



Middle Creek in Motion

Winter 2023

2024 Waterfowl Migration Forecast

Every year we try to provide you with an update of what to expect for the waterfowl migration in the spring, specifically for snow geese. These forecasts are just scientific guesses based on the information we have at the time.

Last year, we just gave you the bare bones of what contributes to migration trends. Weather is always a driver of these northern migrations. Snow geese and tundra swans need open water to roost. The lake at Middle Creek provides this roost site where they can rest overnight without pressure from predators and people. But if it is too cold, and the lake is frozen, the birds will not be here yet. Our hearty resident Canada geese might stick it out, but snow geese and tundra swans will stay south on open water.

Next is food. These birds need access to waste grain green vegetation in the local agricultural fields which means they can't be covered in snow. In typical years, snow free fields and an ice free lake means most times birds will be peaking in February and March. However, last year, our snow geese showed up just shortly after Christmas and peaked before February due to warmer temperatures and practically no snowfall.

If you pay attention to weather patterns, you know that this year is an El Niño year which means weather patterns change slightly based on warmer ocean temperatures. As a result, much of the northern U.S. can likely expect a warmer, drier winter this time around. However, The Farmer's Almanac will tell you that we should expect above-normal snowfall and below-average temperatures.

Either way, expect the migration to take place over the months of January – March. If we have a dry warmer weather, the migration will be spread out and happen sooner. If its cold and snowy, the migration will peak over a course of a short few weeks later in February and March.

The chart below shows the last five years peak dates for waterfowl numbers. Over the last few years, our winters have had less snow, snow on the ground for shorter periods of time before melting, and warmer which has resulted in numbers of snow geese being spread out.

When do you think the migration will peak for the 2024 season?

YEAR	Peak Number of Snow Geese	Date	Peak Number of Tundra Swans	Date
2023	79,000	1/31/23	1,950	1/31/23
2022	105,000	2/25/22	4,500	2/28/22
2021	120,000	3/08/21	1,050	3/08/21
2020	125,000	2/18/20	3,000	2/07/20
2019	150,000	3/12/19	5,000	2/4/19



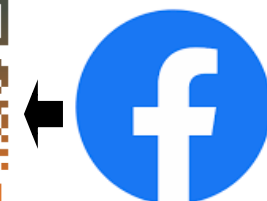
Photo by Alicia Kopp

Important Reminders!

Whether it is officially winter, or not, snow geese and other early "spring" migrants will often begin their movement north, hampered only by iced over water and persistent snow on the ground. However, our winters have been getting warmer and snow and ice have persisted for shorter periods on the ground and on water.

For the last 50 years, Middle Creek has been closed from Thanksgiving to February 1st, but snow geese have been arriving earlier each year, on par with milder conditions allowing them to do so. Therefore, we need to also adapt and open our doors when crowds begin to arrive earlier to see the snow geese. Think of it as a domino effect!

The Visitors Center will open back up to the public on Tuesday, January 16th, 2024.



Native Plant Gardens Enter the Dormant Season

Our garden volunteers had their last work day a little over two weeks ago. Besides one very persistent native aster (to the delight of remaining pollinators), the rest of the garden is now in the dormant season.

Most stems and seed heads are left throughout the winter. This provides shelter and food for many of our overwintering songbirds and small mammals.

Leaves are also left in the flower beds for similar reasons, benefitting birds, mammals, reptiles, amphibians, insects, and more. Although we provide supplemental feeding for the birds in the fall, winter, and early spring, these simple garden practices provide wildlife with natural food and shelter that they've always relied on. This is something we can all easily replicate in our own backyards.



New Chimney Swift Nesting Structures

Thanks to another Eagle Scout project, this time the work of Preston G., Middle Creek gained some new nesting structures near the Visitors Center: chimney swift towers (*Chaetura pelagica*). These artificial chimneys will join the many other structures at the Visitors Center that help boost bird populations, such as barn swallows, eastern bluebirds, American kestrels, tree swallows, purple martins, and more!



Chimney swifts can nest naturally in places such as tree cavities, but are almost always found nesting in human-made structures, particularly chimneys. Their nests are built plastered onto the insides, similar to how a barn swallow will plaster their nest under the eaves of the roof of our Visitors Center.

They can sometimes fly low over roads, getting hit by cars. Other threats include capping of chimneys, loss of native insects which prevents them from being able to nest. Hopefully with some luck, we will have chimney swifts breeding within viewing distance of the Visitors Center next year!

In 2018, the International Union for Conservation of Nature changed the chimney swift's status from near threatened to vulnerable, reflecting declines in their population.

Middle Creek's Controlled Hunt Summaries (So Far)

Middle Creek has several "controlled" hunts throughout the "off-season." These are basically broken down into an archery season, waterfowl hunts, and finally an archery/flintlock hunt. The controlled waterfowl season goes into January, so a final summary of the waterfowl season will appear in the Spring Newsletter.

The Middle Creek special archery hunt concluded on Saturday, November 4th. The 45 hunters and mentors who took part in the hunt harvested a total of 11 deer. The harvested deer consisted of 7 does, 3 bucks, and 1 button buck. Zone 3 was the most successful with a total of 6 deer (two doe, one button buck, one 6-point buck and two 8-point bucks). Zone 2 had one doe harvested. Zone 4/5 had two doe as well. Zone 1 had two doe.

Many hunters reported seeing deer and either couldn't get shots, or in some cases, didn't have an antlered permit. Two missed deer were reported as well. Overall, the success rate for the hunt was 22%, or nearly a quarter of all hunters who participated.

Great weather greeted the participants of this year's Middle Creek special flintlock/archery hunt on December 13, and which was reflected by the number of hunters who participated. If each hunter drawn shows up and brings a guest, we can have a maximum of 52 hunters. This year we had 46. This is up from the last two years.

The hunt had fourteen successful hunters that harvested 9 antlerless deer (two of which were "button bucks") and five antlered deer. That came out to a 30% success rate, an increase of 5% over last year

The Middle Creek waterfowl hunting season has been off to a fast start with seven days of goose hunts and six days of duck hunts already completed, so far. The duck hunting has been excellent with hunters enjoying a 60% success rate while harvesting 148 ducks to this point in the season. Species harvested include: mallard (52), American black ducks (40), American green-winged teal (38), northern pintail (8), northern shoveler (4), gadwall (3), lesser scaup (1), hooded merganser (1), and ruddy duck (1). The goose hunting has been slower but not without success. To this point in the season 44 Canada geese have been harvested, a 37% success rate amongst hunters.

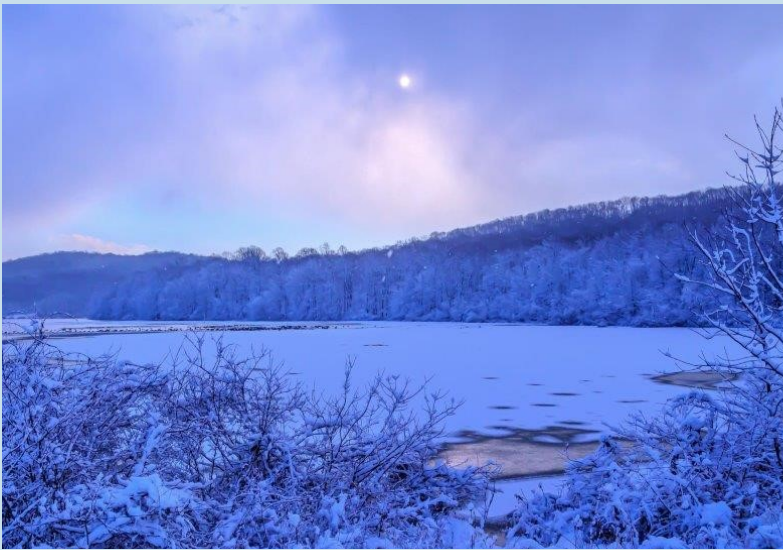
As always, it's the luck of the draw with weather and we've had several excellent days for waterfowl hunting. Such days are often cool and rainy. Hunting will continue every Tuesday, Thursday, and Saturday up until January 20th. As mentioned earlier, final counts from the waterfowl hunt will be in the Spring edition of *Middle Creek in Motion*. Anyone interested in applying for a duck or goose blinds can do so by visiting the Middle Creek web page for additional instructions.

Congratulations to all of our hunters! For those of us who didn't get a harvest or didn't get drawn this year, there's



Joe Petrovich harvested his 8-point buck during December's flintlock/archery hunt

Editor's note: a HUGE thank you to all who offered their photographs for this newsletter. There were many submissions and far too little space!



An ice- and snow-covered lake at Middle Creek has been less and less common over the years. Last winter, the lake only saw ice for perhaps a total of two weeks. Open waters and a snow-free landscape has been pushing the spring waterfowl migrations to be earlier and earlier as the birds take advantage of feeding opportunities. Don't hold your breath that this winter will be any more normal. The El Nino conditions are predicted to give our area warmer-than-average temps, but a toss up for precipitation amounts. So enjoy the frosty views of the lake when they happen!

Photo by Bonita Palm

As we take one last look back on our previous 50 years of conservation history at Middle Creek, it's not just the people and events that define it, but the wildlife. Middle Creek today hosts species once nearly lost from the state, or ones that became uncommon: bald eagles, otters, beavers, deer, turkey, and others. Those species didn't draw in the crowds of people, however. Although snow geese are the big crowd-pleasers today, it was actually tundra swans that first came to the main lake. These large birds later had their show stolen by ever-increasing migrations of snow geese.

Photo by Nancy Reber



Most now know the miraculous conservation success of the bald eagle. That success is ultimately the result of people coming together to demand action and putting in the hard work to ensure they persist. However, most visitors who come to Willow Point during the snow goose migration will ask why the geese all fly into the air at once, only to land back on the water again. The answer often requires some careful observation. Bald eagles regularly fly over or past the flocks on the water, spooking them and causing them to fly. Eagles nesting nearby only cause this phenomenon to happen even more often!

Photo by Deborah Moehlmann



Improving Lake Habitat—One Carp at a Time

This year, if you visited Middle Creek, you noticed the lower water levels and two large structures out in the water off Willow Point. Carp trapping is part of our overall lake habitat improvement project along with the seasonal drawdowns taking place. The purpose of carp removal is to stabilize the sediment within the lake by reducing disturbance and promoting vegetation growth. It was determined through an electrofishing survey that the main lake has an extremely high population of common carp, a non-native, invasive species. The carp are feeding on the aquatic vegetation within the lake causing the sediment to destabilize and suspend itself in the water column, further restricting light penetration, hence the brown watercolor that is seen through out the year at Middle Creek and increased algal blooms.

What you were seeing from Willow Point are suspended weights used to lift the 30'x60' nets out of the water, trapping the carp within. The nets were triggered remotely after baiting the carp in for several days using corn. With the nets up, crews were able to lift the middle of the net toward one of the sides effectively corralling the captured fish into one corner where the species we don't want to remove (bycatch) could be separated from the carp. The carp were then removed, quickly euthanized and given to a local farmer for fertilizer, reducing any waste.

We began trapping at the end of June 2023 and completed trapping on the last week of September 2023. In total we deployed the traps 13 times during that period, averaging 287 caught carp per deployment, totaling 3732 common carp and 115 mirror carp (a subspecies of common carp) removed from the main lake. Our highest capture day took place in August, where 440 carp were captured in one net, the total for that day was 511. We additionally caught another 800 carp that were at the dam in December. This brought the carp grand total to 4,674. Along with carp we also captured 3110 channel catfish, 73 bullhead catfish, 2 white catfish, 3 bluegill, 2 yellow perch, 6 white sucker, 1 pumpkinseed, 1 largemouth bass, and 3 very aggressive snapping turtles! All of the native bycatch was released back into the lake.

This project was a large undertaking and would not have been possible without the help of our Visitors Center staff habitat crew members, biologists, and others using their time to come assist. It has required early mornings, late nights, constant baiting, battery changes, and fixing the upright poles to have a single successful deployment. Without everyone's help, this would not have been possible.

The plan is to continue performing these carp removals along with the lake drawdowns until we see a reduction in suspended sediment within the lake and an increase in vegetation. This was our first year of removals and we are optimistic. We are hoping to see increases in vegetation and stabilization of sediment, corresponding to an increase in waterfowl usage. We often get feedback from anglers saying how good the catfish harvests used to be, as well as the bass fishing at Middle Creek. With a reduction in carp, other species that are either native and/or preferred sport fish will increase in size and abundance. Other management strategies in the tool box will be considered depending on how current carp removal seems to affect the lake long-term.



Carp were caught in baited nets, quickly euthanized, and used by local farmers for fertilizer. Native fish caught were released.

50th Anniversary Celebration goes into the History Books

Throughout the entire year, we have been highlighting our 50th anniversary on social media, at events, in the newsletters, and in our regular days. A big thank you to everyone who joined in on the fun!

To mark this special occasion, we had several special activities and recognitions. We hid a geocache on the property for geocachers to seek out with a GPS, held a contest for a patch and decal design that saw 30 wonderful submissions, gave away native persimmon seedlings to local community organizations which were grown from fruit found at Middle Creek, dedicated a time capsule in the Conservation Heritage Museum, had a special raffle at National Hunting and Fishing Day, held a “50 Things to Do at Middle Creek” challenge, and posted plenty of interesting historical photos on our Facebook page. Finally, we worked with the Bureau of Information and Education to produce a video on Middle Creek’s history which can be viewed [here](#), or on the Game Commission’s YouTube page.



What’s next? Well, we are taking a few years off from anniversary planning. The next big milestone will of course be 75 years. Eventually, that time capsule in the museum will be opened on our 100th anniversary! And this very newsletter will be one of the items inside. Until those dates, we still have some 50th patches available for purchase in the Visitors Center!

ZooAmerica’s Butterfly Conservation Work at Middle Creek **By Ann Holzman**

Surveys were conducted during the summer and fall of 2023 at Middle Creek WMA by a conservation team composed of biologists from ZooAmerica, Fort Indiantown Gap, and butterfly enthusiasts/photographers in search of the beautiful Baltimore Checkerspot (*Euphydryas phaeton*) butterfly. This species prefers a wetland habitat in which its preferred host plant, the white turtlehead (*Chelone glabra*) can be found.

Though this project is in its preliminary stages, it was exciting to see the number of Baltimore Checkerspots flying in June and early July. As the summer progressed, these butterflies were harder to locate but their larvae (caterpillars) were visible on white turtlehead and surrounding vegetation. By mid July, eggs were even found under a leaf close to a large cluster of turtlehead plants. With the beginning of fall, the host plant was blooming and the Baltimore Checkerspot communal webs were found close to these plants.

While surveying has concluded for 2023, the biologists are hopeful that the overwintering caterpillars are safely nestled in the leaf litter where they can survive the colder months. Monitoring will begin again in the early summer and additional white turtlehead plants may be planted to increase the range of this brilliant butterfly at Middle Creek WMA.

White turtlehead is often available at native plant nurseries. Help this species out by planting it in your own backyard!



Various life stages of the Baltimore checkerspot

Upcoming Events at Middle Creek

December 21st - March 19th

Wednesday, February 14th at 6:30 PM in the Auditorium: Dam Removal: A River Love Story

American Rivers is dedicated to restoring the health of our waterways, and one way to achieve that is through dam removal projects. While many dams have important uses such as water supply, flood management, and hydropower, many others – both publicly and privately owned – have reached the end of their useful life. Those dams can pose public safety risks, impact fish and other aquatic life, and can be costly liabilities to their owners. Removing dams restores native aquatic life to rivers, reduces the risk of aging dams failing possibly causing catastrophic flooding, damages, and/or loss of human life.

Saturday, February 24th at 10:00 AM: On the Search for Silk Moth Cocoons

Most parks, rail trails, and other public areas have moth cocoons hiding within variable habitat. Learning how to find them can be a ton of fun and in most cases, requires minimal effort. This event will start with a quick discussion about local silk moth species and the cocoons in which they hibernate. Then we'll take the group on a hike, in order to help teach everyone how to find cocoons. Host plant, habitat, geography, time of day, and identifying moths to specific habitat will be the focus of the day. Actually finding cocoons will be a huge bonus!

Wednesday, March 13th at 6:30 PM in the Auditorium: Past, Present, and Wilderness Ways of the Lenape

Chief Adam Waterbear will discuss the past and present of the Lenape people, including pre-colonial life, relationships with William Penn, the era of Penn's Sons and the Walking Purchase, the Lenape diaspora, and what the Lenape Nation of Pennsylvania is doing today to revitalize Lenape culture and continue their role as caretakers of the environment. Chief Adam will also share stories and culture that speak to the Lenape connection to wilderness and nature.

Saturday, March 16th at 10:00 AM (Rain Date March 23rd): Public Prescribed Fire Demonstration

This year will be the third consecutive year of burning a field by the Visitors Center for the public to come view and learn about prescribed fire. Habitat workers and foresters will be on hand to answer questions and to display the equipment that enables the safe use of fire as a natural management tool for forests and fields. This event has a rain date, so keep an eye out for last minute information on this event happening or not. Call the Middle Creek Visitors Center for more information.

**Be sure to pick up our 2024
Event Guide!**

**Available in the New Year:
online and at the Visitors
Center!**

