

Detroit River Hawk Watch 2011 Season Summary



Submitted by:

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Abstract

The 2011 count represented the 29th consecutive year of monitoring diurnal raptor migration at the mouth of the Detroit River and the 14th year of consistent coverage at Lake Erie Metropark (LEMP), Wayne County, Michigan. There were 591.5 hours of data collection with counts conducted on 83 days between 1 September and 30 November. A total of 260,974 raptors of 16 species were recorded. Five species were above their long-term average (LTA) since 1998 (broad-winged hawk [*Buteo platypterus*], turkey vulture [*Cathartes aura*], Cooper's hawk [*Accipiter cooperii*], bald eagle [*Haliaeetus leucocephalis*] and golden eagle [*Aquila chrysaetos*]). Northern goshawk [*Accipiter gentilis*] and Swainson's hawk (*Buteo swainsoni*) were detected in average numbers. Eight species were detected below their LTA (sharp-shinned hawk [*Accipiter striatus*], red-shouldered hawk [*Buteo lineatus*], red-tailed hawk [*Buteo jamaicensis*], rough-legged hawk [*Buteo lagopus*], northern harrier [*Circus cyaneus*], American kestrel [*Falco sparverius*], merlin [*Falco columbarius*] and peregrine falcon [*Falco peregrinus*]).

Methods

An hourly count of diurnal raptors was conducted each day between 1 September and 30 November 2011. 591.5 hours of coverage occurred at the Lake Erie Metropark Boat Launch (LEMP; N 42.0792, W 83.1937). Observations began at 07:00 EST and ended at 15:00 EST until 25 October when, due to declining day length, the official sunrise was one hour later than on 1 September. After 25 October, the count began at 08:00 EST and ended at 15:00 EST. All counting was conducted by allowing observers to freely scan the skies with 8 to 10X magnification binoculars. Spotting scopes with 20 to 60X magnification were used only to confirm the identification of raptors previously sighted using 8 to 10X magnification binoculars. Days with excessive rain, exceptionally strong winds, or heavy fog were excluded. Raptors were determined to be migrating if they were observed crossing (and not returning) an imaginary line originating at the observer and running to the northwest and southeast.

Wind direction and speed, cloud cover, visibility, precipitation, humidity, barometric pressure, and temperature were collected at the beginning of each hour. Counts attempted to estimate birds exiting kettles in a stream-like fashion during periods of large migration volume.

Results are reported in relation to LEMP's long-term averages since 1998 when consistent coverage began there. Table 3 displays 2011 results in relation to the long-term trends since 1991 combining data from both LEMP and Pointe Mouillee State Game Area Headquarters (N 42.0379, W 83.1982).

Summary Statistics

Monthly trends from 2006 and yearly trends from 1998 use data from Lake Erie Metropark alone (Tables 1 and 2). Results also combine totals at Lake Erie Metropark and Pointe Mouillee State Game Area (Table 3). The protocol was consistent from 1998 through 2010. A change in the protocol was implemented in 2011 that eliminated the use of spotting scopes or high-powered binoculars (over 12X magnification) to initially detect migrant raptors. These tools were used only to confirm the species and associated data of birds.

Results

September

As in years past, September was characterized mainly by winds with a strong southerly component. The outlier was the middle portion of the month—the period spanning 14 September to 17 September—when winds were mostly out of the north and when, as might be expected with north winds, our largest flights occurred.

The first week of September featured south winds and limited movement. It wasn't until after a rain day on 8 September that migration truly began in earnest. Our first day of decent movement was on 9 September with a count of more than 200 individual raptors, mostly sharp-shinned hawks. On 11 September, there was considerable clearing in the afternoon after several days of overcast weather and we had one of our best days of the month. The day featured a season peak of 18 bald eagles, 12 osprey and 541 sharp-shinned hawks, as well as a September high of 67 American kestrels.

After the 11th, there were two more days of hazy skies and south winds that kept migration to a minimum. But on 14 September, partly sunny skies and light northwest winds brought us our first surge of broad-winged hawks (2,011) and red-tailed hawks (23). Over the next two days, broad-winged hawks continued to move, but strong north winds pushed several large kettles well south of LEMP. There were reports of more than 40,000 broad-winged hawks seen both days from the southern end of Pointe Mouillee State Game Area in the vicinity of Roberts Road (Jeff Schultz personal communication).

A massive broad-winged hawk flight materialized on 17 September. Conditions were sub-optimal at the start of the day with overcast skies and little wind. Luckily for us, the skies began to clear and the wind, while still light, began to pick up and gust out of the northeast. Liftoff occurred at approximately 9:30 EST when multiple kettles of broad-winged hawks numbering in the tens of thousands were seen circling above the Canadian shoreline. After that, for the rest of the day, there were few moments when there wasn't a broad-winged hawk within view. The largest flight occurred late, around 15:00 EST, when more than 100,000 broad-winged hawks in three long, broad lines were sighted high in the blue sky. The final tally was 190,121 broad-winged hawks, which represents the third highest single-day total recorded at this watch site. Four Swainson's hawks and the first two red-shouldered hawks of the season were hidden among the many broad-winged hawks.

During the last two weeks of the month, from 18 September to 30 September, there were two rain days and predominantly south winds, which limited our overall numbers. On 18

September, 20 September and 24 September, several small flights of broad-winged hawks moved through. On 25 September, we saw our last big push of broad-winged hawks (2,199). On 28 September and 29 September, we had our second and third highest single-day osprey (9, 8) and sharp-shinned hawk (229, 216) totals for the month. On 29 September, we also had a season peak of five peregrine falcons.

October

Winds are typically out of the north, west and northwest in October, but this season saw south winds dominate the month. Eighteen days featured winds out of the south or southeast. The rest of the month featured days with winds that had a northerly or westerly component. The lack of north and west winds more than likely limited our turkey vulture and buteo flight. While turkey vultures were counted in above average numbers this season, red-tailed and red-shouldered hawks were both seen in below average numbers.

The first six days of October were characterized by partly sunny skies and light winds out of the north and northwest, highly favorable conditions for significant movement. Turkey vultures took advantage and, as they typically do when the calendar changes to October, began to push their way south. During the first six days of the month, 12,735 turkey vultures were counted. In addition to vultures, other species were on the move. Cooper's hawks, another species that typically exhibits an early October peak, were pushing through with a total of 299 counted during the first eight days of the month, including a season peak of 59 on 5 October. American kestrels peaked for the season on 1 October when 101 were counted. Northern harriers had their season peak on 5 October with a total of 17 counted. Also on 5 October, the season's first golden eagle and rough-legged hawk were seen, an uncommonly early day for the first sighting of the season for both species.

From 7 October until 20 October, there was a total of nine days with hazy skies and southeast winds, which depressed our flight significantly. Three other days featured heavy rain, which didn't help matters much, either. Of note was 15 October, when the wind was strong and out of the west, and a season peak of four merlins were seen, as well

as the season's first northern goshawk. The wind was also strong and out of the west on 17 October, providing us with our only other day of substantial movement during the entire two-week period.

After so many days of poor flight conditions, we finally got a full day of light west winds on 21 October. Turkey Vultures and a large number of adult *Accipiter* took advantage. A total of 4,157 turkey vultures were counted and we had our second highest single-day sharp-shinned hawk (411) and Cooper's hawk (55) totals of the season. The next day, 22 October, the floodgates remained open. On what was one of our best days of the season, 14 species were seen including an abnormally late season peak of 10,927 turkey vultures and one late broad-winged hawk, the last of the fall. Two days later, 24 October, proved to be another day of significant turkey vulture migration with 5,431 individuals counted.

For the next two days after 24 October, there was little movement. But after a rainout on 27 October, 28 October was bursting with activity. We counted a season peak of 681 red-tailed hawks and also had our second highest turkey vulture day of the season at 10,268 individuals counted, our second highest red-shouldered hawk day of the season at 46 individuals counted, and our second highest golden eagle day of the season at 31 individuals counted. Astoundingly, our season peak of golden eagles (40) occurred on the very next day, 29 October, giving us 71 golden eagles counted during the two-day span. On 29 October, we also saw a season peak of 83 red-shouldered hawks and a monthly peak of 3 northern goshawks. We finished out the month with two days of overcast skies and rain, but that did little to dampen our spirits after such amazing golden eagle flights.

November

Hoping for more favorable winds with the start of a new month, there was no such luck as south winds again prevailed in November. Wind direction breakdown for the month consisted of 15 days with south winds, six days with north winds and six days with west winds. One additional day was shortened due to excessive rain and two others were called off completely for the same reason. The timing of migration during November was

similar to that of October. There was an early burst of activity during the first week of the month, and then a lengthy dry spell before another burst of activity occurred toward the end of the month.

The first five days of November were the liveliest. 1 November was a busy day that featured 348 red-tailed hawks, 46 red-shouldered hawks and 14 golden eagles. On 4 November, we added another 13 golden eagles. And then on 5 November, we tallied a monthly peak of red-tailed hawks (472), a monthly peak of red-shouldered hawks (47) and a season peak of rough-legged hawks (3). Turkey vultures continued to move through with a total of 1,052 individual vultures counted during the five-day period. On 5 November, we had our last day of the season where turkey vulture migration entered into triple-digits.

From 6 November to 16 November, an extended period of mostly south winds kept movement to a minimum. During that stretch, there wasn't a single day when the number of individual raptors tallied surpassed 100. On 17 November, we received our first day of west winds in quite some time and, buoyed by a strong flight of 74 Red-tailed Hawks, eclipsed the 100 raptors counted mark.

On 21 November, migration began to pick up again with a full day of movement that featured 190 red-tailed hawks, 24 red-shouldered hawks, 8 golden eagles and 7 bald eagles. For the next two days, many raptors continued to move through the viewing area. Despite less than ideal conditions on 22 November, we still managed to tally another 124 red-tailed hawks and a monthly peak of 12 northern harriers. On 23 November, red-tailed hawks (296) continued to push through as did red-shouldered hawks (23) and northern goshawks (3). The period spanning 20 November to 24 November proved to be our most productive for northern goshawk sightings with a total of nine seen during the five-day period. A monthly high of 8 bald eagles were seen on 30 November.

Species Accounts

Turkey Vulture: 52,745 between 3 September and 30 November were 17% above the previous 13-year mean for LEMP. Turkey vulture numbers were down from the count's record high of 122,325 set last season, but were very much in line with the number of individuals typically seen at this site. This year's high count day was noticeably later than our traditional peak date of 9 October.

High Count: (10,927) 22 October

Osprey: 85 between 1 September and 22 October were 47% below the previous 13-year mean for LEMP. Osprey numbers were higher than in 2009 (46) and 2010 (63), but remain low when compared to previous years.

High Count: (12) 11 September

Bald Eagle: 235 between 1 September and 30 November were 70% above the previous 13-year mean for LEMP. This season saw the highest number of bald eagles ever recorded at LEMP, building on last season's previous high of 220.

High Count: (18) 11 September

Northern Harrier: 278 between 9 September and 30 November were 46% below the previous 13-year mean for LEMP. Highly cyclical at this watch site, 2011 represented a low season for northern harriers after last season's relatively high yield of 465.

High Count: (17) 5 October

Sharp-shinned Hawk: 5,331 between 1 September and 25 November were 25% below the previous 13-year mean for LEMP. Up until 20 October, juvenile sharp-shinned hawks were detected in greater number than adults. After a big push on 21 October, adults began to outpace juveniles and continued to do so for the rest of the season.

High Count: (541) 11 September

Cooper's Hawk: 763 between 3 September and 30 November were 47% above the previous 13-year mean for LEMP. This season registered the second highest count of Cooper's hawk ever recorded at LEMP, behind only last season's count of 834. The age breakdown for Cooper's hawk was similar to that of sharp-shinned hawk with a distinct increase in the number of adults seen from late October on.

High Count: (59) 4 October

Northern Goshawk: 26 between 15 October and 24 November were 6% above the previous 13-year mean for LEMP. Of the 26 goshawks seen, 8 were aged to juvenile. No adults were detected.

High Count: (3) 29 October, 5 November and 23 November

Red-shouldered Hawk: 487 between 17 September and 30 November were 28% below the previous 13-year mean for LEMP. Red-shouldered Hawks continued to decline this season since hitting a high of 1,026 in 2007. There were 86 adults, 24 juveniles, and 377 individuals of unknown age.

High Count: (83) 29 October

Broad-winged Hawk: 195,858 between 4 September and 22 October were 263% above the previous 13-year mean for LEMP. This season saw the largest ever broad-winged hawk flight in the history of LEMP. The 190,121 broad-winged hawks seen on 17 September represented the third highest single-day flight in the count's history, including the former alternate count sites.

High Count: (190,121) 17 September

Swainson's Hawk: 5 between 17 September and 18 September were 8% above the previous 13-year mean for LEMP.

High Count: (4) 17 September

Red-tailed Hawk: 4,100 between 3 September and 30 November were 19% below the previous 13-year mean for LEMP. Red-tailed hawk numbers were up when compared to the previous three seasons, but still fell short of their historic average.

High Count: (681) 28 October

Rough-legged Hawk: 19 between 5 October and 21 November were 55% below the previous 13-year mean for LEMP. Rough-legged Hawk numbers vary considerably from one season to the next and this season was low.

High Count: (3) 5 November

Golden Eagle: 167 between 5 October and 28 November were 62% above the previous 13-year mean for LEMP. Golden eagles were seen in their highest numbers since 2000 (188). Peak flights occurred on back-to-back days in late October when 31 golden eagles were tallied on 28 October and then another 40 were tallied on 29 October. Both days represented two of the largest single-day counts in the watch's history.

High Count: (40) 29 October

American Kestrel: 664 between 3 September and 2 November were 36% below the previous 13-year mean for LEMP. Another cyclical species, American kestrel numbers were similar to what they were in 2010 (675) and a bit higher than they were in 2009 (441) and 2008 (404). The seasons of 2005 (1,018), 2006 (1,314) and 2007 (1,275) were ones of cyclical abundance.

High Count: (101) 1 October

Merlin: 21 between 10 September and 3 November were 57% below the previous 13-year mean for LEMP. Fluctuating greatly from season to season, merlins were counted in their lowest numbers since 2008.

High Count: (4) 15 October

Peregrine Falcon: 21 between 16 September and 12 November were 52% below the previous 13-year mean for LEMP. Also highly variable from season to season, peregrine Falcons were seen in their lowest numbers since 2004.

High Count: (5) 29 September

Short-eared Owl: Seen during most but not all seasons, one short-eared owl was spotted on 26 November.

Table 1. 2006–2011 monthly data from Lake Erie Metropark with the 2011 percent deviation from the previous 5-year mean. See Appendix 1 for a reference to the species codes.

	September																				
	Hours	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	PR	UNK	Total
2006	185.5	0	1,608	162	87	321	3,237	105	0	2	48,612	2	144	0	1	1,115	23	22	0	0	55,441
2007	240.3	0	1,785	147	139	500	6,705	173	0	8	69,535	2	363	0	0	1,062	26	35	0	8	80,488
2008	186.3	0	1,383	111	64	87	2,292	120	0	3	36,199	0	123	0	0	309	11	11	0	0	40,713
2009	195.9	0	746	43	48	75	1,572	87	0	1	19,934	1	116	0	0	305	22	14	0	0	22,964
2010	219.3	0	1,371	52	138	262	4,955	237	2	5	79,363	5	248	0	0	573	24	20	2	17	87,274
2011	199.0	0	517	69	97	102	2,411	99	0	2	195,216	5	78	0	0	404	11	13	0	20	199,044
Average	204.4	0.0	1,235.0	97.3	95.5	224.5	3,528.7	136.8	0.3	3.5	74,809.8	2.5	178.7	0.0	0.2	628.0	19.5	19.2	0.3	7.5	80,987.3
2011 Mean Dev.	-3.1		-62.5	-33.0	1.9	-59.0	-35.7	-31.4		-47.4	284.8	150.0	-60.8			-40.0	-48.1	-36.3		300.0	246.9
	October																				
	Hours	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	PR	UNK	Total
2006	158.5	0	46,254	33	56	166	3,501	366	6	226	2,106	6	1,615	7	18	191	14	10	0	0	54,575
2007	194.5	0	57,621	44	56	248	3,034	334	2	416	39	0	2,341	4	34	210	12	26	0	0	64,421
2008	164.8	2	33,533	29	38	50	1,222	129	3	111	17	0	1,417	8	53	92	5	7	0	0	36,716
2009	181.6	0	53,401	3	49	71	1,632	193	16	351	82	3	1,372	5	63	133	17	18	0	12	57,421
2010	213.3	0	118,124	11	60	144	1,500	505	6	272	209	0	1,081	0	18	100	24	17	1	0	122,072
2011	212.5	0	50,917	16	83	122	2,823	552	11	202	642	0	1,758	8	95	258	9	5	0	106	57,607
Average	187.5	0.3	59,975.0	22.7	57.0	133.5	2,285.3	346.5	7.3	263.0	515.8	1.5	1,597.3	5.3	46.8	164.0	13.5	13.8	0.2	19.7	65,468.7
2011 Mean Dev.	16.4		-17.6	-33.3	60.2	-10.2	29.6	80.7	66.7	-26.6	30.9		12.3	66.7	155.4	77.7	-37.5	-67.9		4,316.7	-14.1
	November																				
	Hours	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW	RT	RL	GE	AK	ML	PG	PR	UNK	Total
2006	132.0	0	3,860	1	19	129	275	157	1	791	0	0	4,266	20	105	8	3	6	0	0	9,641
2007	163.0	0	3,476	4	16	70	170	217	4	602	0	0	6,702	25	90	3	3	6	0	0	11,388
2008	113.9	0	257	0	39	12	79	45	7	71	0	0	967	10	36	3	3	5	0	0	1,534
2009	142.0	0	842	0	21	23	55	55	8	263	0	0	986	8	54	3	0	3	0	2	2,323
2010	132.0	0	2,830	0	22	59	49	92	13	211	0	0	1,878	29	58	2	4	3	0	1	5,251
2011	180.0	0	1,311	0	55	54	97	112	15	283	0	0	2,264	11	72	2	1	3	0	43	4,323
Average	143.8	0.0	2,096.0	0.8	28.7	57.8	120.8	113.0	8.0	370.2	0.0	0.0	2,843.8	17.2	69.2	3.5	2.3	4.3	0.0	7.7	5,743.3
2011 Mean Dev.	31.8		-41.8		135.0	-7.8	-22.8	-1.1	127.3	-27.0			-23.5	-40.2	5.0	-47.4	-61.5	-34.8		7,066.7	-28.3

Table 2. 1998–2011 data from Lake Erie Metropark with the 2011 percent deviation from the previous 13-year mean. Seasonal records in bold. See Appendix 1 for a reference to the species codes.

	Hours	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW	SW
1998	451.3	0	19,743	135	111	807	4,968	378	17	517	63,689	5
1999	481.0	0	17,559	58	69	556	6,534	299	23	556	45,711	8
2000	510.2	0	29,421	133	83	138	7,132	408	49	875	57,585	5
2001	526.0	0	28,237	213	115	757	14,715	693	46	858	19,386	3
2002	561.5	0	42,644	238	185	696	7,307	572	22	962	91,499	0
2003	545.3	0	54,975	234	147	1,005	10,643	709	28	533	84,085	12
2004	478.8	0	36,893	201	118	214	5,027	461	49	869	27,381	0
2005	456.3	0	29,699	218	116	291	5,623	432	18	299	56,229	8
2006	475.8	0	51,722	196	162	616	7,013	628	7	1,019	50,718	8
2007	598.5	0	62,882	195	211	818	9,909	724	6	1,026	69,574	2
2008	464.9	2	35,173	140	141	149	3,593	294	10	185	36,216	0
2009	519.4	0	54,989	46	118	169	3,259	335	24	615	20,016	4
2010	564.5	0	122,325	63	220	465	6,504	834	21	488	79,572	5
2011	591.5	0	52,745	85	235	278	5,331	763	26	487	195,858	5
Average	516.1	0.1	45,643.4	153.9	145.1	497.1	6,968.4	537.9	24.7	663.5	64,108.5	4.6
2011 Mean Dev.	15.9		17.0	-46.6	70.1	-45.9	-24.9	46.6	5.6	-28.1	262.9	8.3

	RT	RL	GE	AK	ML	PG	PR	SEOW	UNK	TOTAL
1998	3,782	17	33	1,046	95	52	0	1	86	95,482
1999	3,504	76	208	664	30	49	0	0	47	75,951
2000	5,754	55	188	790	34	24	0	2	37	102,713
2001	8,153	55	120	1,026	50	48	0	1	45	74,521
2002	6,565	63	79	2,277	64	52	0	1	15	153,241
2003	5,789	31	60	2,128	72	82	0	0	0	160,533
2004	6,155	101	79	470	38	20	0	0	0	78,076
2005	2,619	30	45	1,018	55	37	1	0	0	96,738
2006	6,025	27	124	1,314	40	38	0	0	0	119,657
2007	9,406	29	124	1,275	41	67	0	0	8	156,297
2008	2,507	18	89	404	19	23	0	0	0	78,963
2009	2,474	13	117	441	39	35	0	0	14	82,708
2010	3,207	29	76	675	52	40	3	0	18	214,597
2011	4,100	19	167	664	21	21	0	1	169	260,974
Average	5,002.9	40.2	107.8	1,013.7	46.4	42.0	0.3	0.4	31.4	125,032.2
2011 Mean Dev.	-19.2	-54.6	61.8	-36.2	-56.6	-51.9			713.7	127.8

Table 3. 1998–2011 data from Lake Erie Metropark and Pointe Mouillee State Game Area with the 2011 percent deviation from the previous 13-year mean. Seasonal records in bold. See Appendix 1 for a reference to the species codes.

	Hours	BV	TV	OS	BE	NH	SS	CH	NG	RS	BW
1998	578.9	0	31,257	164	144	1,304	8,360	786	36	980	87,926
1999	583.0	0	28,902	80	114	1,159	11,571	390	32	733	612,457
2000	646.1	0	33,183	161	111	243	9,253	592	63	1,100	110,204
2001	667.9	0	37,184	267	176	1,158	19,887	897	70	1,134	82,732
2002	646.3	0	49,404	282	232	935	9,055	668	24	1,109	106,417
2003	624.8	1	73,886	246	199	1,372	12,080	882	50	874	87,359
2004	589.0	0	56,655	256	200	384	6,783	721	58	1,065	185,382
2005	595.8	0	104,538	241	178	571	8,519	854	37	956	91,089
2006	551.3	0	73,146	225	200	1,004	8,404	745	7	1,044	67,956
2007	637.0	0	69,703	209	254	929	10,745	771	6	1,045	127,167
2008	570.0	2	69,676	151	195	292	4,728	458	12	328	321,762
2009	542.2	0	55,055	62	126	189	3,597	359	24	615	35,274
2010	593.2	0	132,976	66	252	515	6,819	876	21	504	153,739
2011	591.5	0	52,745	85	235	278	5,331	763	26	487	195,858
Average	601.2	0.2	62,022.1	178.2	186.9	738.1	8,938.0	697.3	33.3	855.3	161,808.7
2011 Mean Dev.	-1.7		-15.9	-54.1	28.3	-64.1	-42.2	10.2	-23.2	-44.9	23.0

	SW	RT	RL	GE	AK	ML	PG	PR	SEOW	UNK	Total
1998	10	8,694	40	89 ¹	1,631	119	86	0	1	91	141,718
1999	14	5,445	94	246	1,529	45	90	0	0	80	662,981
2000	12	8,210	78	251	1,086	57	41	0	2	44	164,691
2001	6	10,638	70	174	1,860	75	94	0	1	54	156,477
2002	4	8,074	68	110	3,248	77	67	0	1	0	179,775
2003	14	12,161	100	124	2,380	83	87	0	2	12	191,912
2004	2	8,689	125	108	1,008	54	36	0	1	0	261,527
2005	10	7,711	67	90	1,745	74	51	1	0	0	216,732
2006	9	6,530	29	125	1,861	45	47	0	1	0	161,378
2007	3	9,676	29	124	1,391	47	73	0	0	0	222,172
2008	5	4,003	30	148	795	28	37	0	4	0	402,654
2009	5	2,536	13	117	509	43	38	0	0	14	98,576
2010	7	3,298	29	76	725	54	42	3	0	18	300,020
2011	5	4,100	19	167	664	21	21	0	1	169	260,974
Average	7.6	7,126.1	56.5	196.5	1,459.4	58.7	57.9	0.3	1.0	34.4	244,399.1
2011 Mean Dev.	-35.6	-44.3	-68.0	-16.0	-56.3	-65.9	-65.4	-100.0	0.0	601.9	7.3

¹Includes data from Marina Point and Wavepool at Lake Erie Metropark.

Non-raptor Highlights

Three American white pelicans flew over Celeron Island on 15 September. Dozens of common loons, an uncommon fall migrant, were seen from late October until the middle of November. The two most notable sightings of birds rarely seen from the count site came in November when three cave swallows flew overhead on the 6th and a parasitic jaeger was spotted over Lake Erie on the 13th.

Waterfowl

A cackling goose flew by along with a pair of Canada geese on 5 September. The first wood duck of the season was noted on 6 September. Thereafter, the species continued to be seen flying by in limited numbers over the rest of the month. An early American wigeon and an early lesser scaup were seen flying with a flock of mallards on 21 September. A flock of 12 blue-winged teal flew past on 30 September. Canada geese were on the move on 1 October with more than 700 seen from the count site. A Northern shoveler flew overhead on 10 October. A handful of pied-billed grebes and five American coots showed up on 17 October. American coots were seen in greater numbers on 3 November and continued to increase in number throughout the rest of the month.

The first tundra swans of the season were seen on 29 October when 12 flew by in formation. Another 10 tundra swans were noted on 10 November. Many more flocks of Tundra Swans continued to be seen over the next week with a high of more than 150 counted on 17 November. On 15 November, a flock of approximately 40 Snow Geese circled overhead. Interestingly, all but one of the geese were dark morphs. More than 25 red-breasted mergansers flew by on 19 November. Bufflehead were zipping around the channel on 22 November and on 24 November, and four common goldeneye flew by early in the morning. A total of nine hooded mergansers were seen on November 26. A flock of 20 common mergansers flew by on 30 November.

Shorebirds

A spotted sandpiper flew by on 3 September. A flock of sanderlings could be seen darting around the channel on 7 September. Nine American golden-plovers flew by early in the morning on 17 September and five black-bellied plovers flew by early in the morning on 25 September. Small flocks of greater yellowlegs were noted on 1 October, 2 October and 14 October. A late lesser yellowlegs

was seen on 5 November. Additionally, there were a number of killdeer sightings throughout the season.

Gulls

The season's first Bonaparte's gulls were seen on 1 October. Thereafter, small numbers of this species were present into November with peak activity occurring in early November. An adult great black-backed gull was seen on 3 November and 26 November.

Wading Birds

The month of September featured a good deal of black-crowned night heron activity. Usually, one bird was seen flying past the count site, headed northwest each day. In October and much of November, there were very few sightings of this species. Later in November, however, herons began to be seen more frequently, moving through the viewing area in flocks of more than five birds. Great blue herons could be seen flying past in greater abundance during the month of November, often during the late afternoon. Great egrets were migrating well into November. Eight egrets, clearly flying as one flock, were seen on 23 November.

Corvids

The first migrant blue jays were detected on 11 September. Peak movement occurred during late September and early October, which was consistent with previous seasons. The single largest flight of blue jays occurred on 28 September when more than 30,000 were noted. The first migrant American crows were detected on October 7. Peak movement occurred during late October and early November, which was a little later than previous seasons. The single largest flight of American crows occurred on 3 November when more than half a million passed overhead during a 45-minute span. Throughout their migratory period, there were several days when the number of American crows exceeded 100,000.

Icterids

The first red-winged blackbirds of the season were seen moving through on 11 September. Red-winged blackbirds continued to be seen throughout the fall with many flocks flying past even into late November. A peak of migration for this species occurred during the latter part of October. The first rusty blackbird of the season was spotted perched atop a tall tree on 22 September. The first flocks of rusty blackbirds were detected passing overhead on 8 October and small flocks continued to be seen in varying numbers up until mid-November. Common grackles were seen mixed in among the flocks of blackbirds, most frequently in late October. A Brown-headed Cowbird flew overhead on 15 October.

Swifts and Swallows

Purple martins, tree, barn and northern rough-winged swallows were all abundant in September. Purple martin migration was more protracted with the last group of martins seen on 21 September. Barn and northern rough-winged swallows continued to be seen in small numbers into the first week of October. Tree swallows were seen in unusually large numbers well into late October. Tens of thousands of tree swallows could be observed migrating past on 17 October and 24 October. Also, two late tree swallows were noted on 6 November. The first chimney swifts of the season were seen on 6 September with a peak of movement occurring in late September.

Sparrows and Finches

Common redpolls were heard flying overhead on 13 November and 14 November. Snow buntings were first noted on 1 November and continued to move through for the rest of the month. The first American goldfinches and pine siskins of the season passed overhead on 4 October. Small flocks of each continued to fly past into mid-November. The first dark-eyed juncos and white-throated and white-crowned sparrows of the season were noted on 8 October. The first fox sparrow of the season was seen on 25 October. The first American tree sparrow was found on 31 October.

Warblers

A total of 14 species of warblers were detected during the months of September and October including pine, blackpoll, bay-breasted, Tennessee, Cape May, palm, black-throated blue, black-throated green, magnolia, Nashville, black-and-white, chestnut-sided, yellow-rumped and American

redstart. The spruce near the count site was a magnet for Cape May warblers, contributing to multiple sightings. A late adult male black-throated blue warbler was found on 25 October. A late blackpoll warbler was seen on 31 October. A late palm warbler was observed on 21 October. The last yellow-rumped warblers of the season were noted on 20 October.

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Appendix 1.

BV: black vulture (*Coragyps atratus*)
TV: turkey vulture (*Cathartes aura*)
OS: osprey (*Pandion haliaetus*)
BE: bald eagle (*Haliaeetus leucocephalis*)
NH: northern harrier (*Circus cyaneus*)
SS: sharp-shinned hawk (*Accipiter striatus*)
CH: Cooper's hawk (*Accipiter cooperii*)
NG: northern goshawk (*Accipiter gentilis*)
RS: red-shouldered hawk (*Buteo lineatus*)
BW: broad-winged hawk (*Buteo platypterus*)
SW: Swainson's hawk (*Buteo swainsoni*)

RT: red-tailed hawk (*Buteo jamaicensis*)
RL: rough-legged hawk (*Buteo lagopus*)
GE: golden eagle (*Aquila chrysaetos*)
AK: American kestrel (*Falco sparverius*)
ML: merlin (*Falco columbarius*)
PG: peregrine falcon (*Falco peregrinus*)
PR: prairie falcon (*Falco mexicanus*)
SEOW: short-eared owl (*Asio flammeus*)
UNK: unknown raptor species