

# Detroit River Hawk Watch

## 2022 Season Summary

Submitted by:



Jerome S. Jourdan, Detroit River Hawk Watch Advisory Committee (Primary Author);  
Andrew Sturgess, Detroit River Hawk Watch Advisory Committee;  
Jessica Fletcher, Wildlife Biologist, Detroit River International Wildlife Refuge;  
Erika Van Kirk, Hawk Watch Apprentice, Detroit River Hawk Watch;  
Sarah deGuise, Hawk Watch Apprentice, Detroit River Hawk Watch;  
Kevin Georg, 2022 Contract Counter



*Bald Eagle. © Mark Hainen*

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## Abstract

The 2022 count was the 40th consecutive season of monitoring diurnal raptor and turkey vulture migration at the mouth of the Detroit River, and the 25th year of consistent coverage at Lake Erie Metropark. There were 573 hours of data collection with counts conducted on 87 days between 01 September and 30 November. This season, 145,577 total turkey vultures and raptors of 15 species were counted. This total was 16% above the LTA (125,048) and 13% above the 10-year average between 2013 - 2022 (128,265). We compared this season's totals to the respective LTA for each species since 1998. Turkey vulture (26%), broad-winged hawks (13%), American kestrel (10%), merlin (59%), and peregrine falcon (28%) were the only species counted above the LTA. Osprey (-84%), bald eagle (-42%), northern harrier (-12%), sharp-shinned hawk (-2%), Cooper's hawk (-77%), northern goshawk (-87%), red-shouldered hawk (-24%), Swainson's hawk (-100%), red-tailed hawk (-4%), rough-legged hawk (-88%), and golden eagle (-52%) were lower than their respective LTA (where values >15% are considered "significant" for the count). Two northern goshawks and zero Swainson's hawks were counted this year. There were no "unknown" raptors counted this year.

## Methods

An hourly count of migrating diurnal raptors and turkey vultures was conducted each day between 01 September and 30 November 2020 with a total of 573 hours of coverage at the Lake Erie Metropark Boat Launch (LEMP; N 42.0792, W 83.1937). Observation protocol was conducted according to [The Detroit River Hawk Watch Monitoring Protocol<sup>1</sup>](#) except in the case of hourly weather recording. Hourly measurements were recorded directly from the Grosse Ile Weather Station at Weather Underground. The reasoning behind this deviation was that local measurements from the LEMP count site had no bearing on whether raptors migrated past the site.

Counters attempted to estimate birds exiting kettles in a stream-like fashion during periods of large migration volume. Hourly results were reported at the end of the day to [Hawk Count](#) where results are then used to build a raptor population index (RPI) to assess species population trends.

Results referenced below are reported as a percent deviation in relation to LEMP's long-term average (LTA) since 1998, when consistent coverage began at LEMP. If the deviation between this year's total count of a given species was within  $\pm 15\%$  of the LTA, we considered that species to have been counted in "approximately average" numbers. If the deviation was greater than 15% from the LTA, we considered that deviation to be significant.

## Monthly Reports

The 2022 Detroit River Hawk Watch (DRHW) season returned to normal operations after relaxation of the ongoing COVID-19 protocols. Through cooperative efforts and safety protocols DRHW celebrated its 40th consecutive year of monitoring the fall raptor migration.

Each season the faithful turn their eyes to the sky in the hopes that every raptor that leaves Canada for its wintering grounds will fly in a well-ordered manner directly over our observation post, thus permitting easy viewing and counting of their numbers. Of course, this never actually happens as there are variables in the equation that mere humans have no control over.

The wind and weather factors are different each year and this leads to large swings in the numerical counts of certain species that are affected by slight changes in wind strength and direction. Much the same as a person swimming across a river with a current, their exit point will depend on the speed of that current and the width of the river. This same principal applies to migrating species as they transit down the Canadian corridor between the two Great Lakes that they try to avoid, Huron and Erie.

Sometimes the effects are subtle, and the birds may still be seen from our observation site, at other times, they adjust their routes and cross the border into the US at points unseen and unknown. Fortunately, the winds were relatively kind to us in the 2022 season, resulting in our highest total count since 2015.

Detroit River Hawk Watch welcomed back Kevin Georg as its primary counter for 2022. This is Kevin's sixth year with DRHW to go along with his 35+ years of experience performing raptor surveys. Detroit River Hawk Watch also welcomed back hawk watch apprentice Erika Van Kirk for her 2nd year assisting with the watch and quality-checking daily reports. Sarah deGuise joined our team as a new hawk watch apprentice for this season. Both Sarah and Erika were instrumental in daily count management utilizing the Dunkadoo.org real-time raptor reporting tool<sup>2</sup>.

Figures 1-3 show daily temperature, wind, and pressure records<sup>3-5</sup> for the Detroit River Hawk Watch from 01 September to 30 November. Best flight counts during September and October were associated with rising barometer readings and winds coming from a northerly direction.

## September



*Broad-winged hawk image courtesy of A. Sturgess*

September is the month that starts the transition from relatively calm summer weather patterns to more variable and turbulent fall systems. It is a slightly unpredictable month as it may be a mere continuation of summer for weeks before displaying signs of the changes to come, or a change that comes about sooner. This September proved summer-like until the fourth week when the temperatures dropped into the sixties. The average wind speed was 6.59 miles per hour and the average high temperature was 73.9 degrees Fahrenheit. It was a dry month with less than an inch of rain.

High seasonal count totals at DRHW depend on the two most common species: broad-winged hawks and turkey vultures. In a good year, both species usually migrate close to us in numbers averaging five figures. While turkey vultures dominate the month of October, the broad-winged hawks take center stage in September. Broad-winged hawks travel in large social groups using a “kettle and stream” method, gathering more birds as they travel south. Once they reach places like Corpus Christi, Vera Cruz, and Panama, their seasonal totals climb to six and seven figures. All these hawk count sites are subject to the vagaries of the winds and, like our location, broad-wing hawk numbers can show significant variations from season to season. In the last ten years our numbers have varied from just over 10,000 to just under 200,000. This season ended with more than 67,000.

The first hint that we might have a good season came when northeast winds delivered over 12,000 early broad-winged hawks during the first week of the watch. There were 7,286 counted on 06 September and 5,022 on 07 September. Although it’s possible to see a few broad-winged hawks on the very first day of the watch, we don’t usually expect large numbers until around the middle of the month. In the history of this location, this is the largest number of birds seen this early in the season. The closest comparison took place in 2004 when 7,400 birds were seen on the 10th of the

month. This year's next large movement came on 15 September with just over 14,000 birds. This was topped with the highest one-day total for the month on the 23 September with a fitting 23,859 birds. All but 28 of the season total of 67,349 broad-wings came in September.

The first month of the watch is also a busy time counting sharp-shinned hawks. After a week or two, they start coming in numbers that can soar into the hundreds on any given day. These birds seem determined to hold a set course rather than surf on the winds like the buteos. Their flap-and-glide rhythm becomes familiar to all as the juvenile individuals lead the way south. Not that these birds are unaffected by the winds, they are buffeted around during turbulent times. During high winds they can be seen at times "crabbing" – their head facing somewhat towards the wind trying to offset the forces acting on them – while the strength of the wind pushes them in a different direction. This season we had nearly 3,000 of this species in September and 5,897 total for the year.

Another bird that starts its migration in September is the American kestrel. The kestrel's long, swept-back wings make it adept at hovering over fields in search of prey. They commonly take dragonflies as they migrate, catching and eating them on the wing. This seems to be the mildest-mannered of the three falcons that we see, the merlin being its seemingly polar opposite, angrily aggressive all the time. The kestrel is a companion bird to the sharp-shinned hawk, starting to migrate around the same time and they are commonly seen together in good numbers on certain days. Seventy-five percent of the 981 kestrels we counted this season came in the month of September. The other two falcons, merlins and peregrines, are also on the move in September. All three continue into October, falling off dramatically in November.

Another bird that is mostly seen in September is the osprey. All but two of our totals counted this year were September birds. Like bald eagles, they do have a local presence and require close observation to separate migrants from the daily local sightings. This is a species that has benefited from the ban on DDT and seems to be thriving locally and in other areas of the country. However, our recent count numbers do not reflect that so it is possible their normal migration paths may not pass close enough to our location. These birds are not afraid of water and do fly over larger bodies of water that other raptors avoid.

Table 1 summarizes the total raptor survey from the LEMP Boat Launch site for the month of September. A total of 78,784 turkey vultures and raptors consisting of 12 species were counted during the period 01 September to 30 September. This is in comparison to 30,016 total birds and 13 species recorded in 2021 and 20,788 birds and 12 species in 2020. Species surveyed included turkey vulture, osprey, bald eagle, northern harrier, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, broad-winged hawk, red-tailed hawk, American kestrel, merlin, and peregrine falcon. Northern goshawk, golden eagle, and Swainson's hawks were not seen this month.

The 67,321 broad-winged hawks counted during September were a major improvement over the 21,969 broad-winged hawks counted during September 2021 and constituted one of the best flight months in the past 10 years. A tally of 7,284 turkey vultures was a significant increase over the 4,112 turkey vultures counted in September 2021, the 1,788 turkey vultures counted in 2020, and the 491 birds tallied in 2019. Peregrine falcon numbers (22) were slightly below the 26 counted in 2021 and the 28 counted in 2020 during this period. Sharp-shinned hawk numbers (2,890) were similar to the 2,918 counted in September 2021 and a significant improvement over the 1,956

tallied in September 2020. Bald eagle numbers (31) were similar to September 2021 (33) but still slightly better than in 2020 (25). American kestrel numbers (755) were a significant improvement over this time last year (646) and the 387 birds counted in September 2020. Red-tailed hawks (181) this fall were almost three times more than in September 2021 (62). Rain washed out the count on 03 and 04 September.

Daily photo highlights, non-raptor observations, and commentary from Andrew Sturgess were submitted to the Detroit River Hawk Watch Facebook page in September. Select photos and commentary, along with photos from Mark Hainen, Erika Van Kirk, Bill Peregord, and visitors to the site were archived in the Gallery tab of the [Detroit River Hawk Watch](#) website.

## October



*Sharp-shinned hawk image courtesy of A. Sturgess*

October is a month where change is the order of the day. It may be mild at the beginning of the month, as trees morph into various fall shades on the red-orange-yellow spectrum. As the month progresses, a struggle for dominance develops between the last vestiges of summer and an approaching winter, with thrusts and parries from both sides. Temperatures can vary from the high seventies to the mid-forties. The average high temperature for this October was 61.58 degrees Fahrenheit, with an average wind speed of 7.31 mph. Rainfall was almost non-existent with 0.3 inches for the month.

A favorite month for many hawk-watchers, diversity is the key word in October. Particularly in the second half of the month, it is possible to see a wide variety of species on a given day. This October, we observed thirteen of the sixteen species we look for. Of the three remaining species, northern goshawk, Swainson's hawk, and rough-legged hawk, two are rarely seen at our site and rough-legged hawks are becoming noticeably scarcer at our location. The numerical king of October is the turkey vulture. We counted 57,480 of the season total of 65,788 birds in October. They start moving in late September and trail off in November, but the larger kettles requiring a tally counter or hand "clicker" to count come in this month. Each year we search diligently for a black vulture among the crowd but most years we come up empty, as we did this season. This bird is expanding its range northward so at some point, we should start to see them more frequently.

Red-tailed hawks and their buteo brethren, red-shouldered hawks, start to arrive in larger numbers in October. Thanks to some productive October winds and a relative lack of them in November, the majority of both species were counted in October this season.

Table 2 summarizes raptor totals for the period 01 October to 31 October 2022. A total of 64,176 raptors represented a 10% increase over the 57,911 raptors counted in October 2021. Of all birds counted this month, 90% (57,480) were turkey vultures. This compares to 51,815 turkey vultures in October 2021 and 69,727 in October 2020. Cooper's hawk (44 vs. 29 in 2021), red-tailed hawk (2,828 vs. 1,555 in 2021), and merlin (43 vs. 26 in 2021) were seen in higher numbers than last year. American kestrel (226 vs. 422 in 2021) and sharp-shinned hawk (2,961 vs. 3,482 in 2021) were notably lower. Rain washed out the count on the 31 of October. Daily photo highlights, non-raptor observations, and commentary from Andrew Sturgess and Mark Hainen were submitted to the Detroit River Hawk Watch Facebook page during the month of October. Select photos were archived in the Gallery tab of the [Detroit River Hawk Watch](#) website.

## November



*Red-tailed hawk image courtesy of A. Sturgess*

Gordon Lightfoot reminded us that “the gales of November come early” giving us a hint to how turbulent this month can be. This year seemed to be unseasonably mild, until it wasn’t, with a few days that reminded us why birds wear down coats. The average high temperature was 49.73 degrees Fahrenheit. The average wind speed increased to 8.11 miles per hour. Total rainfall for the month was just over one inch. Although November is also a month for a diverse number of species to migrate past our location, the bird most likely to top the count list is the red-tailed hawk. This is another bird that is most affected by the wind conditions from year to year. This year, the second half of the month lacked the most productive winds, and our counts were probably less than they could have been had fortune favored us a little more. For the month, we totaled 1,290 red-tailed hawks but only 156 of these birds came in the last half of the month when it seemed that, due to uncooperative wind conditions, we were only seeing the outliers on the edge of a larger movement. The season total of 4,299 red-tails was in the ballpark of our average normal so we had no real complaints. This bird comes in a fascinating variety of plumages including some partially leucistic (reduced coloring) versions and dark morphs, both of which we were fortunate enough to see this season. The early migrants of this species are mostly juveniles, the adults come later, some possibly after the end of our count.

Another species that we eagerly search for in November is the golden eagle. Most of the birds that we saw this year were juveniles or subadults, meaning that we did not see the later adult migration. Evidence from other sites that continue their counts into December, such as Alleghany Front, would indicate that the adult golden eagles are still migrating in good numbers later in the year. Our numbers have been variable over the past few years with 44 being tallied this year, a drop from last year’s 65 birds, and well off our hoped-for triple digit count.

For the first time in many years red-tailed hawks (1,290) outnumbered turkey vultures (1,024) during the month of November. This is most likely due to strong south winds that tended to push the vultures north of the count site and reduced their numbers relative to November 2021 when 4,171 birds were tallied.

Table 3 summarizes raptor totals for the period 01 November to 30 November 2022. A total of 2,617 raptors during the month were significantly lower than the 6,689 recorded during this time in 2021. Red-tailed hawks (1,290) comprised 49% of the total, while turkey vultures (1,024) made up another 39%. Both species showed significant decrease in numbers relative to 2021 when 4,171 turkey vultures and 2,026 red-tailed hawks were counted. Golden eagle numbers were down this year (27) compared to November 2021 when 50 were tallied.

Rain cancelled counts on the 24 and 27 of November.

Daily photo highlights, non-raptor observations, and commentary from Andrew Sturgess were submitted to the Detroit River Hawk Watch Facebook page during the month of November. Select photos have been archived in the Gallery tab in the [Detroit River Hawk Watch](#) website.

## Species Accounts

Table 4 summarizes the 2022 species totals for the Detroit River Hawk Watch between the period 01 September to 30 November. Totals for previous years, as well as the Long-term Average (LTA) and 10-year average between 2013 – 2022 (TYA) are also given. 2022 deviations from the LTA and TYA are also shown in light blue (+ deviation) and light red (- deviation). Values greater than +/- 15% are considered significant and are shown in dark blue (+) and dark red (-).

### TURKEY VULTURE

65,788 turkey vultures migrated through the count site during the period 08 September to 28 November 2022, which was a 9% increase over 2021 totals (60,098) and 26% above the LTA (52,003). This year's tally was also 6% above the TYA (61,778). High counts (8,515; 5,804, and 5,305) occurred on 27 October, 10 October, and 28 October, respectively.



*Turkey vulture images courtesy of A. Sturgess and M. Hainen*

### OSPREY

Only 17 osprey (vs. 26 in 2021 and 31 in 2020) migrated through the count site during the period 06 September to 15 October 2022, which is 84% below the LTA (106), and 59% below the TYA (42). A high count of 3 birds were reported on 18 September. No birds were reported in November.



*Osprey images courtesy of A. Sturgess, B. Peregord, and M. Hainen*

### BALD EAGLE

92 bald eagles (vs. 83 in 2021 and 73 in 2020) were tallied between 07 September and 29 November 2022. This year's count was 42% lower than the LTA (160) and 47% lower than the TYA (174). The season's high count occurred on 28 November when 8 bald eagles passed by the count. Local juvenile and adult bald eagles entertained and distracted counters during the season

but were not counted unless high in the atmosphere or purposefully heading west across the channel.



*Bald eagle images courtesy of M. Hainen and A. Sturgess*

### NORTHERN HARRIER

393 northern harriers (vs. 379 in 2021 and 421 in 2020) migrated through the count site between 01 September and 26 November 2022 with a high count of 30 birds occurring on 23 September and another 29 birds counted on 20 September. The season total is 12% below the LTA (446) but equal to the TYA (394).



*Northern harrier images courtesy of A. Sturgess*

## SHARP-SHINNED HAWK

5,897 sharp-shinned hawks (vs. 6,571 in 2021 and 5,050 in 2020) passed by the count site during the period 06 September and 26 November 2022, which is 2% below the LTA (6,005) but 20% above the TYA (4,898). The high count (402) occurred on 22 October.



*Sharp-shinned hawk images courtesy of M. Hainen, B. Peregord, and A. Sturgess*

## COOPER'S HAWK

A season total of 91 Cooper's hawks (vs. 52 in 2021 105 in 2020) migrated past the count site between 06 September and 30 November 2022. This year's total was 77% below the LTA (399) and 54% below the TYA (197). High counts (6) occurred on three separate dates: 29 September, 30 September, and 16 October.



*Cooper's hawk images courtesy of M. Hainen and A. Sturgess*

## NORTHERN GOSHAWK

Two goshawks were counted this year. Individuals were spotted on 28 October and 14 November. The LTA is 16 while the TYA is only 3 birds.

## SWAINSON'S HAWK

This year no Swainson's hawks were counted. The LTA (3) and TYA (2) were not met.

## RED-SHOULDERED HAWK

479 red-shouldered hawks (vs. 502 in 2021 and 825 in 2020) were tallied between 27 September and 28 November 2022. This season's flight was 24% below the LTA (632) and 21% below the TYA (605). A high count of 105 birds occurred on 29 October.



*Red-shouldered hawk images courtesy of A. Sturgess*

## BROAD-WINGED HAWK

2022 was a rebound year for broad-winged hawks. 67,349 broad-winged hawks (vs. 21,987 in 2021 and 16,971 in 2020) migrated past the count site between 01 September and 03 October 2022. The 2022 fall season total was 13% above the LTA (59,653) and 22% above the TYA (55,289). Favorable winds on the 06, 07, 15, and 23 of September brought large numbers of birds through the count site. The big flight this year occurred on 23 September when 23,859 birds were counted. 14,146 birds were also tallied on 15 September.



*Broad-winged hawk images courtesy of A. Sturgess and M. Hainen*

## RED-TAILED HAWK

4,299 red-tailed hawks (vs. 3,643 in 2021 and 4,241 in 2020) passed by the count site between 01 September and 30 November 2021. This year's tally was 4% below the LTA (4,462) and 12% below the TYA (3,853). High counts occurred on the 27 (414), 28 (867), and 29 (688) of October, and again on the 15 (483) of November.



*Red-tailed hawk images courtesy of A. Sturgess and J. Jourdan*

## ROUGH-LEGGED HAWK

Only 4 rough-legged hawks (vs. 4 in 2021 and 27 in 2020) migrated past the count site between 14 November and 25 November 2022. This year's tally is 88% below the LTA (32), and 82% below the TYA (23). Single birds were recorded on 14 November and 21 November with two individuals counted on 25 November.

## GOLDEN EAGLE

44 golden eagles (vs. 65 in 2021 and 55 in 2020) migrated past the count site between 02 October and 30 November 2022. This year's count was 52% below the LTA (92) and 41% below the TYA (75). High counts of 4 golden eagles occurred on 28 October and 25 November. An individual on 30 November proved to be the last raptor observed for the season!



*Golden eagle images courtesy of A. Sturgess*

## AMERICAN KESTREL

981 American kestrels (vs. 1,068 in 2021 and 641 in 2020) passed by the count site between 01 September and 24 October 2022. This year's count was 10% above the LTA (895) and 28% above the TYA (766). High counts of 120 (22 September), 102 (20 September) and 101 (14 September) were recorded.



*American kestrel images courtesy of A. Sturgess, B. Peregord, and M. Hainen*

## MERLIN

79 merlins between 01 September and 26 November 2022 bettered season totals of 2021 (67) and 2020 (67). This year's tally was 59% above the LTA (50), and 43% above the TYA (55). High counts of 8 (24 October), 7 (21 October), and 5 (23 October) merlins were recorded.



*Merlin images courtesy of A. Sturgess and M. Hainen*

## PEREGRINE FALCON

62 peregrine falcons (vs. 70 in 2021 and 102 in 2020) were tallied between 06 September and 07 November. This year's tally was 28% above the LTA (48) and 5% above the TYA (59). High counts of 5 birds occurred 07 October and 10 October.



*Peregrine falcon images courtesy of A. Sturgess and J. Jourdan*

## UNKNOWN RAPTOR

0 unknown raptors were recorded between 01 September and 30 November 2022. The LTA is 43 and the TYA is 45.

## TOTAL

145,577 diurnal raptors and turkey vultures (vs. 94, 616 in 2021 and 101,200 in 2020) migrated over the Lake Erie Metropark Boat Launch between 01 September and 30 November 2022. This year's tally was 16% above the LTA (125,044) and 13% above the TYA (128,256).

Figure 4 shows total numbers for 2022 plotted against the previous totals since 1998. Totals for 2022 appeared to signify an overall population upswing that shows a cyclic pattern after a period of population leveling. Weather plays an important role in the success of the season's survey with favorable winds in early September contributing and high winds in November detracting from season totals.

## Migratory and Non-Raptor Highlights

Non-raptor highlights, which include waterfowl, grebes, loons, shorebirds, migratory songbirds, and passerines are the happy distractions that occupy the counters between raptor flights. These sightings help to alleviate slow raptor days when weather and dull skies test the patience of our volunteer counters. With special thanks to Andrew Sturgess, Mark Hainen, and Bill Peregord, daily narratives and special observations were reported to both [HawkCount](#) and the [Detroit River Hawk Watch Facebook Page](#). Some of the highlights include:



*526 monarch butterflies migrated past the count site on 14 Sep. Some were worse for their wear.*



*On 06 Sep 2022 a pair of local bald eagles put on a tussle show in front of the counters during a relatively slow day.*



*Double-crested cormorants continue to migrate in big numbers past the site during the first two weeks of September. Some came very close!*



*A young map turtle visited the crew.*



*American White Pelicans put on migratory spectacles during September and October months.*





*Tens of thousands of blue jays migrated past the site during September*



*A state rarity Little Gull performed in front of the counters for several days beginning 11 Nov 2022*



*Images courtesy of A. Sturgess and M. Hainen*

## Outreach

The Detroit River Hawk Watch is actively engaged in bringing outreach to the community in an attempt to increase interest not only in the hawk watch, but in raptor conservation. Our volunteers and apprentices are always happy to chat with visitors and answer any questions they may have as they visit the count site. Additionally, for the first time since before the COVID-19 pandemic, the annual Hawk Fest at Lake Erie Metropark hosted by Huron-Clinton Metropolitan Authority returned from 16-18 Sep 2022.



DRHW was overjoyed to welcome back Erika Van Kirk to the Detroit River Hawk Watch team for her second season as a hawk watch apprentice! Erika's passion for migrating raptors and environmental education and interpretation made her such an invaluable asset last year that we could not resist asking her to join us again! Erika also worked with our staff during the "off-season" this year to update our informational brochure, quality check last year's data, and assisted with writing the 2021 and 2022 season summaries.



Our new apprentice Sarah deGuise joined the hawk watch crew to learn identification, migration, counting and to assist us with our data collection, management, and public outreach. Sarah is a recent graduate from Michigan State University where she obtained her degree in Fisheries and Wildlife with a concentration in conservation biology. Prior to working with us, she finished a field season with the Forestry Service where she surveyed sensitive shorebird and turtle species along the Lake Michigan coastline. Her passion for nature was instilled in her at a young age but her love of raptors stems from her time spent as a raptor trainer in college.

The Detroit River Hawk Watch was featured in an article in the Detroit Free Press Online website 20 Oct 2022. You can read the article by following [this link](#).

The Detroit River Hawk Watch celebrated 40 years of hawk watching with a T-shirt campaign through Bonfire to raise funds that will go towards supporting our professional counter and apprentices for the future. Over the course of the season, we raised \$854! A very big THANK YOU to all of our supporters!





Natalie Cypher and the Outdoor Adventure Center hosted “Little Cub & Explorer Club” events on 8 Oct, 16 Oct and 19 Nov 2022



Since 04 December 2021 the Detroit River Hawk Watch Facebook Group has added another 324 new members for a 04 December 2022 total of 2,038 members. Thank you all for following and supporting us!

## Acknowledgements

Detroit River Hawk Watch is a collective effort administered by the United States Fish and Wildlife Service (USFWS) at the Detroit River International Wildlife Refuge and a dedicated core of volunteers. The success of the Detroit River Hawk Watch itself would not be possible without the dedication of USFWS volunteers who log hundreds of hours counting hawks in all-weather situations. Thanks go out to Kevin Georg, our professional counter, and to the DRHW crew of Andrew Sturgess, Don Sherwood, Rosemary Brady, Patrick Mulawa, Mark Hainen, Bill Peregord, Michelle Peregord, Frank Kitakis, Alex Gilford, Mike McEvoy, returning apprentice Erika Van Kirk, and 2022 new apprentice Sarah deGuisse.

Detroit River Hawk Watch is also grateful to those visitors (some regular) who came out on many occasions to assist with sightings and provide a break during particularly slow days. Special acknowledgement is made to Andrew Sturgess, Mark Hainen, and Bill Peregord, all of whom provided wonderful photos and stories for the DRHW Facebook Page. Daily narratives, insights and predictions provided by Andrew were posted to Facebook and received many compliments from followers of the Detroit River Hawk Watch. Of course, the success of the count would not be possible without financial support from the International Wildlife Refuge Alliance (IWRA) and DTE Energy, database support from Hawk Migration Association of North America (HMANA), and site support Huron-Clinton Metropolitan Authority (HCMA) at the Lake Erie Metropark. Volunteers are always welcome and are invited to come out to the boat launch at LEMP to join in our efforts. Keep looking up!



*Images courtesy of Detroit River Hawk Watch*



## References:

1. Detroit River Hawk Watch. 2011. The Detroit River Hawk Watch Monitoring Protocol: A Review and Implementation for Scientific Integrity. U.S. Fish and Wildlife Service. Grosse Ile, Michigan.
2. <https://dunkadoo.org/explore/detroit-river-international-wildlife-refuge/detroit-river-hawk-watch-fall-2022>
3. <https://www.timeanddate.com/weather/@4994850/historic?month=9&year=2022>
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5. <https://www.timeanddate.com/weather/@4994850/historic?month=11&year=2022>

**Table 1.** Raptor totals for the Detroit River Hawk Watch during September 2022. (Table courtesy of hawkcount.org)

Month Summary: September 2022																								
		Black Vulture	Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	Northern Goshawk	Red-shouldered Hawk	Broad-winged Hawk	Swainson's Hawk	Red-tailed Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Buteo	Unknown Falcon	Unknown Eagle	Unknown Raptor	Total
Date	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UA	UB	UF	UE	UR	Total
2022-09-01	7					6					8		13			3	2							32
2022-09-02	7					1					5		6			2								14
2022-09-03	7																							0
2022-09-04	2																							0
2022-09-05	0																							0
2022-09-06	9			1		1	4	2			7286		10			47	1	1						7353
2022-09-07	9				5	6	27	1			5022		27			41	2	3						5134
2022-09-08	7		6		1	1	39				165		15			18	1							246
2022-09-09	7.5			1	1	1	259				13		1			16	1	1						294
2022-09-10	7			2	2	2	118				13		1			7								145
2022-09-11	6				2		11				14		1											28
2022-09-12	6						11				7													18
2022-09-13	7					2	31				30		5			3	1	1						73
2022-09-14	6		3	1	1	4	227	1					4			17	1	2						261
2022-09-15	8.25		27	1	7	25	138	2			14146		6			101	1							14454
2022-09-16	7			1	2	22	231				2					20	1							279
2022-09-17	7		13		1	9	83				5		4			19	1							135
2022-09-18	6.5		7	3		1	54				1		1			10								77
2022-09-19	8		8		1	15	133				4777		3			35	1	1						4974
2022-09-20	9.67		9	1		29	321				21					102	2	3						488
2022-09-21	6.5			1		1	25									15								42
2022-09-22	8		15	1		13	185	1			1907		7			120	2	2						2253
2022-09-23	7.17		272		1	30	171	2			23859		11			71	3	1						24421
2022-09-24	6.25		153		1	6	176				3		2				1							342
2022-09-25	8		125		1	4	62	1			4239		1			5								4438
2022-09-26	7		183	1		5	35				389		3			6		1						623
2022-09-27	8		476	1		14	218	1		1	2809		7			32		2						3561
2022-09-28	7		340			11	111	1			127		12			10		2						614
2022-09-29	9		3005		5	12	99	6		2	2385		18			33	2	1						5568
2022-09-30	7.5		2642			12	121	6			88		23			22	2	1						2917
<b>Total: Sep 2022</b>	<b>208.34</b>	<b>0</b>	<b>7284</b>	<b>15</b>	<b>31</b>	<b>233</b>	<b>2890</b>	<b>24</b>	<b>0</b>	<b>3</b>	<b>67321</b>	<b>0</b>	<b>181</b>	<b>0</b>	<b>0</b>	<b>755</b>	<b>25</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78784</b>
<b>Total: Sep 2021</b>	<b>191</b>	<b>0</b>	<b>4112</b>	<b>19</b>	<b>33</b>	<b>191</b>	<b>2918</b>	<b>10</b>	<b>0</b>	<b>5</b>	<b>21969</b>	<b>0</b>	<b>62</b>	<b>0</b>	<b>1</b>	<b>646</b>	<b>23</b>	<b>26</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30016</b>

**Table 2.** Raptor totals for the Detroit River Hawk Watch during October 2022. (Table courtesy of hawkcount.org)

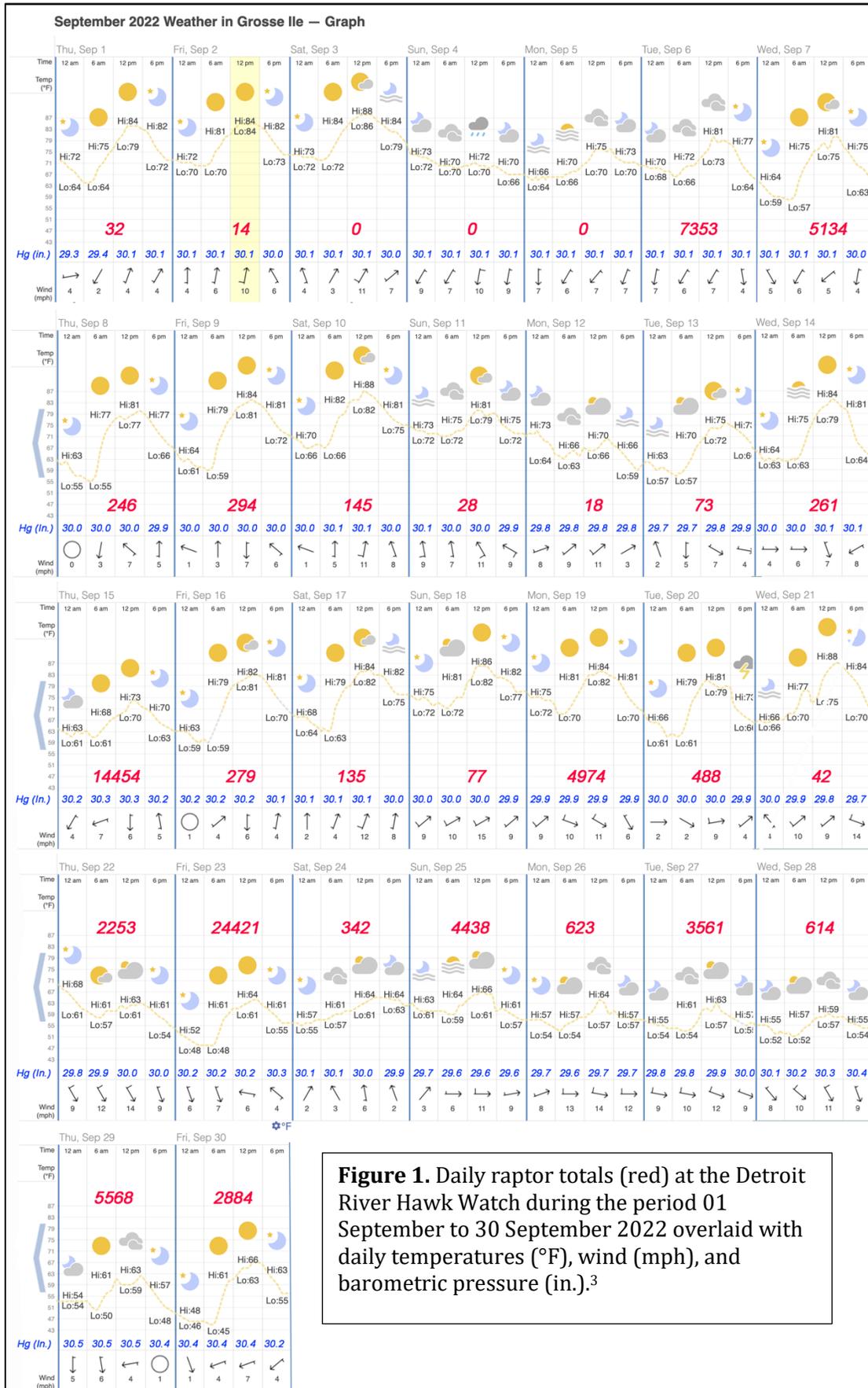
		Month Summary: October 2022																						
		Black Vulture	Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	Northern Goshawk	Red-shouldered Hawk	Broad-winged Hawk	Swainson's Hawk	Red-tailed Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Buteo	Unknown Falcon	Unknown Eagle	Unknown Raptor	Total
Date	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UA	UB	UF	UE	UR	Total
2022-10-01	7.5		3161			3	66	1		2	2		24			10	2							3271
2022-10-02	8.25		4250		4	7	89	4		5	22		102		1	12	2	2						4500
2022-10-03	7.58		1130		2	4	89	4		16	4		99			9	1	2						1360
2022-10-04	8		931			3	55	2		12			49		1	2								1055
2022-10-05	7		87			5	46	1					2			3								144
2022-10-06	7		377		1	3	51						3			1		1						437
2022-10-07	7		946				29	1		2			16					5						999
2022-10-08	7.5		4867	1	1	3	73			2			18		2	4	4	2						4977
2022-10-09	8		2973			4	55	2					12			7	2							3055
2022-10-10	7.33		5804		5	10	63	1		1			30		1	21		5						5941
2022-10-11	6.25		233			5	120	2					3			24	2	1						390
2022-10-12	1.5		16					2								1								19
2022-10-13	6		1119			3	18						3			4		2						1149
2022-10-14	7		1509		2	9	41	1		1			4		2	11								1580
2022-10-15	8		2950	1		13	142	2		1			15			22	2	2						3150
2022-10-16	8		2430		1	10	108	6		7			56		1	2	1	1						2623
2022-10-17	5		2599		1	3	103	1					13			21	2	1						2744
2022-10-18	5		425				69	3					15			5								517
2022-10-19	7.5		1177			4	85	1					10			6								1283
2022-10-20	5		1036			1	123	2					1			2	1							1166
2022-10-21	7.5		134			6	314	1					8			35	7	4						509
2022-10-22	7.5		740			12	402	1					4			9	1	1						1170
2022-10-23	7.5		1890		1	10	233						19			2	5	1						2161
2022-10-24	7.5		284		2	9	353						4			8	8	3						671
2022-10-25	6.5		532		1	4	162	1					15			5	2	1						723
2022-10-26	8.33		833				3						3											839
2022-10-27	8		8515		5	9	28	3		44			414		1		1	4						9024
2022-10-28	8		5305		5		11	1	1	90			867		4									6284
2022-10-29	5		797		1	2	20	3		105			688		1									1617
2022-10-30	6		430		3		8			43			331		3									818
2022-10-31	0																							0
Total: Oct 2022	206	0	57480	2	35	142	2961	44	1	331	28	0	2828	0	17	226	43	38	0	0	0	0	0	64176
Total: Oct 2021	184	0	51815	5	35	159	3482	29	0	320	18	0	1555	1	14	422	26	30	0	0	0	0	0	57911

**Table 3.** Raptor totals for the Detroit River Hawk Watch during November 2022. (Table courtesy of hawkcount.org)

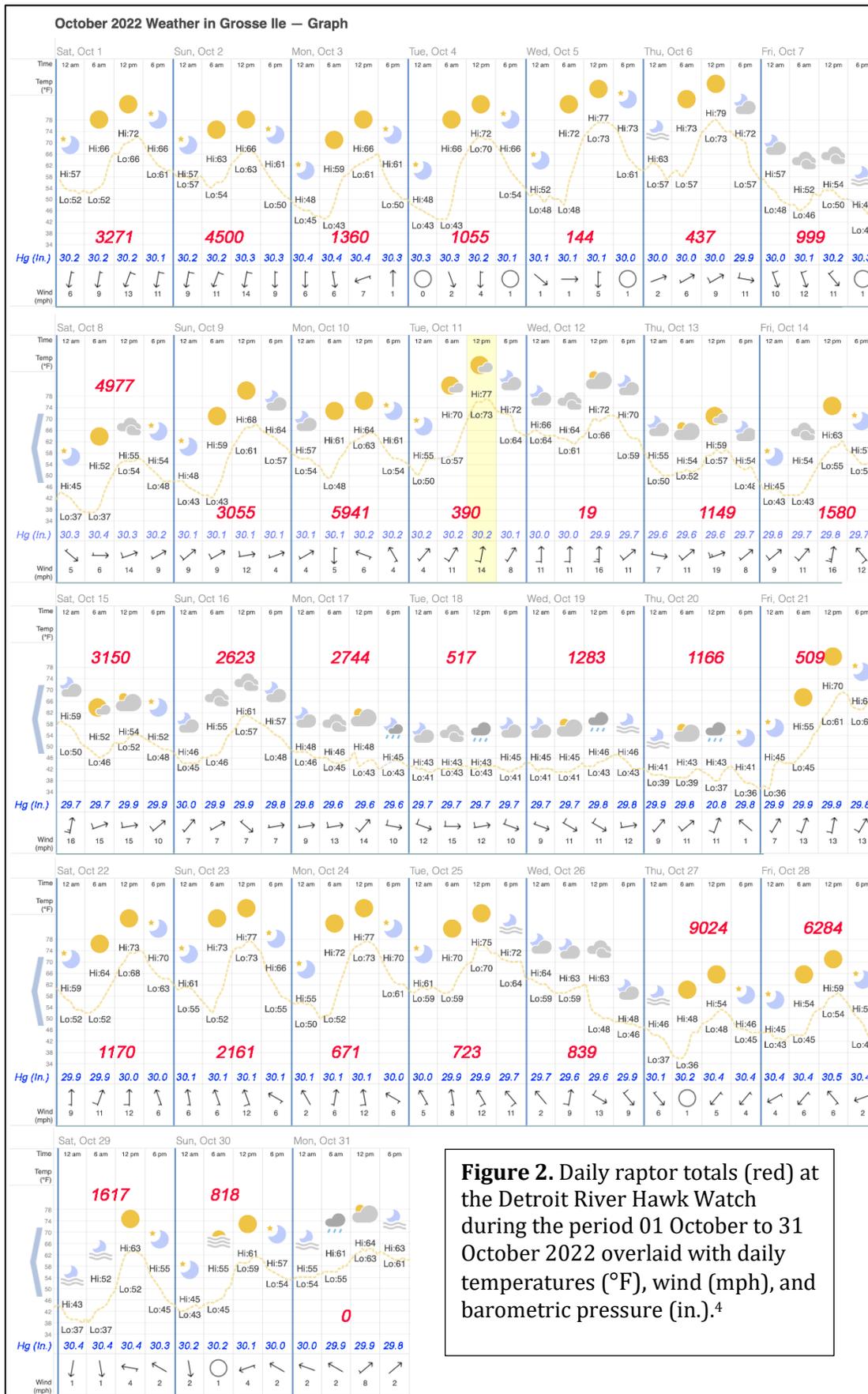
Month Summary: November 2022																									
		Black Vulture	Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	Northern Goshawk	Red-shouldered Hawk	Broad-winged Hawk	Swinson's Hawk	Red-tailed Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Buteo	Unknown Falcon	Unknown Eagle	Unknown Raptor	Total	
Date	Obs Hrs	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UA	UB	UF	UE	UR	Total	
2022-11-01	7		349			1	3	1		18			167		1		1							541	
2022-11-02	7		92			1	4						8											105	
2022-11-03	5.5		1				1																	2	
2022-11-04	7		1										3		1		1	1						7	
2022-11-05	3		5																					5	
2022-11-06	6.5		58		1	3	2			1			12				2							79	
2022-11-07	7		188		1	2	9	3		46			204		2		2	1						458	
2022-11-08	7		195		1			2		8			74		1									281	
2022-11-09	7		34				7	3		11			21		2									78	
2022-11-10	7		6			1	1						1											9	
2022-11-11	6				1			1		1							1							4	
2022-11-12	2				1								2											3	
2022-11-13	7		19		1	2	2	2		9			93		1									129	
2022-11-14	6.67		20		1	2	1			9			66	1	2									102	
2022-11-15	5		40			3	2	1	1	11			483											541	
2022-11-16	6		5		1		1			1			15		2									25	
2022-11-17	6						1			1			14											16	
2022-11-18	3																							0	
2022-11-19	5		3		1								6											10	
2022-11-20	3.5												2		1									3	
2022-11-21	5												2	1										3	
2022-11-22	6		2				2	3		11			21		2		2							43	
2022-11-23	6.5				3		3	2		4			5		3									20	
2022-11-24	0																							0	
2022-11-25	6.5		1		1	1	4	1		4			53	2	4									71	
2022-11-26	6.5		1		3	2	3	1		5			29		1		2							47	
2022-11-27	0																							0	
2022-11-28	6.5		4		8			2		5			6		3									28	
2022-11-29	5.5				2								2											4	
2022-11-30	2							1					1		1									3	
<b>Total: Nov 2022</b>		159	0	1024	0	26	18	46	23	1	145	0	0	1290	4	27	0	11	2	0	0	0	0	0	2617
<b>Total: Nov 2021</b>		163	0	4171	2	15	29	171	13	0	177	0	0	2024	3	50	0	18	14	0	0	0	0	0	6689
<b>Total: Fall 2022</b>		573	0	65788	17	92	393	5896	91	2	479	67349	0	4299	4	44	981	79	62	0	0	0	0	0	145577
<b>Total: Fall 2021</b>		546	0	60098	26	83	379	6572	52	0	502	21987	0	3643	4	65	1068	66	70	0	1	0	0	0	94616

Year	Hours	TV*	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	UNK	Total
1998	451	19743	135	111	807	4968	378	17	517	63689	5	3782	17	33	1046	95	52	86	95481
1999	481	17559	58	69	556	6534	299	23	556	45711	8	3504	76	208	664	30	49	47	75951
2000	510	29421	133	83	138	7132	408	49	875	57585	5	5754	55	188	790	34	24	37	102711
2001	526	28237	213	115	757	14715	693	46	858	19386	3	8153	55	120	1026	50	48	45	74520
2002	562	42644	238	185	696	7307	572	22	962	91499	3	6565	63	79	2277	64	52	15	153243
2003	545	54975	234	147	1005	10643	709	28	533	84085	12	5789	31	60	2128	72	82	0	160533
2004	479	36893	201	118	214	5027	461	49	869	27381	0	6155	101	79	470	38	20	0	78076
2005	456	29699	218	116	291	5623	432	18	299	56229	8	2619	30	45	1018	55	37	0	96737
2006	476	51722	196	162	616	7013	628	7	1019	50718	8	6025	27	124	1314	40	38	0	119657
2007	599	62882	195	211	818	9909	724	6	1026	69574	2	9406	29	124	1275	41	67	8	156297
2008	465	35173	140	141	149	3593	294	10	185	36216	0	2507	18	89	404	19	23	0	78961
2009	519	54989	46	118	169	3259	335	24	615	20016	4	2474	13	117	441	39	35	14	82708
2010	565	122325	63	220	465	6504	834	21	488	79572	5	3207	29	76	675	52	40	18	214594
2011	592	52745	85	235	278	5331	763	26	487	195858	5	4100	19	167	664	21	21	169	260974
2012	619	43285	70	222	248	3590	468	18	450	40923	4	2986	14	51	531	38	30	182	93110
2013	643	69723	71	350	234	3230	460	3	532	49629	5	3473	43	69	681	53	46	112	128714
2014	628	69768	56	354	423	4627	472	9	804	184860	4	4616	34	129	563	46	51	115	266931
2015	648	73601	81	219	632	5540	250	5	763	72461	1	4830	23	100	816	48	37	102	159509
2016	636	38528	23	142	377	4456	169	4	448	17529	0	2917	19	77	551	41	28	89	65398
2017	637	53393	34	238	323	4116	120	2	354	10392	2	2483	35	96	538	59	67	11	72263
2018	542	61967	38	81	413	5324	120	3	568	47246	3	3041	22	49	1104	56	74	14	120123
2019	575	52438	41	107	344	4167	128	3	779	64440	0	4983	14	62	718	37	53	3	128317
2020	568	72585	31	73	421	5050	105	2	825	16971	0	4241	27	55	641	67	102	4	101200
2021	532	60098	26	83	379	6571	52	0	502	21987	0	3643	4	65	1068	67	70	1	94616
<b>2022</b>	<b>573</b>	<b>65788</b>	<b>17</b>	<b>92</b>	<b>393</b>	<b>5897</b>	<b>91</b>	<b>2</b>	<b>479</b>	<b>67349</b>	<b>0</b>	<b>4299</b>	<b>4</b>	<b>44</b>	<b>981</b>	<b>79</b>	<b>62</b>	<b>0</b>	<b>145577</b>
LT Average	553	52007	106	160	446	6005	399	16	632	59652	3	4462	32	92	895	50	48	43	125048
s	63	21999	76	80	233	2581	237	15	230	45514	3	1804	23	46	471	18	21	56	55326
Min	451	17559	17	69	138	3230	52	0	185	10392	0	2474	4	33	404	19	20	0	65398
Max	648	122325	238	354	1005	14715	834	49	1026	195858	12	9406	101	208	2277	95	102	182	266931
10-Yr Average	598	61789	42	174	394	4898	197	3	605	55286	2	3853	23	75	766	55	59	45	128265
2022 Mean % Dev.from LTA	4	26	-84	-42	-12	-2	-77	-87	-24	13	-100	-4	-88	-52	10	59	28	-100	16
2022 Mean % Dev.from 10-Yr Average	-4	6	-59	-47	0	20	-54	-39	-21	22	-100	12	-82	-41	28	43	5	-100	13

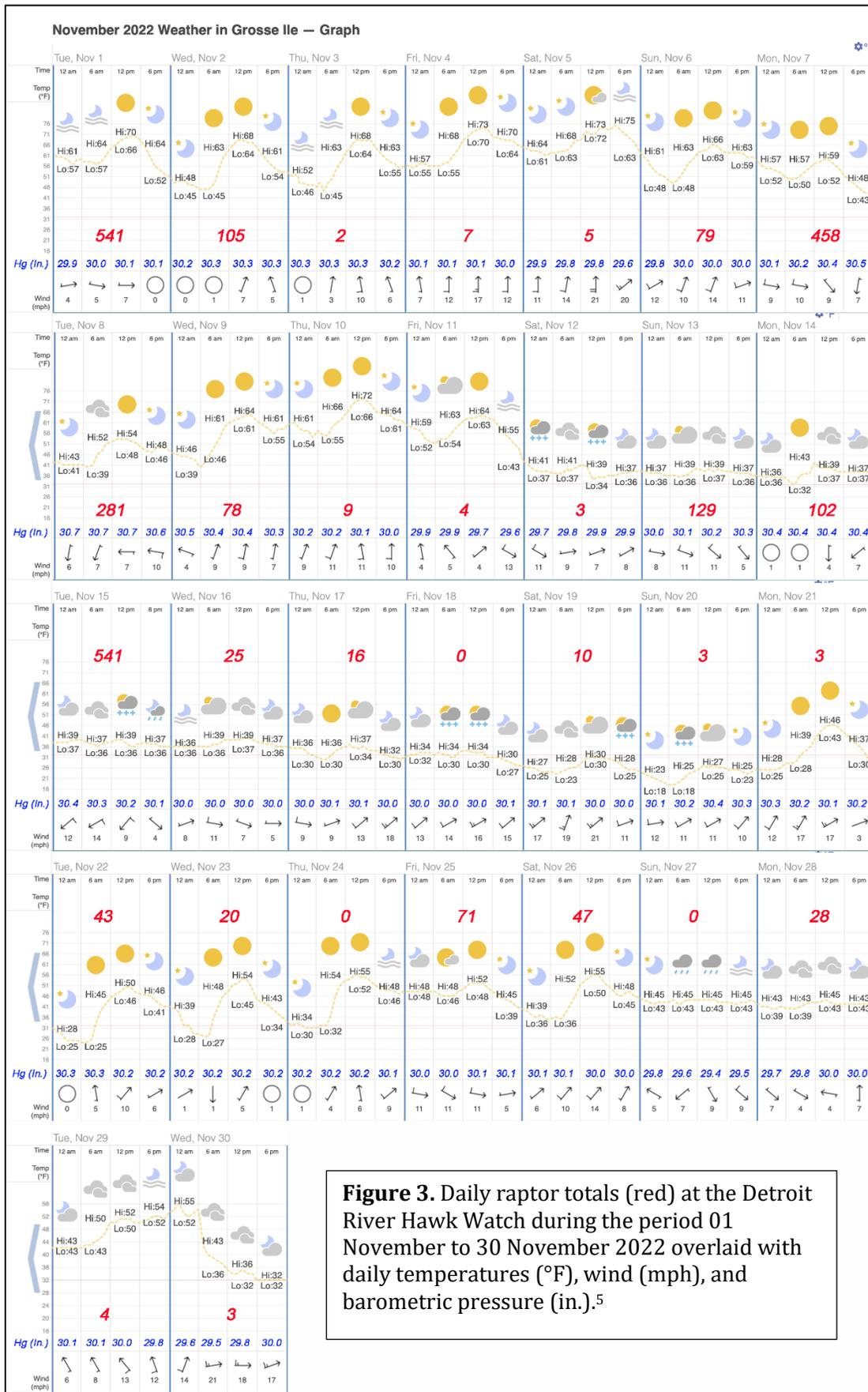
**Table 4.** Detroit Rivers Hawk Watch species totals between 1998 - 2022. Bottom of the table shows 2022 Mean Standard Deviation from the Long-term Average (LTA). Numbers in red indicate those species totals for 2022 that were recorded less than the LTA. Values greater than 15% are considered "significant".



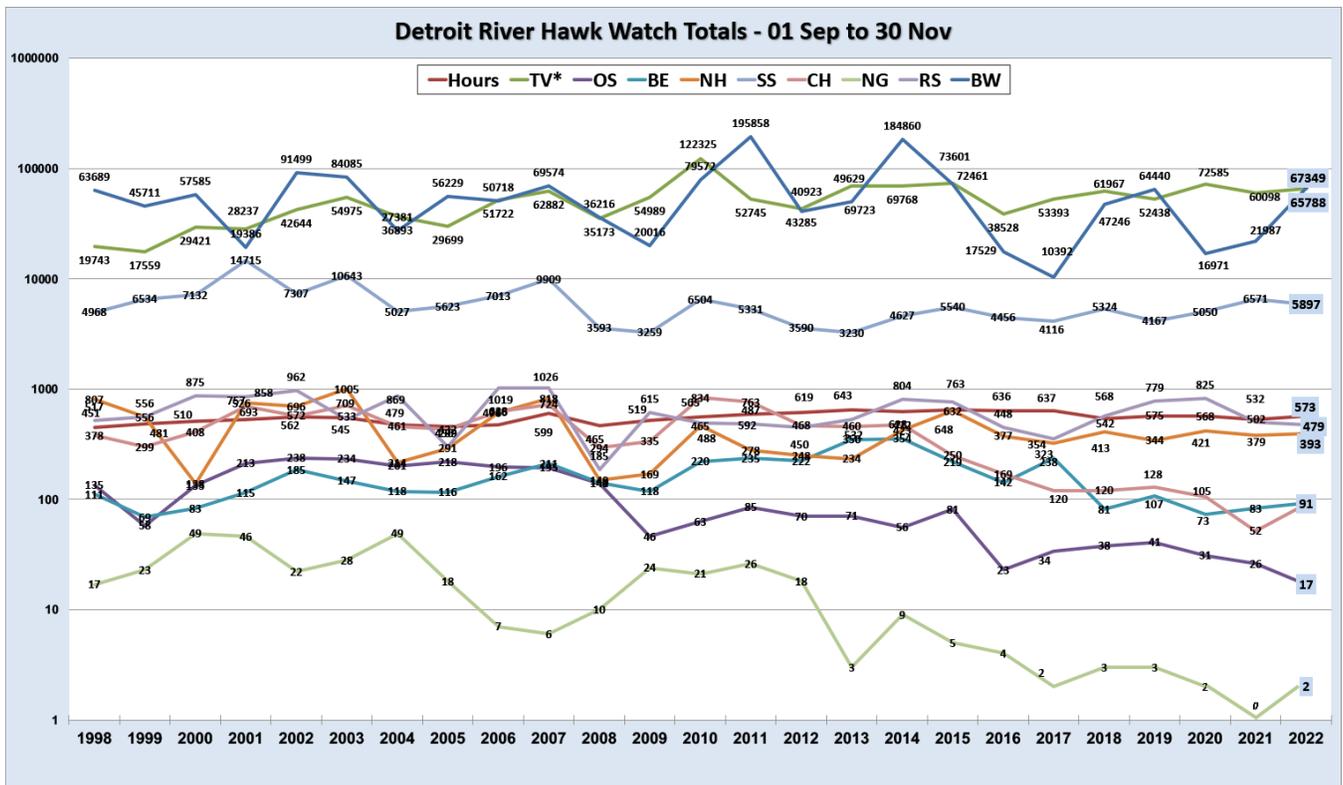
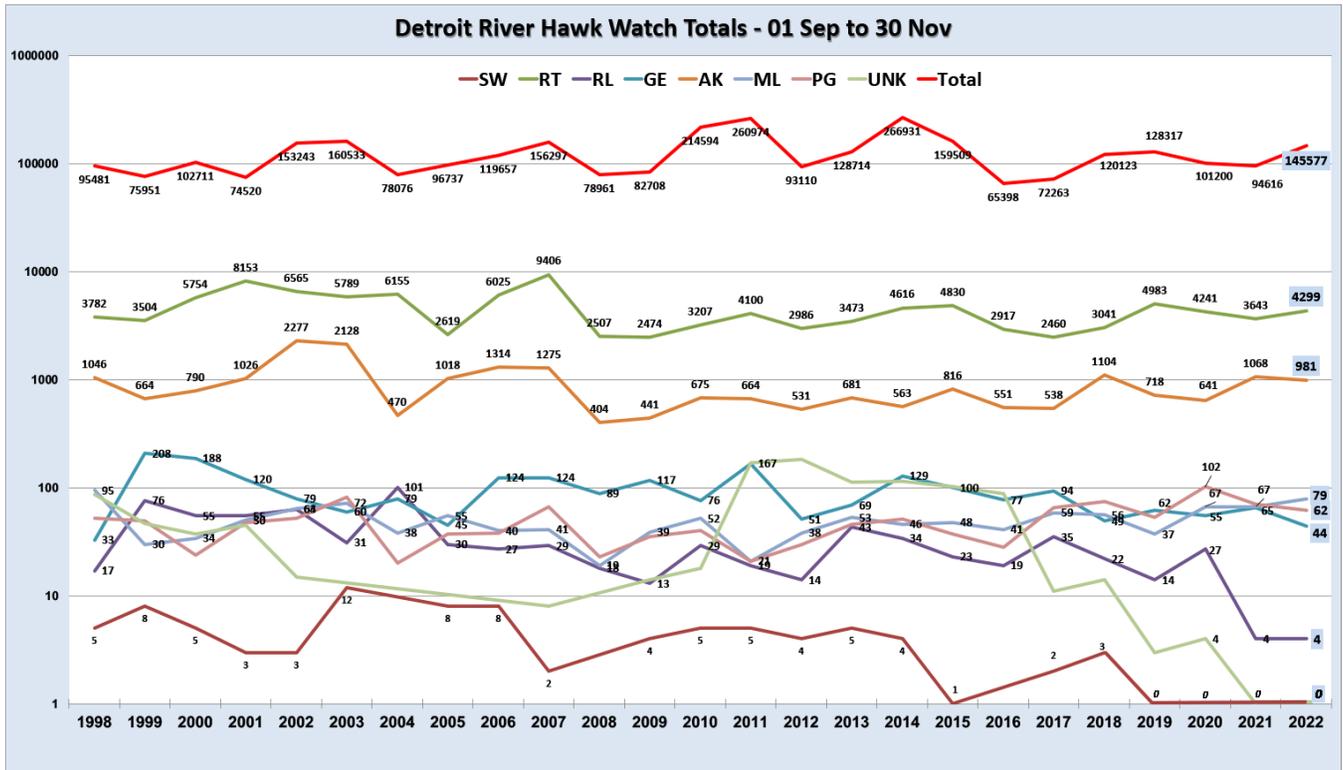
**Figure 1.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 01 September to 30 September 2022 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).<sup>3</sup>



**Figure 2.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 01 October to 31 October 2022 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).<sup>4</sup>



**Figure 3.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 01 November to 30 November 2022 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).<sup>5</sup>



**Figure 4.** Detroit River Hawk Watch yearly totals counted at Lake Erie Metropark, Wayne Co., MI 1998 – 2022.