

# **Forty-first Annual Fall Raptor Migration Count at Holiday Beach Conservation Area, Amherstburg, Essex County, Ontario, Canada**

Including Select Non-raptor Observations



**Fall 2014**

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**Fall 2014 Hawk Counter, Holiday Beach Migration Observatory**

Conducted by the Holiday Beach Migration Observatory  
in cooperation with the Essex Region Conservation Authority  
at Holiday Beach Conservation Area

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## Summary

Holiday Beach Migration Observatory conducted their 41<sup>st</sup> annual hawk count from September 1 to November 30, 2014 at Holiday Beach Conservation Area. A total of 749.75 hours on the tower provided the opportunity to observe 98,450 individual raptors (and Turkey Vultures) of 16 species. 86% of this year's flight was composed of Turkey Vultures and Broad-winged Hawks, leaving only 14% to all other species. Along with providing a comparison of this year to a 20-year average for each species, the 2014 count data has been analyzed with 39 prior years' data to produce a specific graph for each species to compare observation trends. Turkey Vulture, Bald Eagle, Golden Eagle, Merlin, and Peregrine Falcon, *have undergone a strong increase* in observed migratory numbers, while Sharp-shinned Hawk, Red-shouldered Hawk, Red-tailed Hawk, Rough-legged Hawk, and American Kestrel *have undergone strong to moderate decreases*. Osprey, Northern Harrier, Cooper's Hawk, Northern Goshawk, and Broad-winged Hawk *have not seen a very significant change* in observed migratory numbers over the years.

## Site Location and History

Holiday Beach Conservation Area (HBCA) is situated on the north shore of Lake Erie, just over six kilometers east of the Detroit River. Big Creek Marsh lies to the north and west and plenty of flat agricultural land ranges out in all directions. Raptors that are flying south for the winter are "funnelled" toward this southwestern point of Ontario where they can easily glide across the Detroit River rather than attempting an energetically demanding powered flight across the lake. This provides an ideal location for the Holiday Beach Migration Observatory (HBMO) to conduct an annual fall hawk point count as raptors will often follow the shoreline, pass right overhead, or pass just to the north of the count site. The donation of a 40-foot "hawk tower" from the Detroit Edison Company of Michigan in 1988 has given counters a better vantage point for counting, and it continues to be a focal point in the park. Bird Studies Canada recognized portions of HBCA and Big Creek Marsh as an Important Bird Area (IBA) in 2000, thus giving it international recognition (Chartier and Stimac, 2002).

## Methods

The official counter typically conducted the HBMO count on weekdays and various HBMO members conducted the count on weekends. At least one person was present on the top level of the hawk tower at, or shortly after, sunrise for an average of eight hours per day from September 1 to November 30, 2014. Count hours were lengthened or shortened according to flight activity and weather conditions. During periods of rain the counter retreated to the second level of the tower, and the count was cut short or interrupted in the case of thunderstorms or other dangerous weather conditions.

A data sheet was completed upon the hour, containing weather data and a tally of each raptor seen migrating, split into species, age and sex when possible. A daily data sheet was also completed, containing a tally of all non-raptor species that were seen through the day, time permitting. Weather data was collected using a handheld Kestrel Weather Meter, and included wind speed and direction, temperature, barometric pressure, humidity, cloud cover, and precipitation.

The raptor data from each day was entered into the Hawk Migration Association of North America (HMANA)'s electronic database, HawkCount.org and non-raptor data into eBird.ca. This season and past seasons' data can be accessed in hawkcount.org or on the HBMO website, hbmo.ca, under "Raptor Counts".

## Weather Summary and Notes

Temperatures over the fall season during the count ranged from 30.8°C to -8.7°C and precipitation was above average at 273mm (Government of Canada historical climate data, 2014). September had an average temperature of 19.3°C, October an average temperature of 13.1°C, and the cold average of 3.2°C in November had the marsh and the shoreline of Lake Erie covered in ice by November 13 with a couple inches of accumulated snow.

North component winds were present for 32.9% of the count hours in 2014. This may seem a low number, but the average percent of count hours with a north component wind at Holiday Beach since 1974 is 39.3%, which is less than a 7% difference.

It is interesting to note that hours with a north component to the wind have brought, over the 41 years of the count, an average of 228 birds/hour while hours with no north component in wind direction have only brought an average of 55 birds/hour. These numbers are vastly and significantly different, and may lead one to believe that a year with more north wind hours would produce a higher annual count, but this is not the case. As Figure 1 shows, there is no great correlation between number of north wind hours in a year and the total raptors counted in that year.

## **Raptor Migration Summary**

### **September**

The 2014 fall raptor count played out much as everyone has come to expect over the years, starting in September with the daily stream of Sharp-shinned Hawks and American Kestrels, interspersed with the occasional treat of a Northern Harrier, and stunning flights put on by the resident Osprey and Bald Eagles. This came along with the ever-present challenge of differentiating resident birds from those that were migrating. Mid-September brought two amazing days of the much sought-after and well-appreciated Broad-winged Hawk migration, where the sky filled with up to three groups of these birds streaming over the tower and marsh at a time, not to mention the other species continuing their long journeys, oblivious to the excitement of folks on the tower.

### **October**

October brought cooler weather and the hope that the ever-increasing kettles of Turkey Vultures would begin containing more surprises; numbers of Red-tailed Hawks and Red-shouldered Hawks sharing in the thermals. Osprey migration petered out mid-month, just in time for Golden Eagles to start popping up with more regularity. Sharp-shinned Hawks continued their daily passage, with Cooper's Hawks appearing every now and again to keep us all on our toes. Merlins and Peregrine Falcons spread themselves throughout the days; always causing a stir amongst both watchers on the tower, caught off guard by the speed with which they zoomed past; and birds in the marsh, frantically trying to avoid notice or capture.

### **November**

As days went by and November arrived, temperatures continued to drop, on a few occasions bringing snow and on many days, high winds. Northern Goshawks made a few appearances, even causing a stir when two were caught at the banding station! Though Red-tailed Hawks had been moving through, sometimes with days upwards of 200, there had been no exceptional flights. In much the same way, Red-shouldered Hawks were not nearly as abundant as years gone by. Golden Eagles and Rough-legged Hawks made most of their appearances this month and were always a welcome sight. More and more coffee and hot chocolate was consumed, less and less raptors were seen, and many days that month brought only a trickle of birds to record.

### **December**

Then surprise! Although there was no formal December count, days of north component winds early in the month brought in hundreds of Red-tailed Hawks and numerous Red-shouldered Hawks that must have been waiting around for favourable weather in which to migrate.

## **Raptor Species Accounts**

Each species has a corresponding graph of observations from 39 years (1976-2014) of the count at Holiday Beach (Figure 2, a-o). In order to standardize count effort between years, species totals have been divided by each year's total count hours (as hours counted have varied between 177 and 798), resulting in birds/hour. Each species' graph depicts the percent change of birds/hour from 1976 over the years. Table 1 provides a comparison of 2014 to the 20 and 40-year averages. See Table 2 for raw annual count data from 1995-2014.

### **Turkey Vulture (*Cathartes aura*) – 48,454**

Though Turkey Vultures themselves don't tend to inspire much excitement in the general public, these masses of floating spectres often herald the coming of more sought-after raptors such as Golden Eagles and Rough-legged Hawks and kindle a vague hope in the hearts of hawk watchers for a vagrant Black Vulture. There was a

particularly interesting sighting of a Turkey Vulture on October 10 between 1-2 (EST) with a red wing tag, previously banded and marked in Venezuela! (Pettit, Robert, personal communication with David Barber, Hawk Mountain Sanctuary, February 26, 2014.).

During October 8-26 over 40,000 vultures were counted. 7,782 and 7,976 vultures were tallied on October 11 and 22, respectively, thus becoming the second and third highest Turkey Vulture counts since 1974. Turkey Vultures made up 49% of the total birds counted this fall, and this year's count surpasses any other count year by over 4,000 birds. Figure 2a shows the continued strong increasing trend of this species, with a 33% increase of birds/hour each year.

### **Osprey (*Pandion haliaetus*) – 54**

It was an interesting season for Osprey this year. Seen on a regular basis through September to mid-October, it is always a challenge to decide if an Osprey is one of the residents (from the nearby cell tower nest at County Road 50 & County Road 20 or the nest in Amherstburg on the old water tower), or a migrant stopping for a bite to eat. October 13 brought the last migrant, or so we thought. Then, an Osprey was seen from the tower on November 15, 17, 18 and 21. After some consideration, only one record was submitted to HawkCount as a migrant. In the history of the count at Holiday Beach, only 19 birds have been observed in eight years from the tower after October. This makes the probability of four separate Ospreys being in the area so late in the season very low and as such, it was assumed that these sightings were of the same individual, though there were no distinguishing characteristics to confirm this. To further that assumption, an Osprey had been seen on a fairly constant basis hunting at Big Creek (Country Road 20 & Creek Road) from October 15 to November 24. The days that an Osprey was seen from the tower coincided with four days when that area of Big Creek was frozen over and the Osprey lingering there would have had to range farther to find food. December 7, however, brought another surprise when three Ospreys were seen from our raptor banding station east of the tower and another individual was reported on OntBirds listserv near Toronto that same day, perhaps implying that the Ospreys seen from the tower in November may have all been different birds after all.

Only four count years have yielded smaller numbers of Osprey than 2014 and this year's count is 60% lower than the 20-year average (Table 1), but this does not mean that Osprey are necessarily declining. Figure 2b shows that there is *no strong general trend* over time for Osprey and observed number dips such as that seen this year are not uncommon.

### **Bald Eagle (*Haliaeetus leucocephalus*) – 291**

It is a pleasure to see Bald Eagles watching solemnly over the marsh at Holiday Beach on a daily basis. This year the family of resident eagles, nesting just west of the tower in a dense shoreline woods, was composed of the breeding adults and four immatures of various stages. A third adult bird was permitted by the others to stay in the marsh after mid-October. The majority of the Bald Eagles migrated during September and October, but they were still showing up right until the end of the count. The 24 eagles counted on September 18 became the fourth most individuals tallied in a day from the tower. It is nice to see the *continued increasing numbers* of this species (Figure 2c) after the banning of DDT.

### **Northern Harrier (*Circus cyaneus*) – 581**

That distinctive white rump and carefree yet powerful flight of the Northern Harrier could brighten up even the most miserable counter's day. And what a wonderful surprise when a distant white "gull" turns out, rather, to be the striking white of the mysterious Grey Ghost male harrier. This year we had the pleasure of seeing 581 Northern Harriers from the tower, which is an increase from the past two years, but is still a 41% decrease from the 20-year average (Table 1). Due to their tendency of flying far below the tree line and low over the marsh, this is another species that can easily be missed without proper attention, especially at times when most of the other raptors are flying well above eye level. There are also records of Northern Harriers flying early at dawn and late at dusk when the count may have yet to be begun or has already been concluded for the day, or even migrating at night (Russell, 1991). This could be a partial cause of the large variation in observations over the years (Figure 2d) and the lack of trend in the population.

### **Sharp-shinned Hawk (*Accipiter striatus*) – 7,781**

Even on a slow day through the season, you're pretty much guaranteed a sighting of a Sharp-shinned Hawk until later in November. Disregarded by some as a boring bird after a couple weeks into September due to their almost constant presence, "Sharpies" still do have a certain personality about them. Not dallying, but never appearing in a frantic rush, they forge their way overhead, moving in a constant line, until they are out of sight.

Sharp-shinned Hawks saw an increase from the last two years but a 37% decrease from the 20-year average (Table 1). This *significant decrease* (Figure 2e) is fairly consistent across hawkwatches in eastern North America and could be caused by forest fragmentation, habitat loss, pesticide misuse, and maturation of forest stands causing fewer potential breeding habitats, or an alteration of migratory behaviour, among other hypotheses (Viverette et al, 1996).

### **Cooper's Hawk (*Accipiter cooperii*) – 333**

This year brought a slightly different distribution of Cooper's Hawk observations than has been seen over past years of the watch at HBCA. A typical fall of Cooper's Hawk observations sees 21% of the numbers in September, 67% in October, and 12% in November. This year, September and October were much more evenly weighted with 45% and 41%, respectively.

In terms of total numbers, this year saw the lowest count since 1977 with a 52% decrease from the 20-year average (Table 1). This low count is certainly not to be considered a dire prediction since one year's dip doesn't necessarily proclaim disaster. There are perhaps many factors that contribute to this year's low count and future years of data are needed to make sound predictions. The general trend for Cooper's Hawks since the beginning of the count at Holiday Beach has been an *increase, though quite weak and inconspicuous* (Figure 2f).

### **Northern Goshawk (*Accipiter gentilis*) – 13**

The largest of the North American accipiters, the Northern Goshawk is also the least commonly observed and as such, cause of the most excitement. The 13 individuals counted this year is a slight increase from the past two years but a 60% decrease from the 20-year total (Table 1). A graph of the sightings since 1976 shows *no significant increase or decrease* in observations over the years (Figure 2g).

### **Red-Shouldered Hawk (*Buteo lineatus*) – 461**

Beautiful birds, especially in their adult plumage, Red-shouldered Hawks typically begin to arrive in mid-October and continue to migrate through November along with the larger numbers of Red-tailed Hawks. This year's numbers are more in keeping with the numbers of the early 2000's, after which there was a slight increase until this fall. Two days of 77 birds each in late October were the high counts of this species for the season, compared to years in the 70s, 80s and 90s when one day could bring in between 200 and 400 Red-shoulders. This year's total is a decrease of 38% from the 20-year average (Table 1) and the observations graph shows a *moderately strong decline* (Figure 2h).

### **Broad-winged Hawk (*Buteo platypterus*) – 36,348**

The Broad-winged Hawk flight in mid-September is always well received and is often the cause of the most labour-intensive counts of the season due to long daylight hours in which they can happily fly. Many people will find themselves flat on the ground staring up, if not from awe, then to ease a neck sore from counting the hundreds or thousands of birds streaming overhead for hours.

The majority of Broad-wings seen at Holiday Beach this year migrated through on two big days, September 16 and 18, with 11,576 and 21,446 birds, respectively. These two days alone added up to a total of 21.25 hours on the tower. Small groups of up to a dozen Broad-wings kept popping up until the end of October, when they finally petered out. Based only on September count hours, this year showed a 3.4% increase from the 20-year average (Table 1) and was the third highest count since 2001. There is a *mild decrease in numbers* observed each year as shown in Figure 2i.

### **Red-tailed Hawk (*Buteo jamaicensis*) – 2,552**

Though Red-tailed Hawks are commonly seen hunting and sitting on roadsides, it is something else to see them in kettles on migration. Noting the awesome variation in plumage colour and shade is a great way to pass time on the tower and enjoy this wonderful species. Over 1,000 individuals were counted in both October and November with the highest daily count being 249 Red-tails on November 1. This year's total was the second-lowest count since 1975 and is 59% below the 20-year average (Table 1). There has been a *steady decrease* in Red-tailed Hawk numbers observed at Holiday Beach since the beginning of the count (Figure 2j).

### **Rough-legged Hawk (*Buteo lagopus*) – 26**

Appearing long-winged and loping in flight, the Rough-legged Hawk is a welcome visitor from the tundra of the far north. Seeing those distinctive dark undersides or dark carpal patches of the dark and light coloured Rough-legged Hawk certainly causes a stir on the tower, especially this year with only 26 seen. Almost entirely seen in November, this species adds another incentive to braving the cold of the tower near the end of the counting season. This species has undergone a *moderate decrease* over the years at Holiday Beach, losing 6% of birds/hour each year (Figure 2k). In the 1980s it was not uncommon to see over 100 Rough-legged Hawks in a year, but numbers like this year have been common in the past 10 years. This year is a 61% decrease compared to the 20-year average (Table 1). However, according to Christmas Bird Counts conducted since 1970, the Rough-legged Hawk population has not undergone much change (Environment Canada) and as stated on the Hawk Mountain website, Rough-legged Hawks do not migrate past hawk watches with enough regularity to consider observations as a good indication of population size (See Hawk Mountain, 26 January 2015).

### **Golden Eagle (*Aquila chrysaetos*) – 81**

Beginning to show up late in October, the bulk of Golden Eagles pass the tower during November, sometimes hiding amongst streams of Turkey Vultures. The unmistakable white wing patches and tail base of the juveniles and sub-adults can be seen all the way across the marsh and when one is spotted, everyone invariably wants a look.

Two days of 11 Golden Eagles were the highest count of this season and there were a few days of interesting sightings. One of the most memorable Golden Eagle moments of the fall was when a juvenile with a gleaming white tail base flew past the tower on the Lake Erie shore and encountered an adult Bald Eagle. They flew peacefully side by side for a few moments and then did a quick talon lock-flip over before the Golden proceeded on its way westward and the Bald went back to its favourite perch. The 81 Golden Eagles seen this year is 14% below the 20-year average (Table 1), but the birds/hour observations have been *increasing* 29% each year at Holiday Beach (Figure 2l).

### **American Kestrel (*Falco sparverius*) – 1,029**

The smallest of our falcons, the American Kestrel is a joy to see as it seems to flutter by, and is especially interesting when it is munching on a dragonfly on the wing. This species is almost a daily sighting in September, decreasing to about half the numbers in October, and in November only four days held sightings of kestrels.

American Kestrels were once a common sight along roadways perched on utility wires, but they have been declining from as far back as 1966 (Cornell Lab of Ornithology). True to this trend (Figure 2m), besides 2008 and 2012, this year's 1,029 American Kestrels is the *lowest count in the history of the hawk watch* at Holiday Beach.

### **Merlin (*Falco columbarius*) – 76**

Faster, darker and more intent than their smaller kestrel cousin, the Merlin could easily be missed as it zips by the tower, often lower than eye level. They are feisty and constantly eager to pick a fight with other raptors, or to stoop on an unsuspecting passerine in an attempt to have it for dinner.

September 20 this year tied the September 21, 2002 third highest daily count in the HBMO records with 13 birds seen. This year's total count is an unnatural low of 30% below the 20-year average (Table 1) but as a whole, the observations of Merlins have been on a *strong increasing trend* (Figure 2n).

## **Peregrine Falcon (*Falco peregrinus*) – 55**

Peregrine Falcons are inspiring in flight no matter how often you've seen them and they are never ceasing to amaze with their sharp turns, surprising speed and jaw-dropping aerial acrobatics. You know you've had a great day at the tower when it includes a Peregrine stooping for the potential kill.

October is the month when half the Peregrines of the season typically come by, and this year was no exception. September had 33% of the migrants, and November saw 16% of this fall's peregrines. Though this fall was 23% below the 20-year average (Table 1), since the ban on DDT, they have bounced back exceptionally well. You can see this 15% *increase* in birds/hour each year as indicated in Figure 2o.

## **Swainson's Hawk (*Buteo swainsoni*) – 1**

In the midst of a big Broad-wing flight, a single Swainson's Hawk in juvenile or intermediate plumage appeared at the tower on September 16. Vagrants from the west, Swainson's Hawks are not often seen here, making this only the 30<sup>th</sup> record of the species at Holiday Beach since 1974.

### **Short Summary**

These species have undergone a *strong increase* in observed numbers at HBCA from 1976-2014: Turkey Vulture, Bald Eagle, Golden Eagle, Merlin, and Peregrine Falcon.

These species have undergone a *strong to moderate decrease* in observed migratory numbers at HBCA from 1976-2014: Sharp-shinned Hawk, Red-shouldered Hawk, Red-tailed Hawk, Rough-legged Hawk, and American Kestrel.

These species have *not seen a very significant change* in observed migratory numbers at HBCA from 1976-2014: Osprey, Northern Harrier, Cooper's Hawk, Northern Goshawk, and Broad-winged Hawk.

## **Non-Raptor Species Accounts**

Through the season a total of 143 non-raptor species were recorded as being seen or heard from the tower. Almost daily lists with this information can be accessed on [ebird.ca](http://ebird.ca), by searching for Holiday Beach Conservation Area in the "Explore Data" tab under "Explore a Hotspot".

### **Hérons and Egrets**

Great Blue Herons, Great Egrets, Green Herons, and Black-crowned Night-Herons all roost and feed in the marsh. Exciting additions to the marsh from August 18 to September 22 were Snowy Egrets; originally only *one* seen by Dan Greenham, but eventually *four* being seen at one time! Almost each day during this five-week period they could be seen running around, feeding in the small pond directly to the southeast of the hawk tower. The difference in feeding behaviour between the Great Egrets and Snowy Egrets is quite marked and interesting. Great Egrets are much more patient, standing completely still until a tasty morsel shows up nearby at which point they will strike. Snowy Egrets on the other hand are constantly on the move, shuffling their feet to stir up snacks and darting around in the water, probing for prey.

### **Ducks, Geese and Swans**

High water levels and abundant vegetation in Big Creek Marsh provided plenty of area for the 22 species of ducks, geese and swans this fall. Canada Geese, Mute Swans, Wood Ducks, and Mallards are a pretty constant feature of the marsh throughout the fall. They were joined by other dabbling ducks by mid-October (mostly Gadwall, but also American Wigeon, American Black Duck, Northern Shoveler, and Northern Pintail). Blue-winged Teal were seen every few days through September and October and Green-winged Teal were seen for the first few days of September and occasionally for the rest of the season. The numbers of diving ducks were low this fall, though Redhead, Ring-necked Duck, Scaup sp., Bufflehead, Ruddy Duck, and a single Common Goldeneye did appear periodically. On November 3 there was a group of approximately 150 Red-breasted Mergansers south of the tower on Lake Erie, and a group of Hooded Mergansers spent a few days in November in the small trout pond just northeast of the tower.

On October 5 the first Tundra Swans (ten) flew over the tower and then formations came much more frequently after October 25, totalling an impressive 1,833 Tundra Swans by the end of November.

Snow Geese were welcome sightings on three separate occasions; three flying on their own on October 11, two in a group of Tundra Swans on November 12, and 19 Snow Geese with one Canada Goose in formation on November 13.

### **Pelicans**

A beautiful flock of 15 American White Pelicans did a fly-over, circling multiple times over the tower on September 13, right in the middle of Festival weekend! Another American White Pelican was seen sitting in the marsh from October 25-27 and was watched again on October 29 from the tower as it rode a thermal as high as could be seen before it streamed off to the west.

### **Cranes**

A total of 19 Sandhill Cranes flew past the tower on six different days; two on September 3, two on October 22, two on October 23, one on October 26, seven on November 1, and five on November 28.

### **Shorebirds**

The high water levels of the marsh did not provide much habitat for shorebirds in 2014 and so most were seen in flight, passing through. Killdeer were quite numerous this fall with 296 flying over the marsh in groups of up to 50 individuals. Eight Spotted Sandpipers were seen feeding along the shoreline, and 15 Greater Yellowlegs, two Lesser Yellowlegs, five Sanderlings, 21 Pectoral Sandpipers, and three Short-billed Dowitchers all made an appearance in the airspace over the marsh. One Wilson's Snipe and two of the three American Woodcocks seen this fall were spotted from the tower in late November after the marsh was frozen and there was some snow accumulation.

### **Gulls and Terns**

A few notable gull sightings of the season were 579 Bonaparte's Gulls that migrated past and eight Great Black-backed Gulls. Caspian Tern sightings have fluctuated greatly in the past few years, with only 17 in 2012 versus 106 in 2013 and a drop again this year with 29. One Common and five Forster's Terns were also observed in the area.

### **Swifts**

Chimney Swifts were seen from the get-go, perhaps implying that they had begun to migrate before September 1. This species has undergone huge population declines, up to 95% since 1968, according to the Government of Canada's Species at Risk Public Registry. This trend can even be seen in the past few years at Holiday Beach. In 2011, 614 were seen in one day, compared to season totals of 703 in 2012, 297 in 2013, and 228 Chimney Swifts seen this year from September 1 to October 11.

### **Hummingbirds**

This year brought a small total of 103 Ruby-throated Hummingbirds with the last migrant seen from the tower on September 29. This is a far cry from 2011 when 355 were seen in a single day, with a fall total of 658. There were no other hummingbird species recorded at Holiday Beach in 2014.

### **Shrikes and Vireos**

The only Northern Shrike seen this fall was a juvenile near the tower on October 29. It perched very briefly in a tree before continuing its migration.

The songs of up to three Warbling Vireos at a time were a welcome addition to early September mornings until they left on migration in mid-September. Several Red-eyed Vireos were also heard around the tower.

### **Crows and Jays**

According to Ron Pittaway's Winter Finch Forecast for 2014/2015, a "good to heavy flight" of jays would leave the province this winter due to small crops of acorn, beechnut, and hazelnut in Ontario. This forecast ended up being pretty accurate with a total of 205,321 Blue Jays being counted migrating past the tower. The biggest flight was on September 29 with 21,690, and there were many other days of over 10,000 individuals in late September to early October.

American Crows began to appear on October 10 with the highest count at 25,360 on October 22. The crows continued to migrate through the end of November, totalling 79,291 for the season.



## **Waxwings**

The distinctive high-pitched buzzy trill of Cedar Waxwings was heard all throughout the season, right up to the last day. 3,202 were tallied for 2014 with the highest daily count of 283 birds on September 1.

## **Warblers**

2014 was a low season for warblers, even at our banding lab. There were very few days when warblers were abundant in the bushes and trees around the tower and park. Still, 19 warbler species were recorded as seen or heard from the tower, with Yellow-rumped Warblers taking the lead with highest numbers. A Mourning Warbler was seen late in the season on November 6 that caused a bit of a stir.

## **Blackbirds**

Though not a blackbird, European Starlings will be included in this section due to their common presence in blackbird flocks. Because they often travel in huge flocks that can only be vaguely estimated, and they are a non-native species in North America, not a whole lot of effort is put into counting them through the fall. However, approximately 152,500 European Starlings were observed during 2014, though this is likely a low estimate.

Red-winged Blackbird flocks extended well into the fall, uncommon during September, with the largest flocks being observed in late October. Red-winged Blackbirds were still being seen on the last count day and they totalled 37,940 for 2014.

The majority of the 201 Rusty Blackbirds were seen in mid-October and they were a welcome sight when they came to rest in trees just beside the hawk tower. They were seen on 12 days with the largest group containing 60 birds.

## **Finches**

A popular species for the public due to their distinctive dipping flight pattern and call, American Goldfinches numbered in at 9,962 for 2014. This more than doubles those seen in 2013 and is slightly lower than both 2012 and 2011, which saw 11,112 and 12,323, respectively. Finch numbers can vary quite drastically from year to year due to the seed, nut and fruit crop in the more northern parts of Ontario.

Ron Pittaway's Winter Finch Report predicted that Common Redpolls were to be abundant this year, but they were only counted on November 13 when a flock of 120 of them passed the tower. 1,003 Pine Siskins betrayed their presence with their raspy excited call and quick turnaround upon seeing an alder tree close to the pond at which to feed. 57 Purple Finches and 51 House Finches were also recorded from the hawk tower.

## **Monarch Butterflies**

Though not a bird species at all, an attempt to keep track of Monarch Butterflies passing the tower is made ever since they have been experiencing population declines. Sightings for this species at Holiday Beach certainly can not be used to predict population trends especially since far more will cross Lake Erie at Point Pelee than at HBCA. It is, however, still nice to see such a local increase from years before, with 770 Monarchs fluttering past the tower this year compared to previous years that had 100 or less individuals.

## **Acknowledgements**

Though Jenna McDermott was the full-time counter in the 2014 season, it was certainly a team effort pulling together an accurate count each day, especially on days of big flights of raptors and non-raptors alike. A heartfelt thank you to everyone who provided camaraderie, extra sets of eyes, and great queries and observations about raptors, non-raptors, mammals, plants and everything else; it certainly inspires an environment of positive learning up on the tower and late into the evening at home.

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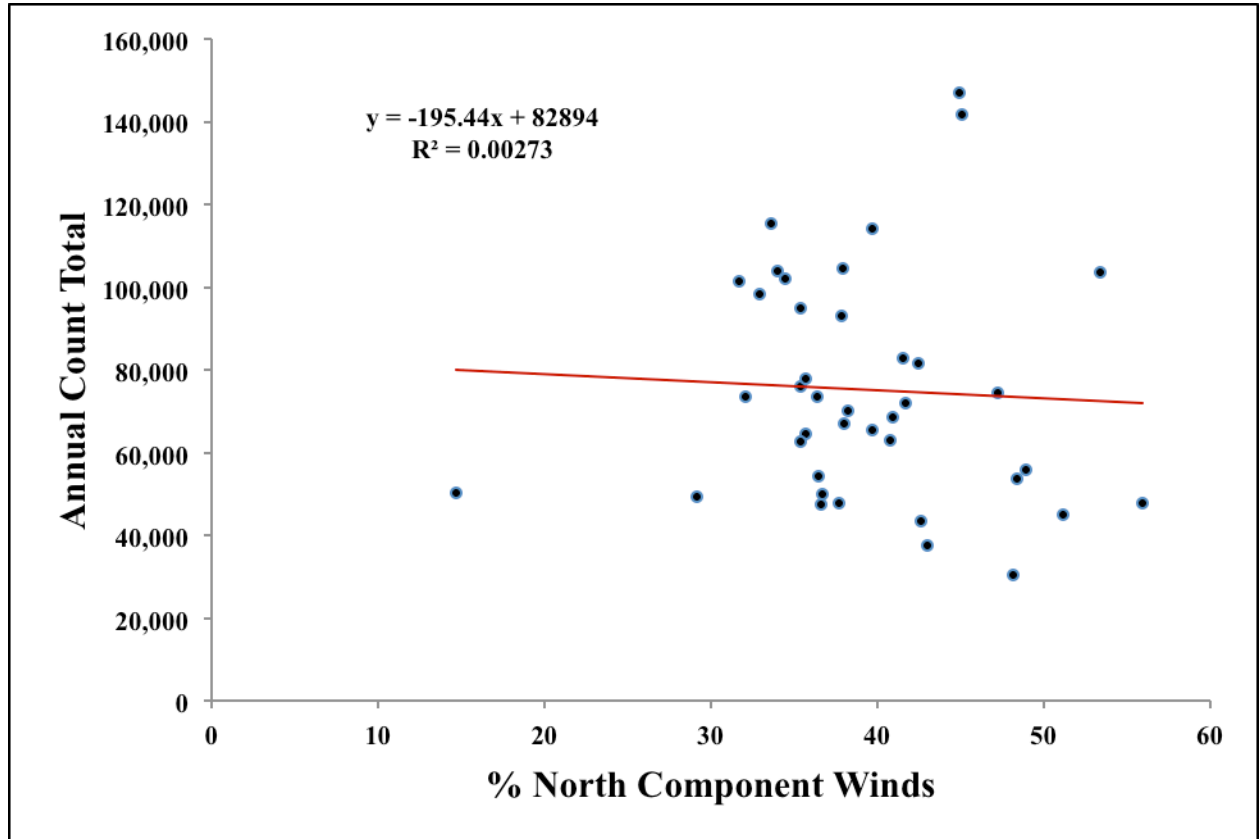
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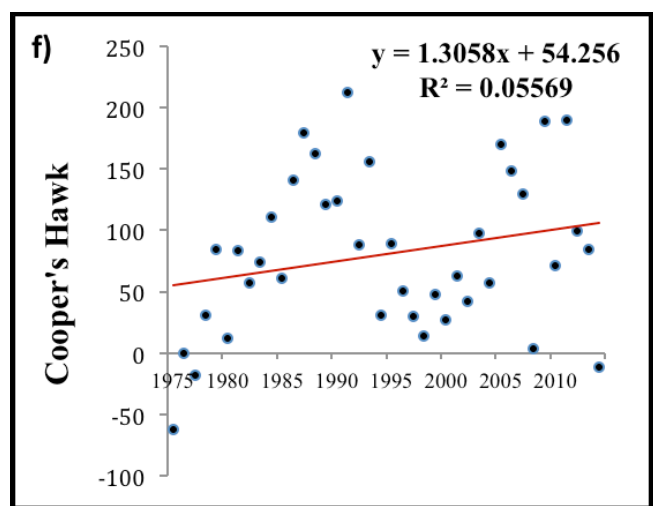
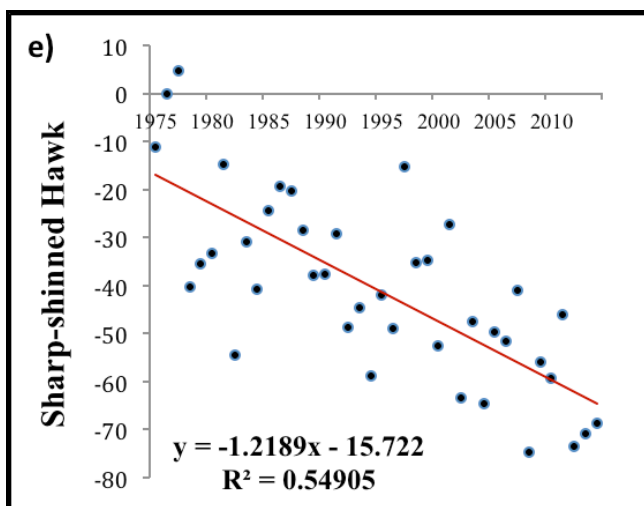
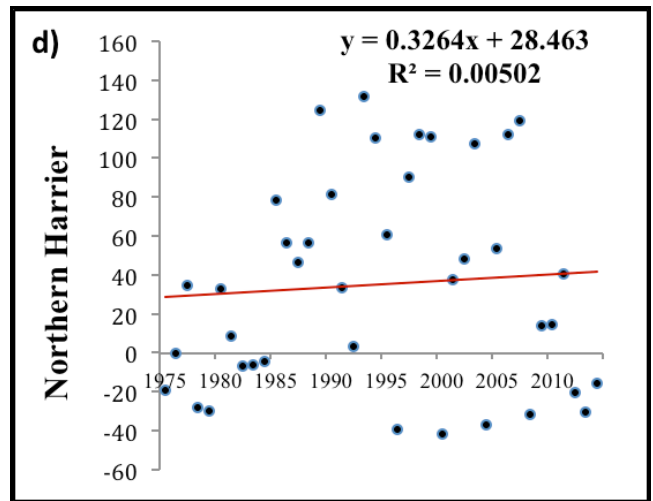
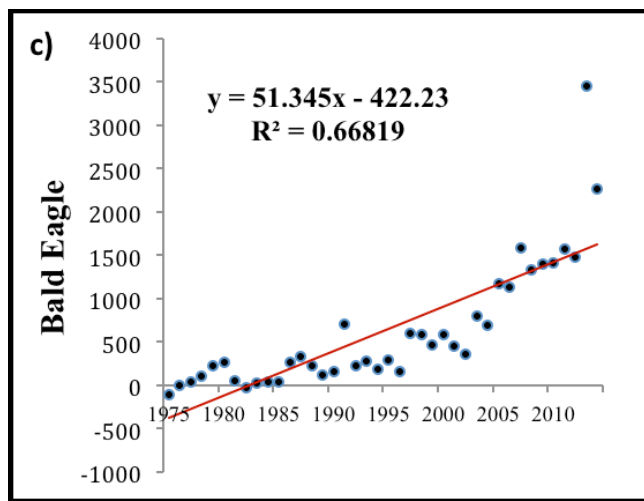
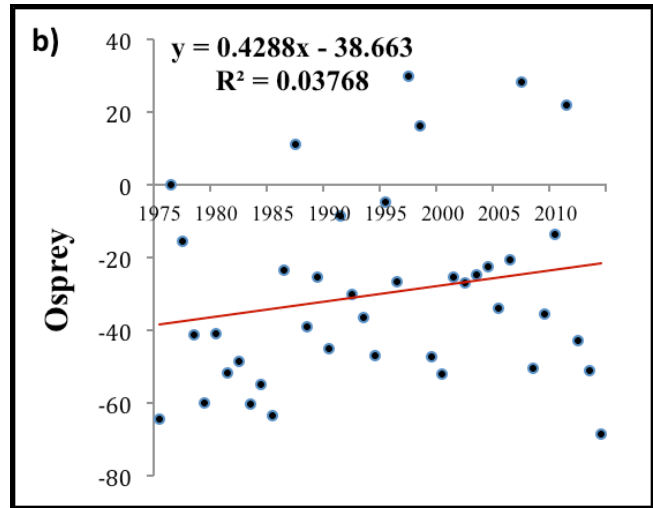
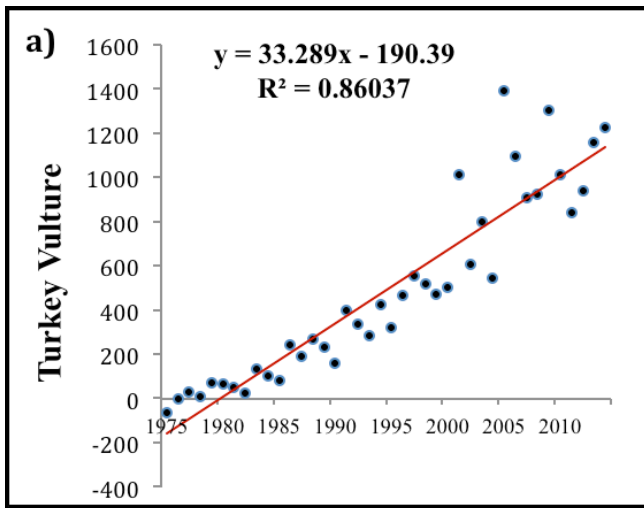
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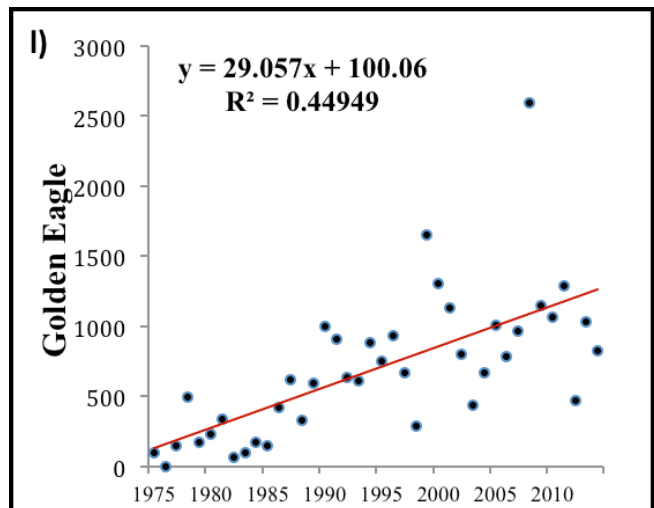
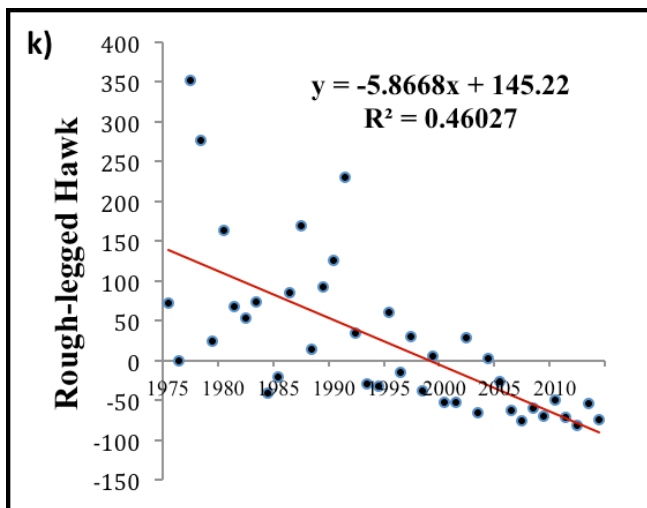
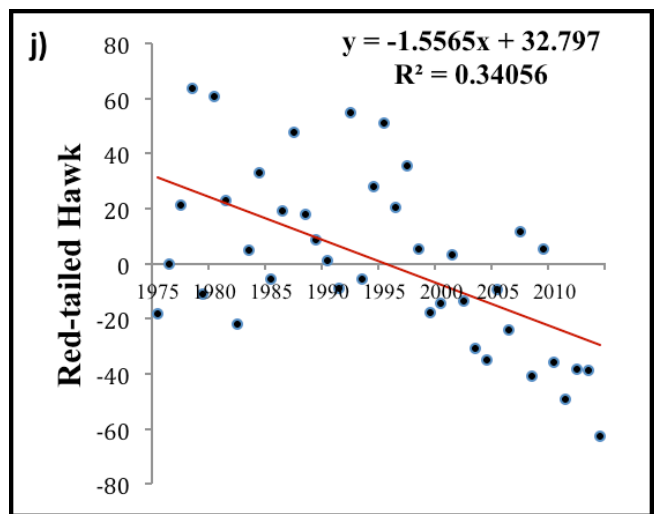
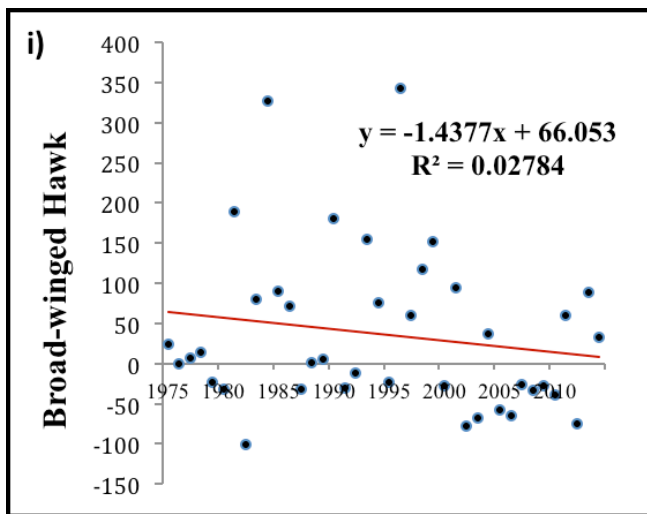
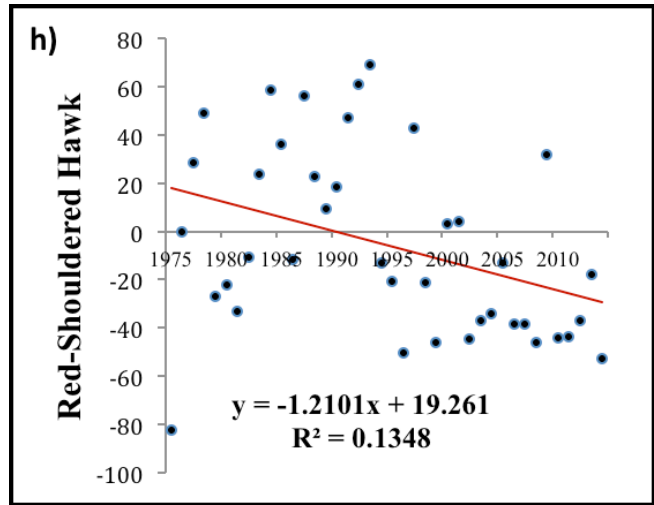
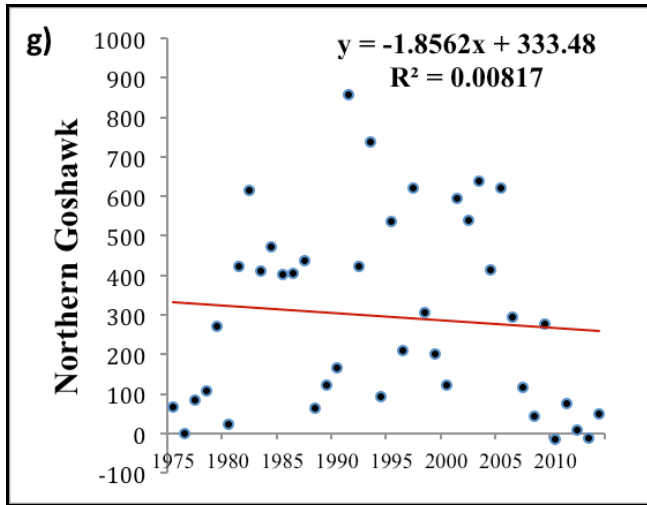
## Appendix – Figures and Tables



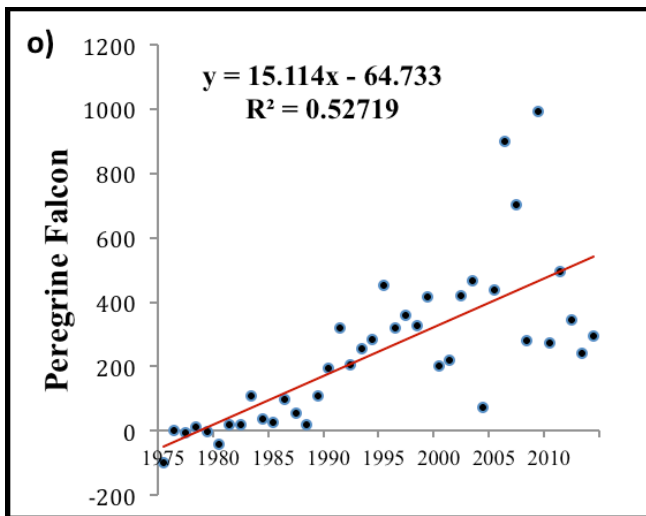
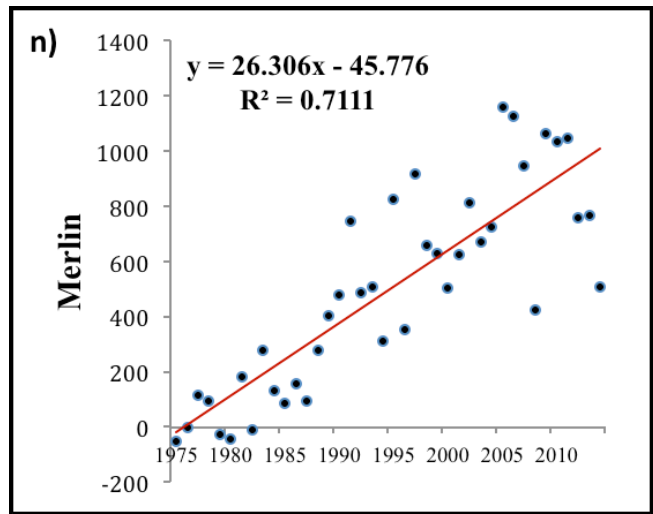
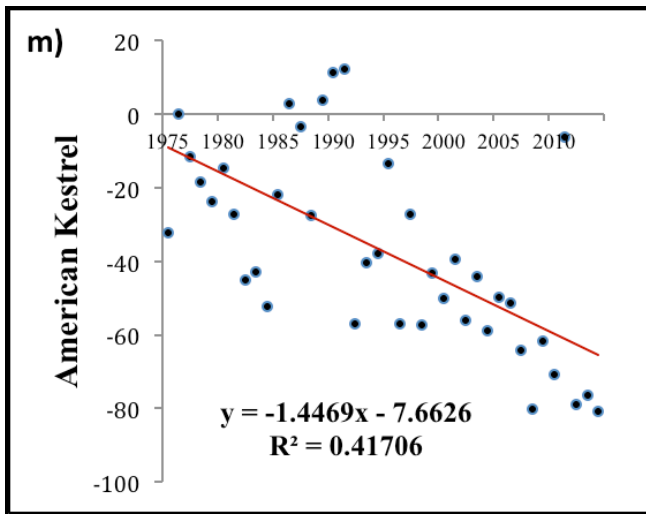
**Figure 1:** A model of the years from 1974-2014, depicting the effect that a north component wind hour has on annual count totals. Though north component winds bring in significantly more birds/hour, there are typically only 30-50% of count hours with north component winds, and this subsequently does not have much effect on an annual count total.



**Figure 2: Birds per hour of each species as a percent change of birds per hour in 1976.** The vertical axis is the percent change for each year calculated based on 1976 birds/hour (The value of which can be found as the number in front of the 'x' in each formula. Examples: Bald Eagles observed/hour increase 51% every year, or Sharp-shinned Hawks observed/hour decrease 1.2% each year). **a)** Turkey Vulture, **b)** Osprey, **c)** Bald Eagle, **d)** Northern Harrier, **e)** Sharp-shinned Hawk, **f)** Cooper's Hawk, **g)** Northern Goshawk, **h)** Red-shouldered Hawk, **i)** Broad-winged Hawk, **j)** Red-tailed Hawk, **k)** Rough-legged Hawk, **l)** Golden Eagle, **m)** American Kestrel, **n)** Merlin, **o)** Peregrine Falcon.



**Figure 2: Birds per hour of each species as a percent change of birds per hour in 1976.** The vertical axis is the percent change for each year calculated based on 1976 birds/hour (The value of which can be found as the number in front of the 'x' in each formula. Examples: Bald Eagles observed/hour increase 51% every year, or Sharp-shinned Hawks observed/hour decrease 1.2% each year). **a)** Turkey Vulture, **b)** Osprey, **c)** Bald Eagle, **d)** Northern Harrier, **e)** Sharp-shinned Hawk, **f)** Cooper's Hawk, **g)** Northern Goshawk, **h)** Red-shouldered Hawk, **i)** Broad-winged Hawk, **j)** Red-tailed Hawk, **k)** Rough-legged Hawk, **l)** Golden Eagle, **m)** American Kestrel, **n)** Merlin, **o)** Peregrine Falcon.



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**Table 1:** Percent change of each species in birds/hour for 2014 as compared to the 20-year average and the 40-year average.

\* Percent change in count hours. \*\*Percent change of birds/September hours. \*\*\*Percent change of total birds, not per hour

Example Formula for Osprey:

Percent change (birds/hour) =(((OS total 2014/2014 hours)-(OS average for 20-year/20-year average hours))/(OS average for 20-year/20-year average hours))\*100= -60 OR (((54/750)-(113/627))/(113/627))\*100= -60

Species	20 year (1994-2013) average	2014	Percent Change (in birds/hour)	Species	40 year (1974-2013) average	2014	Percent Change (in birds/hour)
Hours	627	750	19.6 *	Hours	605	750	24.0 *
TV	26950	48454	50.3	TV	17089	48454	128.7
OS	113	54	-60	OS	100	54	-56.4
BE	112	290	116.5	BE	69	290	239
NH	827	580	-41.4	NH	778	580	-39.9
SS	10294	7778	-36.8	SS	11882	7778	-47.2
CH	576	331	-52	CH	572	331	-53.3
NG	27	13	-59.7	NG	29	13	-63.8
RS	626	461	-38.4	RS	764	461	-51.3
BW **	29941	36348	3.4	BW **	33906	36348	-8.3
RT	5253	2562	-59.2	RT	5667	2562	-63.5
RL	56	26	-61.2	RL	100	26	-79
GE	79	81	-14.3	GE	56	81	16.7
AK	2218	1026	-61.3	AK	2755	1026	-70
ML	89	74	-30.5	ML	60	74	-0.5
PG	60	55	-23.4	PG	40	55	10.9
Raptors per Hour	123	131	6.7	Raptors per Hour	125	131	5.0
Total ***	77302	98450	27.4	Total ***	74100	98450	32.9

**Table 2:** 1995-2014 fall count season raptor totals for Holiday Beach Conservation Area, Amherstburg, Essex County, Ontario.

Fall Season	Observer Hours	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	SW	UR	Season Total
1995	798	16,461	173	52	1,176	15,344	755	59	825	22,381	10,987	170	79	4,884	120	82	0	56	73,604
1996	639	17,675	107	27	356	10,778	480	23	414	107,877	7,016	72	77	1,952	47	50	1	95	147,047
1997	561	17,909	166	64	980	15,719	365	47	1,042	31,375	6,927	97	50	2,894	93	48	0	174	77,950
1998	616	18,558	163	69	1,199	13,211	350	29	631	50,673	5,897	51	28	1,862	76	49	1	141	92,988
1999	658	18,384	79	62	1,276	14,216	487	23	463	60,804	4,934	92	134	2,643	78	63	0	179	103,917
2000	622	18,249	68	70	334	9,786	396	16	836	17,240	4,864	39	102	2,197	61	35	1	35	54,329
2001	593	32,186	101	54	750	14,280	484	48	802	44,310	5,573	37	85	2,538	70	35	1	17	101,371
2002	632	21,810	105	48	859	7,658	448	47	457	4,887	4,964	108	66	1,969	94	61	0	88	43,669
2003	559	24,579	96	83	1,065	9,705	554	48	460	7,009	3,523	26	35	2,214	70	59	2	31	49,559
2004	469	14,752	83	61	272	5,506	369	28	403	27,843	2,771	64	42	1,369	63	15	0	231	53,872
2005	572	41,543	86	119	807	9,528	772	48	645	7,965	4,730	56	74	2,035	117	57	0	110	68,692
2006	613	35,665	111	124	1,195	9,814	760	28	492	7,730	4,248	30	63	2,113	122	114	3	40	62,652
2007	636	31,339	186	175	1,280	12,389	730	16	509	18,400	6,470	20	79	1,611	108	95	0	53	73,460
2008	424	21,182	48	99	266	3,533	219	7	298	8,953	2,282	23	133	597	36	30	0	13	37,719
2009	640	43,827	94	157	670	9,358	926	28	1,096	17,118	6,144	26	93	1,730	121	130	2	27	81,525
2010	705	38,178	139	175	740	9,510	603	7	511	16,317	4,121	47	96	1,458	130	49	0	40	72,122
2011	734	33,703	204	201	947	13,073	1,063	15	539	43,431	3,405	28	119	4,874	137	81	3	140	101,964
2012	630	31,888	82	163	460	5,546	627	8	518	6,055	3,545	16	42	937	88	52	3	38	50,069
2013	680	41,727	76	395	434	6,578	628	7	727	48,629	3,805	41	90	1,143	96	43	7	11	104,440
2014	750	48,454	54	291	581	7,781	333	13	461	36,348	2,552	26	81	1,029	76	55	1	316	98,452