



## Detroit River Hawk Watch 2019 Season Summary

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*Sharp-shinned Hawk. © 2019 Mark Hainen*

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## Abstract

The 2019 count was the 37<sup>th</sup> consecutive season of monitoring diurnal raptor and turkey vulture migration at the mouth of the Detroit River, and the 22<sup>nd</sup> year of consistent coverage at Lake Erie Metropark. There were 562 hours of data collection with counts conducted on 89 days between 01 September and 30 November. 128,131 total turkey vultures and raptors of 15 species were counted, which includes one unknown raptor. This total was 1% above the long-term average (LTA) for the count site, but 15% below the 10-year average (TYA) between 2010 and 2019. We compare this season's totals to the respective LTA for each species since 1998. Turkey vultures (5%), red-shouldered hawk (20%), broad-winged hawk (2%), red-tailed hawk (10%), and peregrine falcon (20%) were the only species counted above the LTA. Osprey (-70%), bald eagle (-41%), northern harrier (-24%), sharp-shinned hawk (-31%), Cooper's hawk (-72%), northern goshawk (-89%), Swainson's hawk (-100%), rough-legged hawk (-63%), golden eagle (-36%), American kestrel (-21%), and merlin (-27%) were significantly lower than their respective LTA (where values >15% are considered "significant" for the count). Two northern goshawk and zero Swainson's hawk were counted this year.

## Methods

An hourly count of migrating diurnal raptors and turkey vultures was conducted each day between 01 September and 30 November 2019 with a total of 562 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. Instead of recording wind direction, speed, relative humidity, barometric pressure, and temperature using a Kestrel 3500® Pocket Weather Meter, the hourly measurements were recorded directly from the [Grosse Ile Weather Station at Weather Underground](#). Reasoning behind this deviation was that local measurements from the LEMP count site had no bearing on whether raptors migrated past the site. This year the counters made use of the [Dunkadoo](#) data collection system, an electronic application that allows real-time recording and uploading of sightings directly to HawkCount.org.

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 statistically significant.



*Peregrine Falcon image courtesy of A. Sturgess*

## Monthly Reports

In some respects, the 2019 Detroit River Hawk Watch (DRHW) season behaved normally in the sense of weather and temperatures. September started warm, got warmer, then began to cool with winds shifting from the southwest to the northeast. This brought lower humidity, cooling temperatures, and clearer skies in October. November brought a mix of rain, snow, and strong winds that tested the mettle of the counting crew.

Detroit River Hawk Watch also welcomed back Kevin Georg as its Contract Counter for 2019. This is Kevin's third year with DRHW to go along with his 30+ years' experience performing raptor surveys, most recently at Mackinaw Straights, MI. The counter and volunteer

spotters spent their time monitoring wind direction and barometric pressure as these provide a good sense of flight success on any particular day. Generally, the ideal time for flying raptors often occurs the day after a cold front – northerly winds, dropping temperatures, rising air pressure, and clearing skies produce conditions suitable for a good migration<sup>2</sup>. Evidence of this trend was observed at the count site this season.

Figures 1 – 3 show daily temperature, wind<sup>3</sup>, and pressure<sup>4</sup> records for the Detroit River Hawk Watch for the period from 01 September to 30 November. Generally, the days with the best flight counts occurred when winds shifted from the south to more northerly directions and the barometer was on the rise.

## September



*Broad-winged Hawk image courtesy of M. Hainen*

September is the traditional month signifying the end of summer. The summer's hot weather activities usually end with a final flourish on the long Labor Day weekend while schools resume classes and college football season begins. September means one thing for devotees of raptor migration at Lake Erie Metropark: broad-winged hawks. Although well documented that this species will pass through the general vicinity around mid-September, the actual dates are variable and dependent on factors beyond the control of hawks and the people that watch them while both await the arrival of northerly winds on the leading edge of a high-pressure

system.

Summer seems increasingly reluctant to ease its grip on the state in the last few years with days commonly reaching 90°F. For example, long-term (1981-2010) average temperatures for Grosse Ile, MI in September have been roughly 66°F (59 – 74°F)<sup>5</sup>. During September 2017, the average temperature was 65°F (45 – 84°F)<sup>6</sup> while 2018 saw the average monthly temperature climb another 2 degrees to 67°F (45 – 90°F)<sup>7</sup>. September 2019 saw average monthly temperature climb another degree to 68°F (51 – 87°F)<sup>8</sup>. Though these single-digit increases do not seem significant, they are usually associated with periods of strong southerly winds that either delay migration or push birds east or west of the count site. The two largest broad-winged hawk totals occurred during days when winds were out of the north (see Figure 1).

Daily temperatures matter, but wind direction is probably most important to the count site. September hot weather often blows on a southwest wind: a direct headwind for migrating birds that tends to push them to the north and out of direct sight of the counter and volunteer spotters. Fortunately, this year there were two successive days of mild northeast winds during the traditional window in which the broad-wings travel. Delivered to the LEMP doorstep were impressive numbers of birds totaling over 58,000. This exceeded the 2018 total in just two days and contributed to the season total of 64,336 birds. As a general rule of thumb, the northerly winds are favorable to buteos (larger raptor species characterized by more robust, broad wings including broad-winged hawks and red-tailed hawks) that soar on the winds, while the sharp-shinned hawks, northern harriers, and falcons will travel despite less favorable winds.

Sharp-shinned hawks can be counted on nearly all days in September, sometimes numbering in the hundreds. In fact, “sharpies” were counted every day during the season this year unless the watch was affected by rain or unusually adverse weather conditions. Their numbers are strong in September and October but tail off in November. Although it seems to the counters that the final total should be higher since their appearances are such a regular occurrence, the final total usually ends up around 4,000 birds. Sharp-shinned hawk numbers followed the same pattern as last year by growing steadily from 06 September through the rest of the month and peaking mid-month at roughly 100 birds per day. Overall numbers were higher this year for sharp-shinned hawks with 2,078 birds counted over the 1,628 for September 2018.



*Sharp-shinned Hawk images courtesy of A. Sturgess*

Table 1 summarizes the total raptor survey from the LEMP Boat Launch site for the month of September. A total of 67,353 turkey vultures and raptors consisting of 11 species were counted during the period 02 September to 30 September (compared to 51,233 birds and 14 species in September 2018). Species surveyed included turkey vulture, osprey, bald eagle, northern harrier, sharp-shinned hawk, Cooper's hawk, broad-winged hawk, red-tailed hawk, American kestrel, merlin, and peregrine falcon. No Swainson's hawk or red-shouldered hawk were seen this month. One unidentified buteo was included in the monthly tally. The 63,798 broad-winged hawks counted during September was a significant increase (+16,882 birds) over September 2018 totals. By contrast, the 491 turkey vultures counted during September 2019 was significantly lower than the 1,558 birds tallied in September 2018.

Fifty-one bald eagles in September was a significant increase over the 18 birds seen in September 2018, and comparable to the 43 seen in September 2017. Thirty osprey in September were on par with the 28 counted in September 2018. Fewer falcon species were observed in September with 573 American kestrel (724 in 2018), 16 merlin (20 in 2018), and 15 peregrine falcons (27 in 2018) all showing lower numbers relative to last year.

Figure 1 shows plots of daily weather patterns at the Grosse Ile Weather Station for the period 01 September to 30 September 2019. Daily raptor totals (in red) were added to the graphs to compare totals with such aspects as cloud cover, wind direction, velocity, and barometric pressure. As noted, broad-winged hawks were most numerous on 16 September (34,700 birds) and 27 September (23,884 birds) when northerly winds and rising barometer were present.

The counter and volunteer spotters will normally count (in a casual way if time allows) the number of monarch butterflies passing overhead. They use the same migration flyway coming out of Canada as the raptors and they are considered a species of special interest and concern at the local and national level. In past years, it was common to count 200-300 butterflies on a good day, but last year the number rose to as much as 600 on a very good day. This year we had one exceptional day on the same day as 35,000 broad-winged hawks passed overhead. Due to the number of broad-wings migrating, volunteer spotters could not accurately count butterflies, but were able to estimate that nearly 30,000 monarchs passed that day – something that no one at the site had witnessed before. Volunteers were counting over 100 butterflies in one minute and they were all over the sky on both sides, which would have taken multiple dedicated people to get an accurate count.

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 September. Their photos and commentary were compiled into a full document and archived. The September 2019 Facebook summary can be viewed [here](#). All of their images can be viewed [here](#).



## October



*Turkey Vulture image courtesy of A. Sturgess.*

October, like September, has a specific bird attached to it. *Cathartes aura*, the turkey vulture, migrates to more southern climes and most of them pass in this month. Their numbers rival that of the broad-winged hawk for season totals. These birds are one of the most distinctive flyers with their black presence, unusual posture, and rocking motion. While not the most attractive of birds, they are great flying machines. Some of the most mesmerizing scenes at the watch are those of turkey vultures effortlessly floating overhead in large bomber-like formations and evoking strains of Wagner's *Ride of the Valkyries* in one's head. These birds love to fly in high winds and seem to delight in being tossed about in the turbulence. Of the 52,459 season total turkey vultures, 47,717 of them came through in October, but they were still moving on the last day in November.

The fall season seems to fully manifest itself in October as the weather cools and trees begin to develop highlights in their hair. The traffic in the air changes and there is awareness that raptors must be examined more closely as there are more possibilities to choose from. The last of the ospreys are still passing though. Cooper's hawks become more common among the sharpies, and there are chances of hitting the accipiter jackpot with a northern goshawk. Buteos need to be analyzed more carefully as broad-winged, red-tailed, red-shouldered, and later on, rough-legged hawks are all possible. The eye is always looking for that distinctive huge-winged Swainson's hawk, just in case. Fortune was not on our side this year as most of the reported Swainson's gave the count site a wide berth and were not seen. As the end of the month approaches, thoughts of the first golden eagle take precedence as the search for that telltale slight dihedral (upward angle of the wings) begins in earnest. The first golden eagle of 2019 appeared on 8 October.

Table 2 summarizes raptor totals for the period 01 October to 31 October 2019. A total of 51,344 raptors were recorded with 47,717 consisting of turkey vultures. These numbers are almost 20% lower than the same period last year when 64,352 raptors were counted including 57,892 turkey vultures. Numbers for sharp-shinned hawks (1,779), bald eagle (27), northern harrier (91), red-shouldered hawks (195), red-tailed hawks (743), and merlin (15) were almost 50% below their totals for October 2018. Only four golden eagles were tallied in October 2019 compared to 17 during the same period last year, while American kestrel (125) were almost 70% down from last year. Only broad-winged hawk numbers (538) were significantly higher than last year at this time. Rain washed out the last two days of the month.

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. Their photos and commentary were compiled into a full document and archived. The October 2019 Facebook summary can be viewed [here](#). All of their images can be viewed [here](#).

## November



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

November is a month of tests. Can you see clearly enough to identify birds with scant light from dark overcast skies, with eyes watering from the cold, with optics shaking from the winds, and your fingers starting to lose their sense of touch? Of course, it is not always that bad, but sometimes it is worse as an early snowstorm proved this year. Normally the month has many swings between high- and low-pressure systems but this year had an unusually calm couple of days when a large low-pressure system with little energy parked over us.

Although November might sound like a potentially barren month, four species recorded the majority of their numbers in this month: red-tailed hawk, red-shouldered hawk, rough-legged hawk, and golden eagle.

Since these birds are all soaring birds with large wings, we tend to see them more on favorable winds that assist them with their mission. If you think of a high-pressure system as a large clockwise wind carousel with corridors of energy around the periphery that raptors can mine and use to their advantage, the beneficial effects of the direction of the winds become more apparent. Winds created by the pressure gradients between the systems can be used to advance the bird's movement in a favorable direction with less energy expended. The observer's position in relation to that carousel becomes important because the majority of the movement occurs within the most favorable quadrant of the high-pressure system with the northerly winds.

The opposite is true for the southerly winds that are a headwind and provide resistance against the birds. As it turns out, a south wind is becoming very common at the site and is about as popular as the biting flies that occasionally visit. Although the count site benefits from a geographical circumstance of being located between two large lakes, will eventual airflow pattern changes make the corridor less inviting?



*Golden Eagle image courtesy of Andrew Sturgess*

Although the season ended with higher total of raptors than last year, due in large part to a better year with broad-winged hawks, it felt like some species did not appear as regularly as expected. Turkey vultures seem to be taking a more northern route or perhaps tree growth in front of the site has made them less easily seen and counted. Other birds like rough-legged hawk or golden eagle may depend on the winds that deliver them in close proximity to the count site and given that each season is different in that regard, their numbers can vary considerably. Golden eagles did have a slight rebound this year with 62 recorded but that came off a low total for last year. Lake Erie Metropark Boat Launch also did not do well with the other Holy Grail birds: northern goshawks, Swainson's hawks, or rough-legged hawks, although these birds were seen in the general

area by other sites. At this time of year, these special birds can make the day of the counters since they are fairly rare. Still, with nearly 130,000 total birds counted, it has to be considered a good season and a job well done by all concerned.

Table 3 summarizes raptor totals for the period 01 November to 30 November 2019. A total of 9,434 raptors (up 46% from November 2018) were recorded with turkey vultures (4,251) and red-tailed hawks (4,096) yielding 89% of the monthly total. Rain days occurred on the 11<sup>th</sup>, 19<sup>th</sup>, 21<sup>st</sup>, and 27<sup>th</sup> days of the month when no raptors were recorded. 58 of the season's 62 golden eagles were recorded during this month.

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 November. Their photos and commentary were compiled into a full document and archived on the website at [detroitriverhawkwatch.org](http://detroitriverhawkwatch.org). The November 2019 Facebook highlights can be accessed [here](#), and the photos are archived [here](#).

## Species Accounts

Table 4 summarizes the 2019 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 2010 – 2019 (TYA) are also given. 2019 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

64,336 turkey vultures migrated through the count site during the period 02 September to 30 November 2019, which is 3% above 2018 totals, and 20% above 2017 totals. This year's tally was 5% above the LTA (50,101), but 18% below the TYA (63,828). The high count (10,580) occurred on 05 October.



*Turkey Vulture images courtesy of A. Sturgess*

## OSPREY

Only 35 ospreys migrated past the count site during the period 03 September to 10 October 2019, which is 8% lower than 2018 (38), but 8% higher than 2017 (23). The 2019 total is still 70% below the LTA (117), and 37% below the TYA (56). 30 birds were counted in September with the high count (4) on 04 September.



*Osprey images courtesy of M. Hainen*

## BALD EAGLE

Bald Eagle numbers rebounded this year, with 101 birds migrating past the count site between 02 September and 28 November. 2019 saw a 29% increase relative to 2018 (78) but still 58% below the 2017 total (238). This year's total is also 41% below the LTA (170), and 53% below the TYA (216). The season's high count occurred on 05 September when 10 bald eagles passed by the count. Local pairs of Bald Eagles were seen daily at the count but were discounted unless passing overhead at high altitudes.



*Bald Eagle images courtesy of A. Sturgess*

### NORTHERN HARRIER

346 northern harriers passed by the count site between 02 September and 24 November, which is 17% below 2018 (416), but 7% above 2017 (323). The 2019 tally is 24% below the LTA (453), and 8% below the TYA (374). The high count (19) occurred on 29 September.



*Northern Harrier images courtesy of M. Hainen*

### SHARP-SHINNED HAWK

4,147 sharp-shinned hawks passed by the count site during the period 02 September and 30 November, which is 24% below 2018 (5,429), but on par with 2017 (4,116). The season count is 31% below the LTA (6,032), and 12% below the TYA (4,697). The high count (446) occurred on 24 September.



*Sharp-shinned Hawk images courtesy of M. Hainen (left) and A. Sturgess (center, right)*

### COOPER'S HAWK

123 Cooper's hawks migrating past the count site between 05 September and 30 November 2019 matched 2018 (119) and 2017 (120) totals. This year's total is 72% below the LTA (378) and 67% below the TYA (378). The high count (14) occurred on 10 November.



*Cooper's Hawk images courtesy of A. Sturgess*

### NORTHERN GOSHAWK

Only two goshawks were counted this year, which is the same as in 2018 and 2017, but still 89% below the LTA (18), and 78% below the TYA (9). Birds were observed on 24 October and 17 November.

### RED-SHOULDERED HAWK

762 red-shouldered hawks passed by the count site between 05 October and 28 November, which is 34% better than 2018 (568) and 115% better than 2017 (354). The strong flight this year is 20% above the LTA (635), and 35% above the TYA (566). A high count of 144 birds occurred on 16 November followed by another 111 birds on 17 November.



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

### BROAD-WINGED HAWKS

Broad-winged hawks continue to recover from a poor year in 2017 when only 10,392 birds were tallied. 64,336 broad-winged hawks counted between 02 September and 09 October 2019 represents a 36% increase over 2018 (47,223) and matches the LTA (62,949). This year's tally, however, is still 16% below the TYA (76278). The big flight this year occurred on 16 September

when 34, 548 birds were counted with another 23,603 counted on 17 September.



*Broad-winged Hawk images courtesy of A. Sturgess*

### SWAINSON'S HAWK

No Swainson's hawks were counted this year. Several birds were reported locally in mid-September 2019 but were not seen at the count site.

### RED-TAILED HAWK

4,954 red-tailed hawks passed by the count site between 02 September and 30 November 2019, which is 63% above 2018 (3039) and 200% above 2017 (2483) totals. This year's tally is 10% above the LTA (4515), and 35% above the TYA (3661). The high-count (1858) occurred on 16 November. A rare-for-this-region rufous Western Red-tailed Hawk was seen on 22 October.



*Red-tailed Hawk images courtesy of M. Hainen*

### ROUGH-LEGGED HAWK

Only 13 rough-legged hawks migrated past the count site between 29 October and 26 November 2019, which is 41% below 2018 (22) and 63% below 2017 (35) totals. This year's tally is also 63% below the LTA (35), and 48% below the TYA (25). 12 of the 13 birds were counted in November with the high count (3) occurring on 15 November.





*Rough-legged Hawk images courtesy of A. Sturgess (left) and M. Hainen (right)*

### GOLDEN EAGLE

62 golden eagles migrated past the count site between 08 October and 30 November 2019. This represents a 24% increase over 2018 (50), but 36% below 2017 (96) totals and the LTA (97). This year's count was also 48% below the TYA (88). A high count of 12 golden eagles occurred on 17 November with another 10 birds counted the following day. One golden eagle was seen in the park on 06 November.



*Golden Eagle images courtesy of M. Hainen (left) and A. Sturgess (center, right)*

### AMERICAN KESTREL

703 American kestrels passed by the count site between 03 September and 24 November 2019. This year's count is 38% below 2018 (1,126) but 30% above 2017 (538) totals. This year's count is also 21% below the LTA (896) birds but 3% above the TYA (685). The high count (37) occurred on 01 October.





*American Kestrel images courtesy of M. Hainen (left) and A. Sturgess (center, right)*

### MERLIN

34 merlin between 04 September and 30 November 2019 represented a 39% decrease from 2018 (56) and 42% below 2017 (59) totals. This year's tally is 27% below the LTA (47), and 24% below the TYA (45). The high count (4) occurred on 26 September.



*Merlin image courtesy of A. Sturgess*

### PEREGRINE FALCON

53 peregrine falcons between 03 September and 26 November were 28% below 2018 (74) and 21% below 2017 (67) totals. However, this year's tally is 20% above the LTA (44), and 19% above the TYA (45). The high count (5) occurred on 06 October.



*Peregrine Falcon images courtesy of A. Sturgess (left, center) and M. Hainen (right)*

## UNKNOWN RAPTOR

Only one unknown raptor was tallied between 02 September and 30 November compared to the LTA of 48 unknown raptors.

## TOTAL

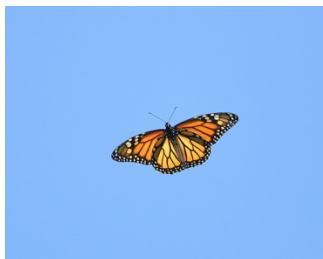
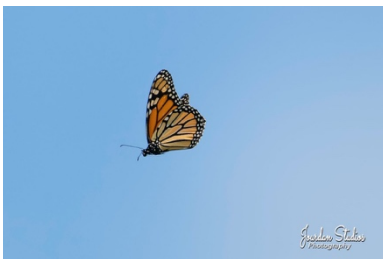
Detroit River Hawk Watch had 128,131 diurnal raptors and turkey vultures migrate through the Lake Erie Metropark Boat Launch between 01 September and 30 November, which is 1% above the LTA (126,601). The 6% increase from 2018 recovery can be attributed once again to the rebound in broad-winged hawk migration and the continued increases in turkey vulture numbers. Figures 1 – 3 show daily raptor totals overlaid onto daily weather plots for Grosse Ile, MI. Figure 4 shows total numbers for 2019 plotted against the previous totals since 1998. Totals for 2019 appear to be leveling-off from steady increases made since 2016 when only 65,398 raptors were counted. This makes it difficult to predict the trend for 2020, when numbers could either increase, decrease, or remain the same. Only time and weather will tell.

## **Migratory and Non-Raptor Highlights**

Traditionally this section is reserved for seasonal narratives of non-raptors, which includes waterfowl, grebes, loons, shorebirds, migratory songbirds, and passerines. With special thanks to Andrew Sturgess and Mark Hainen, daily narratives and special observations were reported to both [HawkCount](#) and the [Detroit River Hawk Watch Facebook Page](#). Photo highlights were compiled for [September](#), [October](#), and [November](#) 2019. Their contributions, as well as those from other visitors (thank you Jan Palland) have been archived as documents that can be accessed through the Detroit River Hawk Watch website ([detroitriverhawkwatch.org](http://detroitriverhawkwatch.org)). Readers are encouraged to click on the links and enjoy the quality photographs and stories. Some of the highlights included:



Watching local Caspian Terns squabble while a Northern Watersnake pays a visit 09 September 2019. Images courtesy of M. Hainen (left) and A. Sturgess (right).



Almost 30,000 Monarch Butterflies migrated past the count site on 16 September 2019. This epic flight was as impressive as the 35,000 Broad-winged Hawks that migrated the same day! Images courtesy of J. Jourdan (left) and A. Sturgess (right).



A relatively slow day interrupted by a Double-crested Cormorant juggling and swallowing a gar on 30 September 2019. Images courtesy of M. Hainen (left) and A. Sturgess (right).



Thousands of Blue Jays, Rusty Blackbirds, European Starlings, and American White Pelicans moved through the area on 04 Oct 2019. Images courtesy of A. Sturgess.



Hundreds of Tundra Swans, Canada Geese, and Sandhill Cranes migrate through the count site during mid-November 2019. Images courtesy of A. Sturgess.



A snowstorm on 11 November 2019 brought migrating leaves, American Pipits and Tree Swallows when the raptors were trying to stay warm. Images courtesy of A. Sturgess.

## 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 to raptor conservation, as well. Some of the highlights from 2019:



Detroit River Hawk Watch is grateful to webmaster Andrew Kling at Roofball Productions for continuing to update and manage the Detroit River Hawk Watch website at [detroitriverhawkwatch.org](http://detroitriverhawkwatch.org).



Detroit River Hawk Watch had the pleasure this year to again participate in the annual Hawk Fest, which is hosted by the Huron-Clinton Metroparks and supported by the International Wildlife Refuge Alliance. DRHW hosted a table at the festival, which was held on 21-22 September 2019 in conjunction with the peak of the broad-winged hawk migration. Once again weather was hot, humid, and not conducive to any significant raptor migration. Jerry Jourdan gave presentations to the public about “Budget Bird Photography” and “The Detroit River Hawk Watch – Citizen Science at Work”. Jerry would also like to thank Jane Ferreyra, Director of Hawk Migration Association of North America for allowing DRHW to share the HMANA tent during HawkFest 2019.



Jerry Jourdan donated a pair of Nikon binoculars for a raffle that helped raise \$3070 for the Detroit River Hawk Watch. Thanks to Joann Van Aken and IWRA for setting up the raffle that helped raise donations. Sheylan Kaslo was the lucky winner of the raffle for the binoculars. Congratulations, Sheylan! Thanks also to DTE Energy Volunteer Corp for their McCarthy Award (\$500) and proceeds from the IWRA Nature Store during HawkFest 2019 (\$430) that resulted in the \$4000 proceeds that will go directly to the Detroit River Hawk Watch.

Detroit River Hawk Watch was featured during the 2-minute segment of Jim Mishler’s All Outdoors Update during the October 2, 2019 segment. It can be heard [here](#).



Natalie Cypher hosted 3 new Jr. Hawkwatchers who received certificates on 21 October. A beautiful female Cooper's Hawk that they banded and released was the highlight of a wonderful Sunday afternoon.



The Detroit River Hawk Watch Facebook page added its 1000<sup>th</sup> member early in the season, and now has over 1100 Facebook followers and members as of Dec. 1, 2019.

## Acknowledgements

The success of the Detroit River Hawk Watch would not be possible without the dedication of volunteers who log hundreds of hours counting hawks in all-weather situations. Thanks go out to Kevin Georg, our Primary Counter, and to regular volunteers Andrew Sturgess, Raburn Howland, Rosemary Brady, Mark Hainen, Patrick Mulawa, John Elliott, Don Sherwood, Frank Kitakis, and new volunteers Sam Heilman, Alex Gilford, and Mike McEvoy. Thanks also go out to those visitors 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 and Mark Hainen, both 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. The success of the count would not be possible without financial and site support from the U.S. Fish and Wildlife Service at Detroit River International Wildlife Refuge, The International Wildlife Refuge Alliance, Hawk Migration Association of North America, and the Huron-Clinton Metropolitan Authority at Lake Erie Metropark. Volunteers are always welcome and are invited to come out to the boat launch at Lake Erie Metropark to join in our efforts. Keep looking up!





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8. <https://www.timeanddate.com/weather/@4994850/historic?month=09&year=2019>

9. Jourdan, J.S. and J. Fletcher. 2018. *Raptor Population Index (RPI) Summary for the Detroit River Hawk Watch and Holiday Beach Conservation Area*. Detroit River Hawk Watch Advisory Committee and U.S. Fish and Wildlife Service.

**Table 1.** Raptor totals for the Detroit River Hawk Watch during September 2019.  
(table courtesy of hawkcount.org)

Month Summary:Sep, 2019

		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		
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	
2019-09-01	0																							0	
2019-09-02	7				1	2	1				14		6											24	
2019-09-03	7			1		3										1		1						6	
2019-09-04	7				2	4	1				10		16			3	1							37	
2019-09-05	8		2	3	10	10	4	2			28		9			7								75	
2019-09-06	8			4	2	13	50									3	1							73	
2019-09-07	7					7	52				35		12			7		1						114	
2019-09-08	7					6	32	1			20		10			7		1						77	
2019-09-09	7			1		5	41				103		2			8								160	
2019-09-10	7					5	122				14		1			2								144	
2019-09-11	4			1	1	3	49									5								59	
2019-09-12	8			1	1	9	51				537		3			28								630	
2019-09-13	6.5			3	2	1	21				1					4		1						33	
2019-09-14	7.5		7	2	1	3	40				23		2			8								86	
2019-09-15	8.5			1		4	139									16	2							162	
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	
2019-09-16	8.5		20	1	3	7	90	1			34548		3			27								34700	
2019-09-17	8.5		70	1	9	11	131	1			23603		20			36	1	1						23884	
2019-09-18	1		3	1		7	28				1258		14			10								1321	
2019-09-19	7		2	1	1	4	42	1			90		2					1						144	
2019-09-20	6.5				2		29				3					2								36	
2019-09-21	5			1			18				1					8								28	
2019-09-22	7				1		21						1			21	1	1						46	
2019-09-23	8		5		1	2	74	1			63					43		1						190	
2019-09-24	9		40	2	3	9	446				1066		4			66								1636	
2019-09-25	6					6	52									71	1	2						132	
2019-09-26	8	0	105	1	2	8	214	1			2219		6			77	4							2637	
2019-09-27	7		27	1	3	15	128				3		1			82	3	2						265	
2019-09-28	6		2	3		2	92	2								9		2		1				113	
2019-09-29	3		52		1	19	20				6					3	1	1						103	
2019-09-30	7		156	1	5	9	90	1			153		3			19	1							438	
Total: Sep 2019	197 hours	0	491	30	51	174	2078	11	0	0	63798	0	115	0	0	573	16	15	0	1	0	0	0	0	67353
Total: Sep 2018	205	0	1558	28	18	144	1628	23	0	1	46,916	2	138	0	1	724	20	27	0	3	0	0	2	51233	



**Table 2.** Raptor totals for the Detroit River Hawk Watch during October 2019.  
(table courtesy of hawkcount.org)

Month Summary:Oct, 2019

		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			
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		
2019-10-01	7		76	2	1	9	354				30		3			37	1	3						516		
2019-10-02	3.75		661			2	31	1			99					4								798		
2019-10-03	4															2								2		
2019-10-04	7		7445			7	84	5			193		12			11		3						7760		
2019-10-05	7.5		10580			9	37	12		3	208		38			8	1	2						10898		
2019-10-06	7		505			1	90				1		5			1		5						608		
2019-10-07	6.25		645				131	3			1		4					2						786		
2019-10-08	7		1903		3	7	84	8		10	3		34		1	4	1							2058		
2019-10-09	7		1957	1	3	2	18	7		10	3		34					3						2038		
2019-10-10	8		1783	2		1	17	3		7			24			3								1840		
2019-10-11	3.5						2																	2		
2019-10-12	7.5		1455				14						10		2	2		1						1484		
2019-10-13	7		603		2		25						1			1	1							633		
2019-10-14	7		1975				77			2			4			3		2						2063		
2019-10-15	7		685			3	32			4			8			7	1	2						742		
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		
2019-10-16	5		635				18																	653		
2019-10-17	8		3651		2	4	117	1		4			35			7	1	1						3823		
2019-10-18	8		2354		6	14	125	1		9			44			11		2						2566		
2019-10-19	7.5		3158		5	15	117	8		28			90			7	1	1						3430		
2019-10-20	8		2130				56	2		2			24											2214		
2019-10-21	4.75		319				70	3					46				2							440		
2019-10-22	5.75		1094				13	1					4			2		1						1115		
2019-10-23	7		406			1	55	1		2			14			11	2	1						493		
2019-10-24	8		2023		3	5	44	9	1	55			173			3	1	2						2319		
2019-10-25	7					5	44	3					5											57		
2019-10-26	4		213		1		8			46			74				1							343		
2019-10-27	7		53				5						6				1							65		
2019-10-28	7		168			6	71	1		3			15		1	1	1							267		
2019-10-29	7		1240		1		40	3		10			36	1										1331		
2019-10-30	0																							0		
2019-10-31	0																							0		
Total: Oct 2019	190.5 hours	0	47717	5	27	91	1779	72	1	195	538	0	743	1	4	125	15	31	0	0	0	0	0	0	51344	
Total: Oct 2018	190.5	0	57892	9	40	210	3623	61	0	350	307	0	1366	0	17	398	31	41	0	1	3	0	3	64352		

**Table 3.** Raptor totals for the Detroit River Hawk Watch during November 2019.  
(table courtesy of hawkcount.org)

Month Summary:Nov, 2019

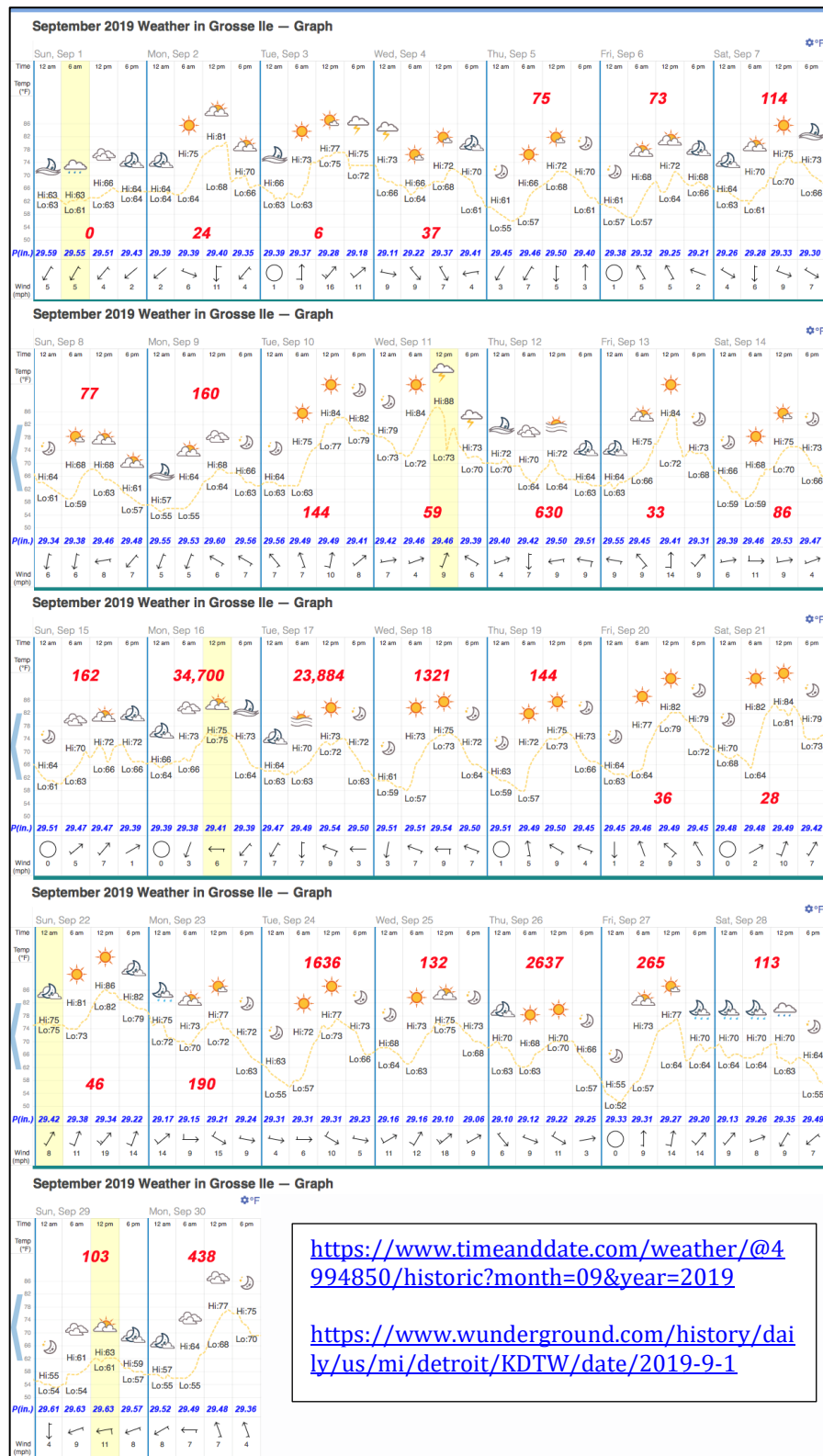
		Black Vulture	Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	Northern Goshawk	Red-shouldered Hawk	Broad-winged Hawk	Swainson's Hawk	Red-tailed Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Buteo	Unknown Falcon	Unknown Eagle	Unknown Raptor		
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	
2019-11-01	7		537		1	3	11	2		22			81	1		1		1						660	
2019-11-02	7		496		2	1	26			8			31		1			1						566	
2019-11-03	7		453		3		19			37			86		2			1						601	
2019-11-04	6		111		1		6						6			1								125	
2019-11-05	7		234		1	3	34	1		5			38		1	1								318	
2019-11-06	6				1	5	17			3			3		1		1							31	
2019-11-07	7		354			3	8	3		18			90		1									477	
2019-11-08	8		837			3	14	1		42			366	2	1			2						1268	
2019-11-09	6		172			1	10	1					71		4									259	
2019-11-10	5.5		105			2	22	14		65			112	2	1	1								324	
2019-11-11	0																							0	
2019-11-12	7		100		1	9	8			31			129											278	
2019-11-13	5.5		51		1	8	7						37					1						105	
2019-11-14	6		14			12	12	1		12			52	1	1									105	
2019-11-15	6		32		3	7	10	1		5			30	3	4									95	
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	
2019-11-16	7.5		348			8	21	3		144			1858	1	10									2393	
2019-11-17	6.5		116		1	6	13	4	1	111			554		12									818	
2019-11-18	7		51			3	11	2		33			254		6									360	
2019-11-19	3																							0	
2019-11-20	6						2						1											3	
2019-11-21	1																							0	
2019-11-22	7		73		1	3	9	1		16			130	1	3									237	
2019-11-23	6		71		5	2	12	1		10			59		4		1							165	
2019-11-24	6		43			2	3						3		1	1								53	
2019-11-25	6						1						4		1									6	
2019-11-26	6		1				5						8	1				1						16	
2019-11-27	4																							0	
2019-11-28	6		5		2		3	2		5			31											48	
2019-11-29	6		6				4	1					16		2									29	
2019-11-30	5		41				2	2					46		2		1							94	
Total: Nov 2019	174 hours	0	4251	0	23	81	290	40	1	567	0	0	4096	12	58	5	3	7	0	0	0	0	0	0	9434
Total: Fall 2019	561.5 hours	0	52459	35	101	346	4147	123	2	762	64336	0	4954	13	62	703	34	53	0	1	0	0	0	0	128131



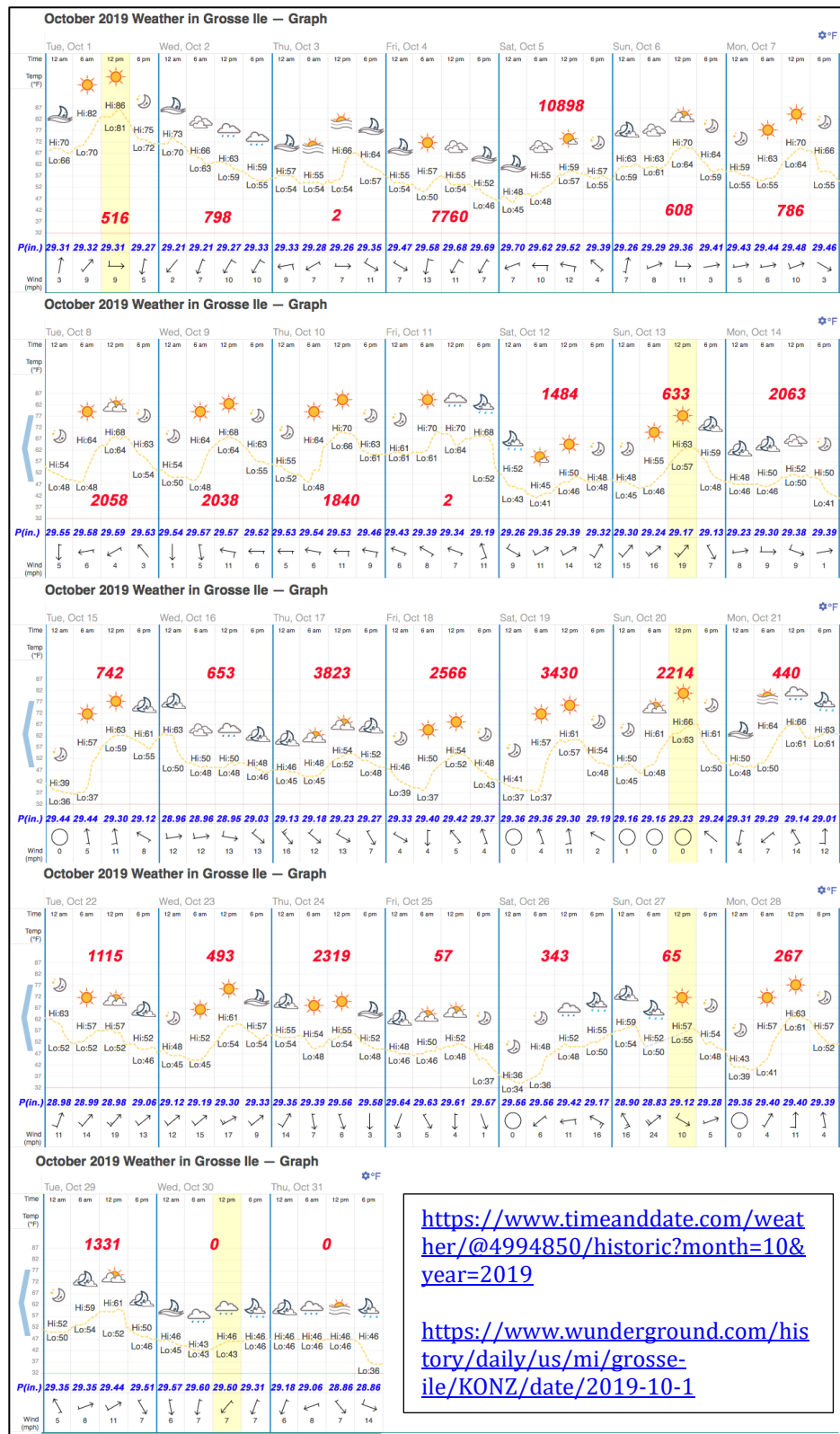
**Table 4.** Detroit Rivers Hawk Watch species totals between 1998 - 2019. Bottom of the table shows 2019 Mean Standard Deviation from the Long-term Average (LTA).

Numbers in red indicate those species totals for 2019 that were recorded less than the LTA. Values greater than 15% are considered "significant".																			
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	636.75	53393	34	238	323	4116	120	2	354	10392	2	2483	35	96	538	59	67	11	72263
2018	551	62455	38	78	416	5429	119	2	568	47223	3	3039	22	50	1126	56	74	14	120712
2019	561.5	52459	35	101	346	4147	123	2	762	64336	0	4954	13	62	703	34	53	1	128131
LTA Average	552	50101	117	170	453	6032	441	18	635	62949	4	4515	35	97	896	47	44	48	126601
s	67	22747	75	79	248	2747	219	15	237	46893	3	1919	23	46	499	17	17	57	58345
Min	451	17559	23	69	138	3230	119	2	185	10392	0	2474	13	33	404	19	20	0	65398
Max	648	122325	238	354	1005	14715	834	49	1026	195858	12	9406	101	208	2277	95	82	182	266931
10-Yr Average	608	63828	56	216	374	4697	378	9	566	76278	3	3661	25	88	685	45	45	81	151034
2019 Mean % Dev. from LTA	2	5	-70	-41	-24	-31	-72	-89	20	2	-100	10	-63	-36	-21	-27	20		1
2019 Mean % Dev. from 10-Yr Average	-8	-18	-37	-53	-8	-12	-67	-78	35	-16	-100	35	-48	-29	3	-24	19		-15

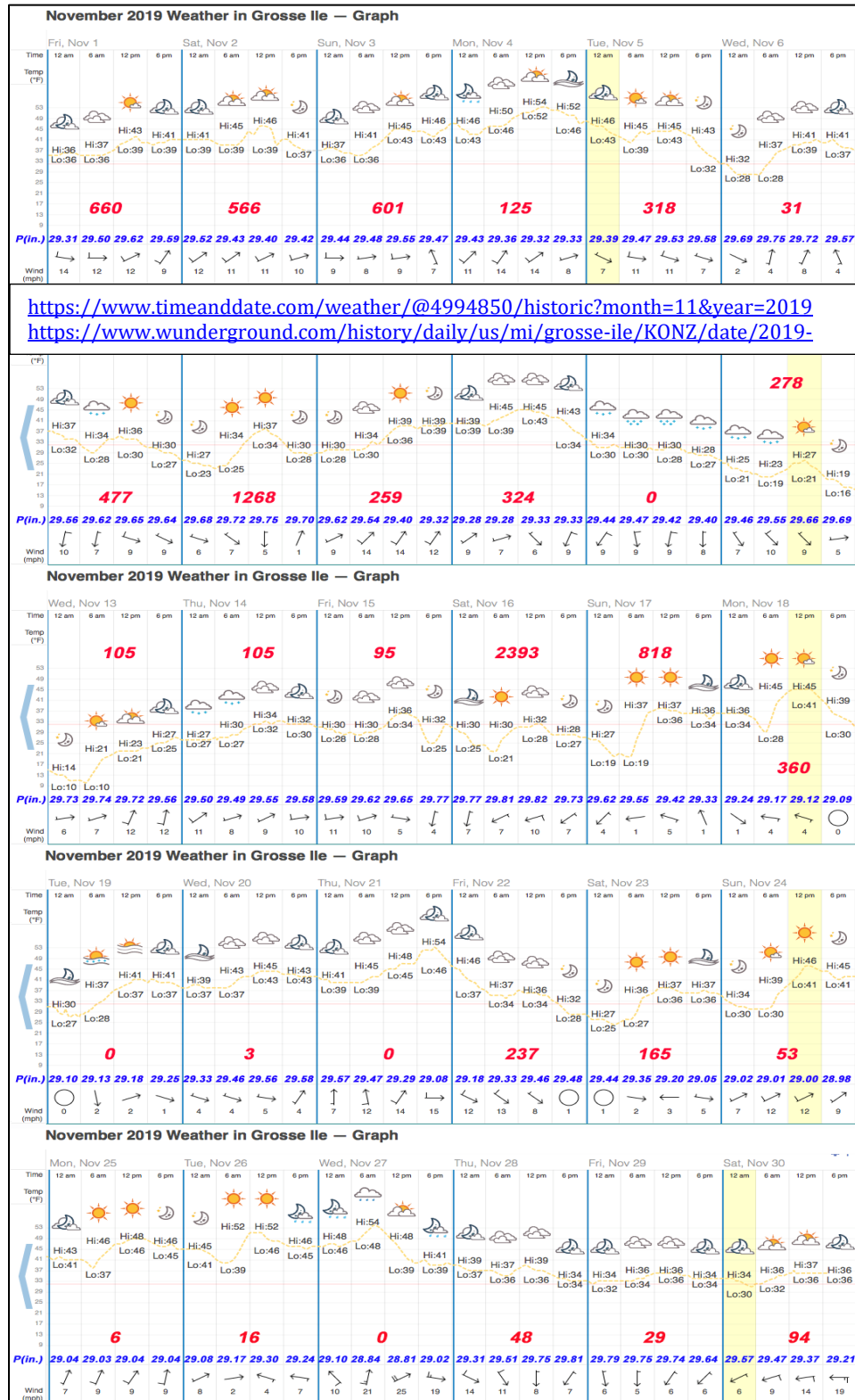
\* - A single black vulture (Coragyps atratus) was observed migrating on 25 September 2015.



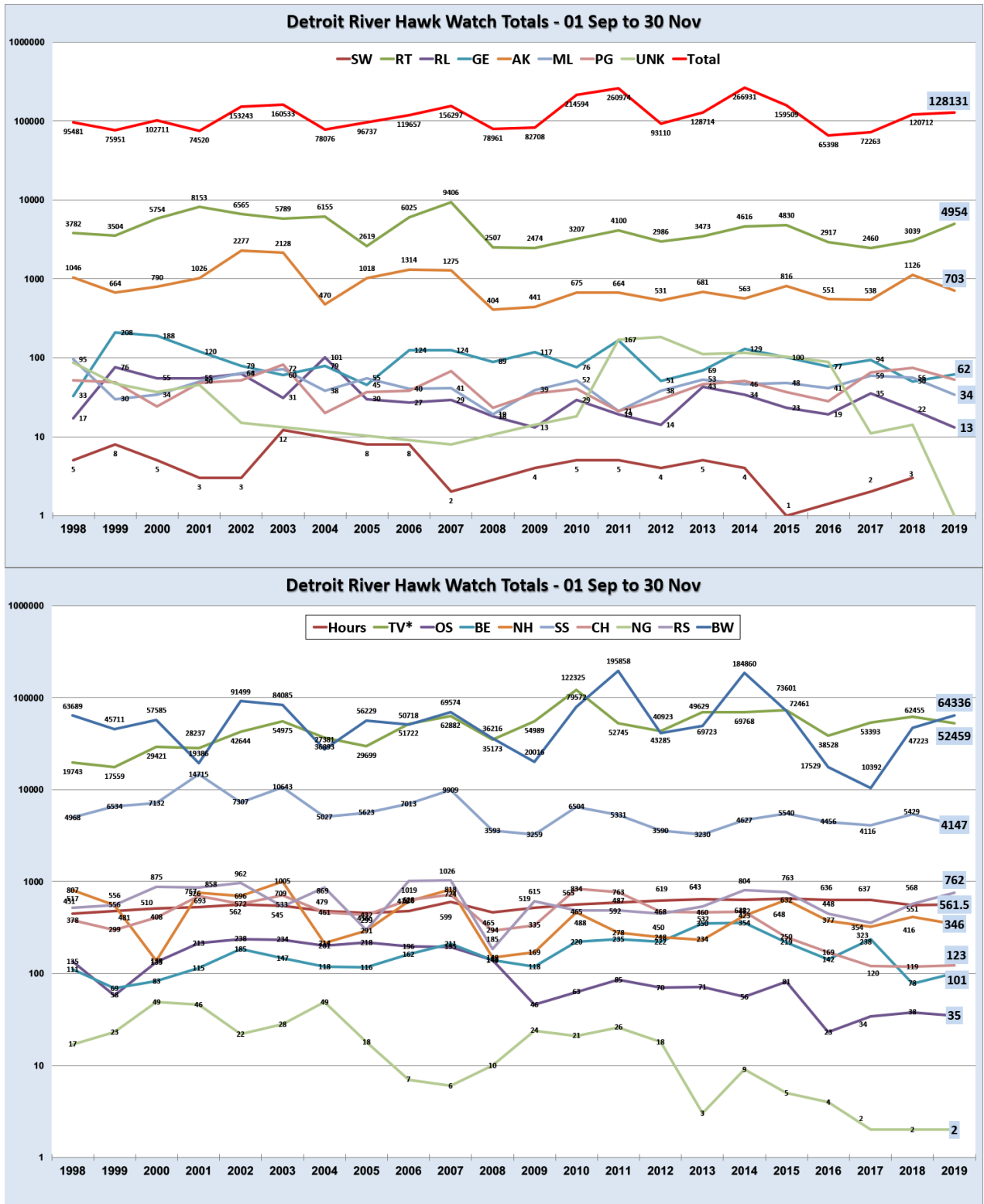
**Figure 1.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 1 September to 30 September 2019 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).



**Figure 2.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 1 October to 31 October 2019 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).



**Figure 3.** Daily raptor totals (red) at the Detroit River Hawk Watch during the period 1 November to 30 November 2019 overlaid with daily temperatures (°F), wind (mph), and barometric pressure (in.).



**Figure 4.** Detroit River Hawk Watch yearly totals counted at Lake Erie Metropark, Wayne Co., MI 1998 – 2019.