begin using their pole-mounted nest.

Operation Osprey first began watching the nest closely during the 2022 breeding season because of concerns about major dock and bulkhead construction at a neighboring waterfront property. Despite the surrounding disruption, Annie and Louie successfully raised a chick that year.

In early spring 2024, Joe and Susie contacted Operation Osprey with concerns that the nesting platform was tilting and appeared to be falling from the pole while Annie and Louie clung precariously to their nest. Our nest-maintenance team mobilized and spent a chilly March morning building a replacement platform.

Using Dr. Green's Key West boat, the team removed the deteriorating platform, preserved the existing nesting material, and installed the new platform with the original sticks. A Reolink camera was also added to monitor activity. Within an hour, the Osprey returned to the nest. The pair went on to produce a healthy fledgling that year.

Unfortunately, the nest was not productive in 2026 because the pair never fully settled on the platform. An adult male and female were regularly observed around the creek, but we could not determine whether one or both were the original birds or younger Osprey that were inexperienced in breeding.



Installing the new nest box



Annie and Louie on their new box with perch & camera



Annie with 2 of her chicks, days old

Attaching High-Performance Transmitters to Our Osprey

Building the Tracking Program

Operation Osprey President Dr. Ken Green began exploring how the organization could build on the pioneering satellite-tracking research led by Dr. Rob Bierregaard in the early to mid-2000s. That work transformed understanding of Osprey movements during the nesting season and migration to South America, including the routes and habitats used by birds from the Chesapeake Bay and the Severn River watershed.

In early 2024, Dr. Green reviewed recent tracking studies and evaluated the equipment, costs, staffing, and approvals needed to establish a local program. At the 2024 Latin American Raptor Research Conference in Colombia, he met Franz Kuemmeth of e-obs GmbH. Their discussions led to an agreement to pursue custom-designed, solar-powered backpack transmitters capable of withstanding repeated water exposure while collecting data through the birds breeding and wintering cycles.

Osprey Transmitter Program Milestones

1. **Equipment purchased** - *Late 2024*
   Ten waterproof e-obs transmitters acquired with sponsor support.
2. **Federal approval** - *March 2026*
   Bird Banding Laboratory authorization approved under Greg Kearns permit.
3. **Field training** - *May 2026*
   Teams practiced safe capture, handling, and transmitter fitting.
4. **Maggie and Millie** - *June 4 2026*
   Both females were fitted, released, and returned to their chicks.
5. **Patty** - *June 16 2026*
   The third adult female was trapped and tagged on the Patuxent River.

Operation Osprey was well positioned to use the technology because of its established nest-monitoring program and familiarity with individual birds. With generous sponsor support, the organization purchased 10 waterproof, UV-protected transmitters in late 2024. The devices combine multiple sensors to provide a detailed record of movement and migration.

Authorization and Field Training



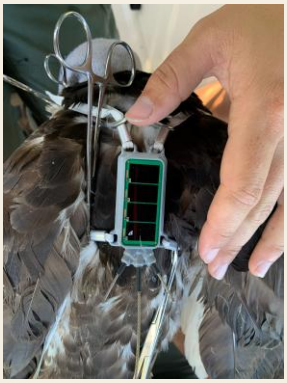
Over the following months, Operation Osprey prepared a comprehensive application for the U.S. Geological Survey Bird Banding Laboratory. Data Manager Alex contributed to the application, and Greg Kearns, Principal Park Naturalist at Patuxent River Park and a federally licensed master bird bander, provided substantial assistance. The request to use GPS/GSM transmitters as auxiliary markers was submitted in early 2026 and approved at the end of March under Greg's permit.

In early May, members of the Jug Bay and Operation Osprey teams trained on the Patuxent River under the guidance of Dave Brinker of the Maryland Department of Natural Resources. During the session, the team safely trapped two female Osprey and practiced fitting backpack transmitters, building the skills needed for the June deployment.

June Deployment on Mill Creek

On June 4, 2026, a Jug Bay Natural Area team led by Greg Kearns joined Field Manager Alex, Fish Ecologist Sam, Dr. Green, and Captain Mike on Mill Creek in the Whitehall subbasin. Working from two Key West boats during the morning high tide, the team began at Maggie's nest on the St. Margaret's pole.







After Maggie left the nest, the team placed Greg's floating noose trap on the platform. Once captured, she dropped safely into the water and was retrieved by the chase boat within minutes. Her newly hatched chick was temporarily placed in a protected, foam-cushioned box. Maggie was weighed, measured, banded, and carefully fitted with the transmitter backpack using secure ties and crimps. The chick was returned to the nest before Maggie was released; she circled the platform, landed beside the chick, and resumed caring for it.





The team then traveled to the mouth of Mill Creek and repeated the process with Millie. Her two chicks were protected while she was measured, banded, and fitted with a transmitter. After release, Millie also returned safely to her nest and chicks.

Three Birds Successfully Transmitting

Boat checks over the following days confirmed that Maggie and Millie were doing well and that both transmitters remained properly attached. On June 16, Greg's Jug Bay team trapped and tagged Patty along the Patuxent River. e-obs subsequently confirmed that all three transmitters were sending signals as expected.

The successful deployment of these transmitters opened an exciting new chapter for Operation Osprey’s research and monitoring program. Annexes 2, 3, and 4 describe the subsequent movements and migrations of Maggie, Millie, and Patty.

Annex 1. Nest Locations for Maggie, Millie and Patty

Two of our birds, Maggie and Millie were trapped and tagged in Mill Creek, a tributary of the Whitehall Subbasin in the Severn River Watershed. The third female, Patty, was trapped and tagged at the end of June in the Patuxent River.



Annex 2. Tracking Maggie from June through September

Maggie's nest has been located on upper Mill Creek for many years. Barbara, the waterfront homeowner and one of our Osprey Stewards, had the nest pole and box installed by a marine contractor more than 15 years ago. The nest has supported an active breeding pair for many seasons, with Maggie's most recent mate being Max.

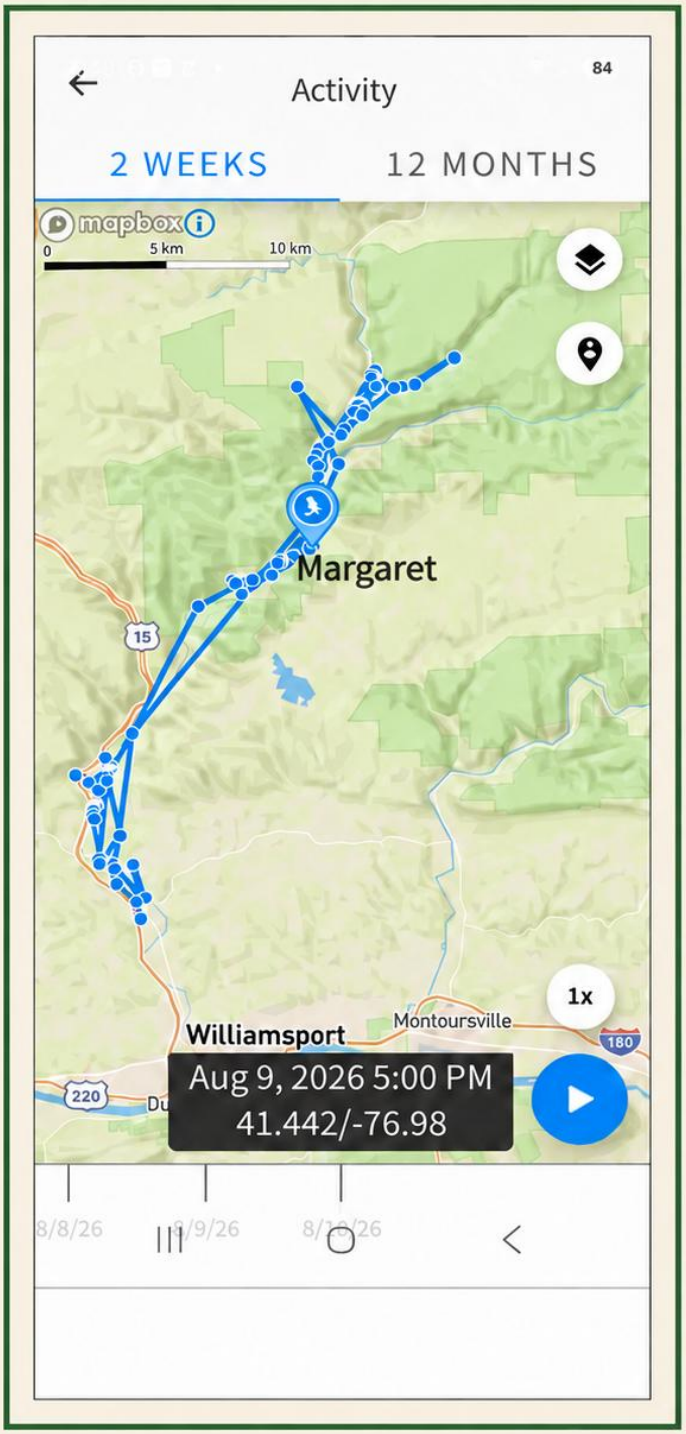
Our monitoring has documented geese occupying the nest beginning in February for the past four years. Like clockwork, Maggie and Max return to the cove in mid- to late March and watch the nest carefully from nearby trees. Barbara reports that, within minutes of the goslings jumping from the nest, Maggie and Max fly onto the platform and begin their annual mating ritual.

We observed three eggs in mid-April, which Maggie was still incubating during our mid-May survey. By the end of May, only two eggs remained, and in early June, we observed one chick approximately a week old. We safely removed the chick while trapping and fitting Maggie with her transmitter backpack. After returning the chick to the nest, we watched Maggie immediately fly back to resume caring for it.

Unfortunately, the chick did not survive. Maggie subsequently abandoned the nest and flew approximately 200 miles north to southern Pennsylvania, settling north of Williamsport. She spent several weeks in June near the rural community of Trout Run, frequently flying around Lycoming Creek. The Pennsylvania Fish and Boat Commission regularly stocks sections of Lycoming Creek in Lycoming County with rainbow, brown, and golden rainbow trout. The creek is considered one of the most heavily stocked streams in north-central Pennsylvania. We presume Maggie enjoyed dining on these fresh water fish.

Throughout July and early August, Maggie traveled back and forth between the Lycoming Creek area and Mill Creek. On August 22, she began her southbound migration and reached southern Florida, just north of the Keys, eight days later. She continued to northeastern Cuba, arriving on August 31.

Maggie spent nearly two weeks traveling southeast across Cuba before flying to Haiti on September 12. By mid-September, she was spending time in the Dominican Republic. Unfortunately, the transmitter stopped transmitting shortly thereafter and we suspect she is no longer alive.


Activity
84
2 WEEKS
12 MONTHS
mapbox
0
5 km
10 km
Margaret
15
1x
Williamsport
Montoursville
180
220
Aug 9, 2026 5:00 PM
41.442/-76.98
8/8/26
8/9/26


Activity
63
2 WEEKS
12 MONTHS
mapbox
0
500 km
1000 km
VT.
MASS.
OHIO
N.J.
W.VA.
KY.
N.C.
Atlanta
GA.
Bahamas
Jamaica
Margaret
Caribbean Sea
1x
Maracaibo
Costa Rica
Sep 15, 2026 12:05 AM
18.09/-71.622
Aug
2026
Sep
2026

Annex 3 . Tracking Millie from June through September

Millie's nest is built on day marker 10R, the last of eight channel markers at the entrance to Mill Creek from Whitehall Bay. After the birds migrate south, the U.S. Coast Guard dismantles the Osprey nests built on channel markers throughout the Bay. When the males return in early spring, they rebuild their nests on the same markers used the previous year, weaving together and piling up hundreds of branches.

With the exception of the lighted marker at the entrance to Mill Creek, all the channel markers support "sandwich" nests. Five or six of these markers may be occupied by breeding pairs in any given year, and marker 10R has supported an active nest for many years. The Osprey's decision to rebuild in such a busy channel is surprising, as hundreds of boats may pass within five feet of the nests on a busy weekend. This causes visible stress to the adults, which call loudly at nearly every passing boat.

Millie was trapped and fitted with a transmitter backpack on June 4, 2026. We recorded three eggs in her nest in early May, and two very young chicks were present when Millie was trapped. She remained close to the nest during the first several weeks of tracking, and our observations confirmed that both chicks were still present in mid-June. Throughout June and July, she made only short trips away from the nest. By June 18, however, only one chick remained alive.

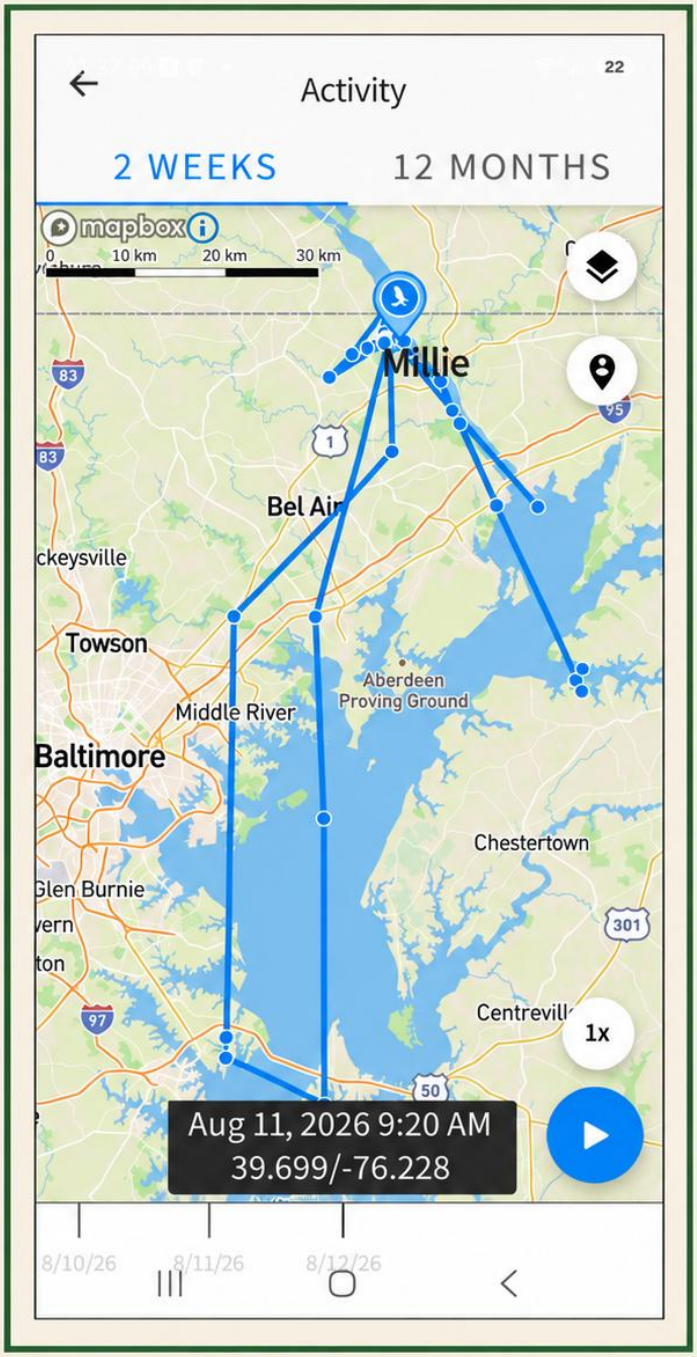
On July 24, Millie headed northwest. She traveled through northern Maryland over the next several days before reaching southern Pennsylvania on July 27. By then, we had observed a healthy fledgling in the nest. We could not confirm whether the male was still nearby and caring for the young, although several mature Osprey were regularly seen flying and perching in the area.

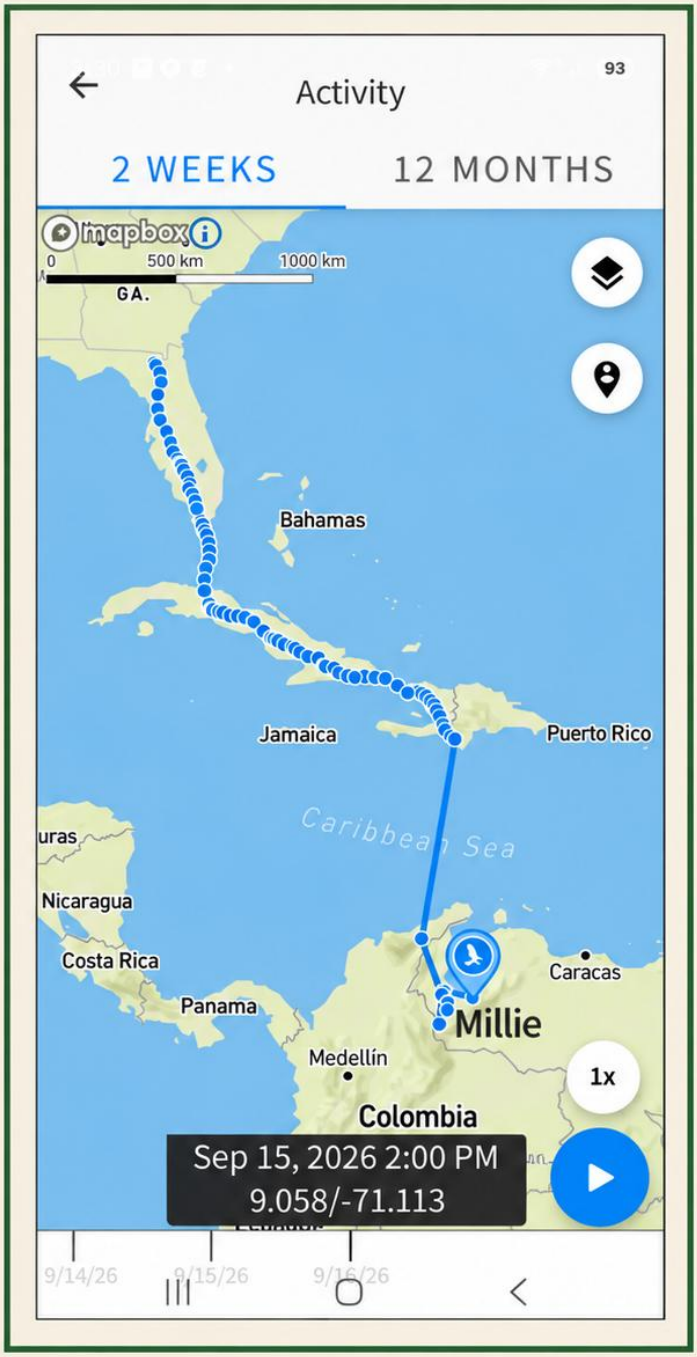
Millie remained in Pennsylvania for nearly a month, making only occasional trips outside her primary activity area. On August 3, she traveled approximately 50 miles back toward her Maryland nest. She remained in the area for about 25 hours before turning north and returning to Pennsylvania.

Millie stayed in Pennsylvania through most of August before beginning her southbound migration on August 28. Her first major flight carried her approximately 119 miles into Virginia in 4.6 hours, at an average speed of 26 mph. The following day, she traveled another 178 miles in roughly seven hours, reaching North Carolina.

Over the next several days, Millie continued through South Carolina and Georgia, covering approximately 157 miles on August 30 and another 175 miles on August 31. By September 1, she had reached Florida following another 144-mile flight. On September 2, she completed her longest flight to date, traveling approximately 232 miles across Florida in just over eight hours at an average speed of about 28 mph. The following day, she covered another 163 miles before reaching the southern tip of Florida.

On September 4, Millie left the Florida Keys and traveled approximately 186 miles in 8.4 hours before reaching central Cuba. The following day, she continued across the island, covering another 195 miles in roughly nine hours. On September 8, Millie crossed the Caribbean from the Dominican Republic and landed in the Guajira region of Colombia. By September 15, she had flown southeast into Venezuela spending days on the wing around Lake Maracaibo. She then flew west into western Colombia at the end of September.


Activity
2 WEEKS
12 MONTHS
mapbox
0 10 km 20 km 30 km
Millie
Bel Air
Towson
Middle River
Baltimore
Aberdeen Proving Ground
Chestertown
Centreville
1x
Aug 11, 2026 9:20 AM
39.699/-76.228
8/10/26
8/11/26
8/12/26


Activity
2 WEEKS
12 MONTHS
mapbox
0 500 km 1000 km
GA.
Bahamas
Jamaica
Puerto Rico
Caribbean Sea
Nicaragua
Costa Rica
Panama
Caracas
Millie
Medellín
Colombia
1x
Sep 15, 2026 2:00 PM
9.058/-71.113
9/14/26
9/15/26
9/16/26

Annex 4. Tracking Patty from June through September

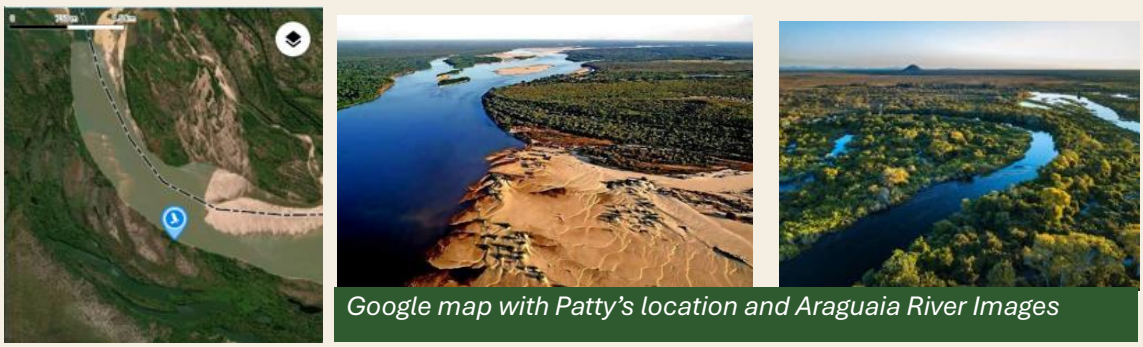
Osprey 18766, whom we've dubbed "Patty", was tagged along the Patuxent River on June 16, 2026. Just days later, following a nest failure, she abandoned her platform along the Patuxent and flew west past Fredericksburg and Charlottesville, Virginia. On June 24th, she turned northward towards West Virginia, ending up outside Morgantown on June 25th. She remained there for a few days. Then, on July 1st, Patty departed again, traveling eastward across the Shenandoah Valley towards Alexandria, Virgina, eventually ending up near where she was originally tagged in Maryland. From July 2nd-4th, Patty briefly revisited her original nest site in Maryland for 36 hours before returning to West Virginia, where she remained until kicking off her southbound migration on July 30.

Her initial leg was a nine hour, 255-mile flight from West Virginia into North Carolina traveling at a rate of about 27.4 mph. On August 1, she covered another 200 miles into South Carolina before roosting about 33 miles outside Orangeburg. Patty then advanced through Florida in shorter, incremental flights, reaching Naples on August 7. At this point, she commenced her Caribbean crossing. Arriving near Colón, Cuba on August 8, she opted against an immediate open-water crossing toward South America. Patty journeyed southeast across the Cuban interior for a week before eventually skirting Santiago de Cuba on August 16. She moved through Haiti and the Dominican Republic between August 17 and 19. From there, starting sometime in the afternoon on August 19th, Patty undertook a direct, non-stop flight across the Caribbean Sea from La Romana, Dominican Republic, to northern Venezuela – a daunting 640-mile journey. She completed this leg in 30 hours, traveling at an average speed of 20.6 mph. Given the timing of this flight, Patty would have had to fly nearly non-stop to where she was detected at 8:30pm local time on August 20th.

Incredibly, as a graduate student in the mid-70s, Ken was part of a Smithsonian Institution Venezuela Wildlife Program and spent considerable time at a research station only 100 miles east of where Patty was tracked at the end of August. This region, part of the expansive llanos, is a vast, tropical grassland plain characterized by extreme seasonal flooding and rich biodiversity. The rainy season, from May to November, transforms the vast, flat grasslands into a temporary wetland rich with fish from the Orinoco River system. For an Osprey like Patty, this seasonal abundance offers an obvious opportunity to fish heavily and build protein reserves.

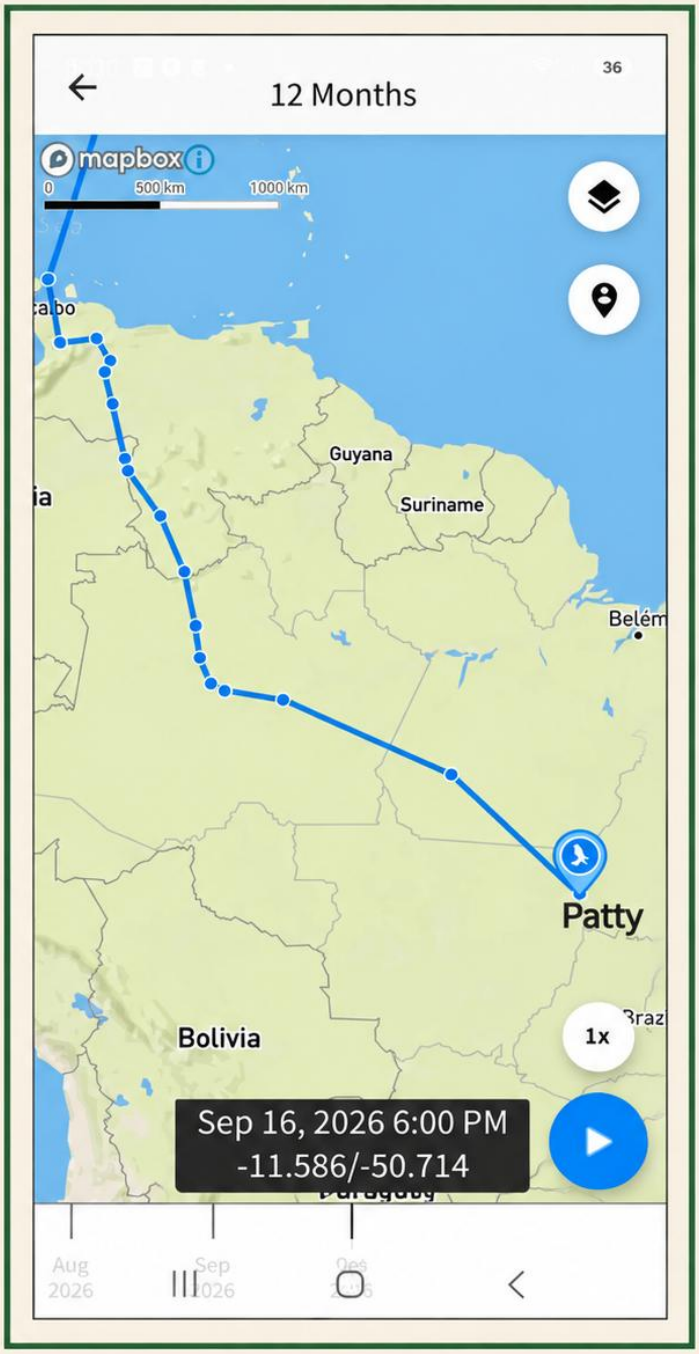
In this region, Patty has access to lagoons, canals, and floodplains supported by the Guárico River Irrigation System in Calabozo, Venezuela. This system is the country's largest irrigation infrastructure and one of the largest irrigation projects in South America. Completed in the 1960s, the project brought tens of thousands of hectares of arid or seasonally variable plains under controlled irrigation. Today, it irrigates nearly 60,000 hectares (about 150,000 acres, or 235 square miles) of farmland, making intensive crop cultivation possible.

However, large-scale rice production may also raise concerns for wintering Osprey. Reported environmental risks include the use of toxic pesticides dating back to the 1970s, including organochlorines, carbamates, pyrethroids, and organophosphorus compounds. Organochlorines, which can have neurotoxic and teratogenic effects, may still be used indiscriminately in the region despite Venezuelan environmental laws. Patty did spend a week in this area and then flew directly south through southern Venezuela into northeast Brazil. She spent the first half of September within the Amazon, first west of Manaus near the main Amazon River and then flew southwest across the Amazon into the State of Matto Grasso on September 15. She remained on the banks of the Araguaia River for the remainder of September.



Google map with Patty's location and Araguaia River Images


96
Activity
2 WEEKS
12 MONTHS
mapbox
0
500 km
1000 km
Guatemala
Nicaragua
Costa Rica
Panama
Patty
Colombia
Ecuador
1x
Aug 22, 2026 6:52 AM
10.103/-69.039
Jul
2026
Aug
2026
Sep


36
12 Months
mapbox
0
500 km
1000 km
Guyana
Suriname
Belém
Patty
Bolivia
1x
Sep 16, 2026 6:00 PM
-11.586/-50.714
Aug
2026
Sep

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