

# McIntyre Marsh Bird Banding Station Final Report 2013



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The 2013 operation of the McIntyre Marsh Bird Banding Station was made possible due to support from the following organizations.



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Cover Photo: Male Townsend's Warbler banded at McIntyre Marsh on May 10, 2013 (Photo – Ben Schonewille)

The McIntyre Marsh Bird Banding Demonstration Site is a project of the Society of Yukon Bird Observatories (SOYBO; PO Box 30056, Whitehorse, YT, Y1A 5M2). SOYBO was established during 2010 to formalize the operation of the Yukon Bird Observatories. The objectives of SOYBO are: (1) contribute to the conservation of migratory birds in western North America, (2) to make the public aware of the avifauna of the Yukon and educate the public, and, (3) to work with other societies, organizations and individuals with similar objectives. For further information, email – [teslin.bird.banding@gmail.com](mailto:teslin.bird.banding@gmail.com) or visit [www.yukonbirdobservatories.org](http://www.yukonbirdobservatories.org)

## EXECUTIVE SUMMARY

The McIntyre Marsh Bird Banding Demonstration Site completed its fifth consecutive year of spring operation during 2013. The field station operated for a total of 24 days during the spring migration season between April 20 and June 2. The station operates sporadically and does not follow a standardized monitoring protocol as is done at the other Yukon Bird Observatories field stations at Teslin Lake and Albert Creek. A primary objective of the station is to provide a setting for the public to visit and be exposed to the diversity of birds in the Yukon and the methods used to monitor them. The close proximity to downtown Whitehorse makes this possible and serves to attract more visitors than the Teslin Lake and Albert Creek bird observatories which require substantially more travel. The methods used for capturing birds at the site are similar to the protocols used at the other field stations — up to 20 mist nets are used at the site depending on bird activity and availability of qualified personnel. In 2013, mist netting resulted in the capture and banding of 1,434 birds of 44 species. The top 5 species banded during 2013 included the following; White-crowned Sparrow (310), Violet-green Swallow (146), Wilson’s Warbler (135), Myrtle Warbler (133) and Savannah Sparrow (104). The data collected in 2013 (banding and general observations) continued to reinforce the understanding that McIntyre Marsh may be a suitable site to operate a full scale migration monitoring station. In 2013, the station was operated primarily by volunteers with 18 individuals and a total of 264 volunteer hours. The station was successful in attracting high numbers of visitors— overall 411 individuals visited the site, totaling over 800 visitor hours. Included in the visitor totals were 11 school groups from various schools in the Whitehorse area and a group from Copper Ridge Place.

### ACKNOWLEDGEMENTS

The following list summarizes the individuals who played a role in the 2013 operation of the McIntyre Marsh Bird Banding Demonstration Site.

Ben Schonewille.....Bander In Charge, Station Advertising, Data Entry/Analysis/Reporting  
Anne MacLeod.....Report Editing  
Nick Guenette.....Bander in Training

Cameron Eckert (Yukon Environment), Pam Sinclair (Canadian Wildlife Service) and Jukka Jantunen provided advice and assisted with project logistics. Board members of the Society of Yukon Bird Observatories helped administer the Yukon Bird Observatories. Yukon Electrical (Richard Kerr) provided access to the site where the station is located.

The following volunteers assisted with the operation of the observatory: over 10 days – Ben Schonewille, Nick Guenette; 5 to 10 days – Anne MacLeod; less than 5 days – Tami Hamilton, Shanti Morrison, Hilary Cooke, Shailyn Drukis, Barney Smith, Andrea Sidler, Ammanda Partridge, Veronica Huggard, Shyloh van Delft, Lila Touzer, Shayla Hamilton, Bruce Bennett, Bev Hanbidge and Tara Stehelin.

The 2013 operation of the McIntyre Marsh Bird Banding Demonstration Site would not have been possible without the support of the following organizations / groups; Environment Canada (Canadian Wildlife Service), Yukon Environment and EDI Environmental Dynamics Inc. (EDI). In particular, EDI provided two field ornithologists (including the Bander In Charge) to operate the station on a number of weekday mornings to allow for an increased number of school groups to visit the site.

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## 1.0 Introduction

The McIntyre Marsh Bird Banding Demonstration Site operated during the spring migration season in 2013. The station completed its fifth spring season of operation thanks to support from several government and non-government agencies. The station was initiated in the spring of 2009 to provide an easily accessible location for members of the public to receive exposure to migratory birds and the methods used to monitor them.

The goals of the McIntyre Marsh Bird Banding Demonstration Site are to:

- Provide a setting for the public (including school groups) to learn about the Yukon's avifauna and the methods used to monitor songbirds.
- Test the feasibility of operating a bird banding / migration monitoring station at McIntyre Marsh.
- Provide training opportunities for interested members of the public and students.

Bird banding serves as a method of carrying out research on birds which is shared through an international database. This is due to the possibility of a banded bird being recaptured across international borders. Many of the birds banded at McIntyre Marsh are highly migratory spending the winter months as far south as Central and South America. In addition to the potential knowledge regarding band recoveries, the demonstration site also serves to continue gathering baseline data of birds (and their migration) in the southern Yukon. Due to the large landmass of the territory, and the relatively few advanced birders in the Yukon, there is still a great deal to be learned regarding the bird life of the Yukon. Bird banding is a highly valuable research method and a form of monitoring which serves to better understand the distribution of many of the Yukon's bird species, many of which are considered uncommon or rare.

Due to the close proximity to downtown Whitehorse, the demonstration site also plays a role in education as a place where the public, volunteers and students can take part in a unique, community-based research project. Across the Yukon (and the world), there are numerous people who have an interest in birds; however, many find it a daunting task to learn the various species. For such people, a visit to the demonstration site can be extremely rewarding as they often have the opportunity to view a wide variety of bird species up close. Many of these species are very difficult to observe naturally; however, through the use of mist nets, the highly trained individuals working at the demonstration site have the ability to identify these species and allow the public to view them up close.

## 2.0 Methods

As the demonstration site is relatively new, a detailed bird monitoring protocol has not yet been prepared. The primary method of monitoring the movement of birds through the study site is the use of mist nets for the purpose of capturing and banding birds. In 2013, the station operated with up to 20 mist nets (Figure 1), all of which were constructed of 30 mm mesh and were 12 m or 18 m (1 net) in length. New net lanes added during 2013 included nets 9 through 12 on the north side of the marsh. Although mist netting did not always begin at sunrise (which is standard practice for other stations), efforts were made to open the station as early as possible. The number of nets used on a daily basis was determined by a number of factors including bird activity, weather and availability of qualified personnel. Mist nets were checked for birds every 15 to 30 minutes and all birds captured were extracted by qualified individuals. Individual birds were then placed in breathable cloth bags and transported to the central bird processing area.

Once at the processing area, all birds were identified to species and banded with a uniquely numbered leg band. A wide variety of other information was collected from each bird including age, sex, wing length, fat score, breeding condition, banding date/time and the bander's initials. Representative photos were also taken from a portion of the birds processed. The birds were then promptly released after all data was collected.

To supplement the banding data collection, incidental observations were also recorded for birds observed within and/or flying over the site. Using the number of birds banded, recaptured and observed, estimated totals were derived for all species observed on each day of operation.

As the primary goal of the study is to provide opportunities for the public to become involved, the public was encouraged to participate where possible. Extracting and handling of birds requires extensive experience doing so and therefore the public was not able to handle the birds. However, small groups of people were regularly taken on net rounds to allow them to view up close how birds are captured in the mist nets and extracted. The public was also allowed to actively watch the bird processing procedure and frequently asked questions about the birds and the banding process. At times, members of the public also assisted the bander by scribing the data onto the data sheets.

### 2.1 Study Site

The station is located at the area known locally as McIntyre Marsh near the junction of the Copper Haul Road and the Fish Lake Road. McIntyre Creek flows through the marsh which has a wide braided channel with numerous areas of standing water (Figure 1). Vegetation in the area is primarily willow with open areas dominated by various grasses and sedges. A defining characteristic of the site is the presence of standing dead snags within the marsh; these are likely a result of the beaver dam impoundment of the area in the past.



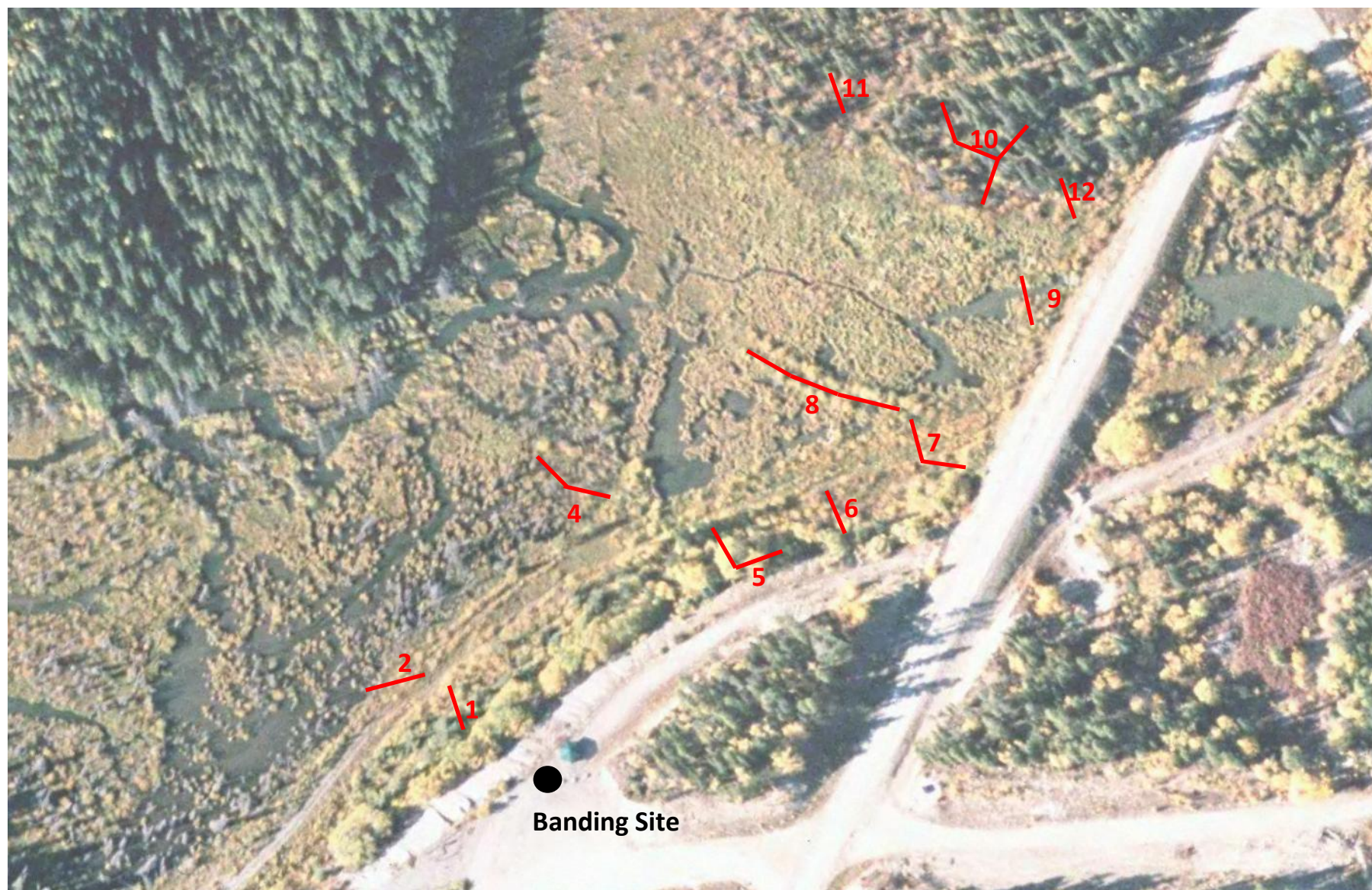


Figure 1. Overview of McIntyre Marsh Bird Banding Station.

### 3.0 Results & Discussion

During 2013, 1,434 birds of 43 species were banded at the McIntyre Marsh Bird Banding Demonstration Site and 82 species were observed within or flying over the site (Tables 1 - 3). The collective total number of birds banded at McIntyre Marsh during the five years of operation is now 6,729 individuals of 62 species (Appendix A). A number of species were banded at the station for the first time during 2013 including: Least Sandpiper, Pectoral Sandpiper, Northern Flicker, Western Wood-Pewee, Warbling Vireo, Gray Jay and Townsend’s Warbler. None of these species are particularly rare in the vicinity of the station and a primary reason for these captures is the placement of new net lanes in different habitat types at the study site.

**Table 1.** Summary statistics of the 2013 spring season at McIntyre Marsh Bird Banding Demonstration Site.

Week	Date	Days Operated		Birds Banded				Total Species Observed
		ETs Only <sup>1</sup>	Mist Netting	#	Species	Net Hours	#/100 Net Hours	
1	20 – 26 Apr	2	0	0	0	0	-	9
2	27 Apr – 3 May	0	1	1	1	24.25	4.1	11
3	4 - 10 May	0	7	562	22	284.25	197.7	50
4	11 - 17 May	0	4	364	26	283.25	128.5	50
5	18 - 24 May	0	5	273	22	348.25	78.4	55
6	25 – 31 May	0	4	219	22	374.50	58.5	47
7	1 – 7 Jun	0	1	15	7	63.0	23.8	39
ALL		2	22	1434	44	1377.50	104.1	82

<sup>1</sup> ETs – Estimated Totals

In comparison to the other Yukon Bird Observatories field stations at Teslin Lake and Albert Creek, the species assemblage of birds banded at McIntyre Marsh is relatively unique. For example, relatively high numbers of swallows are banded at McIntyre Marsh. These species are not often captured at Teslin Lake and Albert Creek because they often fly above the mist nets and are able to avoid the nets due to their agile flight abilities. High numbers of swallows often roost at McIntyre Marsh and if conditions are correct (cool temperatures and/or threatening precipitation) occur, high numbers are often observed flying low over the marsh when they are effectively captured in the mist nets. During 2013, a total of 184 swallows of 4 species were banded (13 % of all birds banded during 2013). Since 2009, a collective total of 835 swallows have been banded accounting for 12 % of all birds banded at the site to date. To provide perspective, a total of 44 swallows have been banded at Teslin Lake and Albert Creek combined (from 2004 to 2013), accounting for a mere 0.07 % of all birds banded at the two stations.

Among the top 20 twenty species banded at McIntyre Marsh during 2013 (Table 3), 16 species were banded in above average numbers with 8 species surpassing the previous high banding totals. The most notable species which were banded in record numbers during 2013 included Violet-green Swallow and Orange-crowned Warbler with 146 and 98 individuals banded, respectively. Among the species not banded in above average numbers during 2013, Slate-colored Junco was the most notable. A total 18 individuals were banded in 2013 compared to the record high of 490 (2012) and the 2009 to 2012 average of 206.

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Table 2. Birds banded at McIntyre Marsh during the spring of 2013.

Common Name	Latin Name	Individuals Banded	
		#	# / 100 Net Hrs
Solitary Sandpiper	<i>Tringa solitaria</i>	1	0.07
Least Sandpiper	<i>Calidris minutilla</i>	1	0.07
Pectoral Sandpiper	<i>Calidris melanotos</i>	2	0.15
Wilson’s Snipe	<i>Gallinago delicata</i>	15	1.09
Northern Flicker	<i>Colaptes auratus</i>	1	0.07
Olive-sided Flycatcher	<i>Contopus cooperi</i>	2	0.15
Western Wood-Pewee	<i>Contopus sordidulus</i>	2	0.15
Alder Flycatcher	<i>Empidonax alnorum</i>	1	0.07
Hammond’s Flycatcher	<i>Empidonax hammondii</i>	7	0.51
Warbling Vireo	<i>Vireo gilvus</i>	1	0.07
Gray Jay	<i>Perisoreus canadensis</i>	4	0.29
Tree Swallow	<i>Tachycineta bicolor</i>	35	2.54
Violet-green Swallow	<i>Tachycineta thalassina</i>	146	10.60
Bank Swallow	<i>Riparia riparia</i>	2	0.15
Barn Swallow	<i>Hirundo rustica</i>	1	0.07
Black-capped Chickadee	<i>Poecile atricapillus</i>	3	0.22
Ruby-crowned Kinglet	<i>Regulus calendula</i>	88	6.39
Hermit Thrush	<i>Catharus guttatus</i>	1	0.07
Gray-cheeked Thrush	<i>Catharus minimus</i>	1	0.07
Swainson’s Thrush	<i>Catharus ustulatus</i>	5	0.36
American Robin	<i>Turdus migratorius</i>	11	0.80
Varied Thrush	<i>Ixoreus naevius</i>	14	1.02
American Pipit	<i>Anthus rubescens</i>	3	0.22
Lapland Longspur	<i>Calcarius lapponicus</i>	2	0.15
Northern Waterthrush	<i>Parkesia noveboracensis</i>	23	1.67
Tennessee Warbler	<i>Oreothlypis peregrina</i>	2	0.15
Orange-crowned Warbler	<i>Oreothlypis celata</i>	98	7.11
Common Yellowthroat	<i>Geothlypis trichas</i>	42	3.05
Yellow Warbler	<i>Setophaga petechia</i>	19	1.38
Blackpoll Warbler	<i>Setophaga striata</i>	30	2.18
Yellow-rumped ‘Myrtle’ Warbler	<i>Setophaga coronata</i>	133	9.66
Townsend’s Warbler	<i>Setophaga townsendi</i>	2	0.15
Wilson’s Warbler	<i>Cardellina pusilla</i>	135	9.80
American Tree Sparrow	<i>Spizella arborea</i>	45	3.27
Chipping Sparrow	<i>Spizella passerina</i>	1	0.07
Savannah Sparrow	<i>Passerculus sandwichensis</i>	104	7.55
Fox Sparrow	<i>Passerella iliaca</i>	4	0.29
Lincoln’s Sparrow	<i>Melospiza lincolnii</i>	59	4.28
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	310	22.50
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	37	2.69
Dark-eyed ‘Slate-colored’ Junco	<i>Junco hyemalis</i>	18	1.31
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	2	0.15
Rusty Blackbird	<i>Euphagus carolinus</i>	4	0.29
Common Redpoll	<i>Acanthis flammea</i>	17	1.23
<b>TOTAL</b>		<b>1434</b>	<b>104.10</b>

**Table 3.** The 20 most common bird species banded in 2013, and comparison to 2008–2012 banding totals (numbers in brackets indicate the annual ranking in birds banded. Note that net hour effort has ranged from 1,400 to 1,700 between 2009 and 2013 with the exception of lower than average during 2011 (980 net hours).

Species	2013	2012	2011	2010	2009	2009–2012 Average
White-crowned Sparrow	310 (1)	620 (1)	4 (17)	342 (1)	113 (1)	270
Violet-green Swallow	146 (2)	116 (7)	36 (4)	22 (13)	103 (2)	69
Wilson’s Warbler	135 (3)	174 (5)	57 (2)	144 (4)	57 (8)	108
Myrtle Warbler	146 (4)	179 (4)	54 (3)	212 (3)	70 (5)	129
Savannah Sparrow	104 (5)	43 (10)	10 (12)	83 (6)	58 (7)	49
Orange-crowned Warbler	98 (6)	25 (14)	20 (7)	16 (14)	9 (15)	18
Ruby-crowned Kinglet	88 (7)	64 (8)	15 (9)	25 (12)	5 (23)	27
Lincoln’s Sparrow	59 (8)	55 (9)	12 (11)	75 (7)	25 (12)	42
American Tree Sparrow	45 (9)	151 (6)	3 (19)	75 (8)	63 (6)	73
Common Yellowthroat	42 (10)	27 (13)	21 (6)	53 (9)	26 (11)	32
Golden-crowned Sparrow	37 (11)	33 (11)	1 (26)	34 (10)	18 (14)	22
Tree Swallow	35 (12)	235 (3)	18 (8)	1 (31)	89 (3)	86
Blackpoll Warbler	30 (13)	10 (18)	14 (10)	5 (23)	0 (-)	7
Northern Waterthrush	23 (14)	6 (25)	7 (15)	16 (15)	8 (17)	9
Yellow Warbler	19 (15)	23 (15)	27 (5)	8 (18)	3 (28)	15
Slate-colored Junco	18 (16)	490 (2)	9 (13)	247 (2)	77 (4)	206
Common Redpoll	17 (17)	1 (30)	97 (1)	33 (11)	31 (10)	41
Wilson’s Snipe	15 (18)	5 (26)	2 (21)	8 (19)	5 (24)	5
Varied Thrush	14 (19)	15 (16)	0 (-)	2 (29)	0 (-)	4
American Robin	11 (20)	11 (17)	0 (-)	15 (16)	6 (21)	8

Weather conditions largely influence the activities at the banding station, particularly the effectiveness of the mist nets due to cold temperatures and/or windy conditions. The weather during the spring of 2013 indicated a relatively late spring as confirmed by the below freezing temperatures during the first two weeks of operation (Table 4); however, the weather conditions did not drastically influence the banding stations activities during 2013.

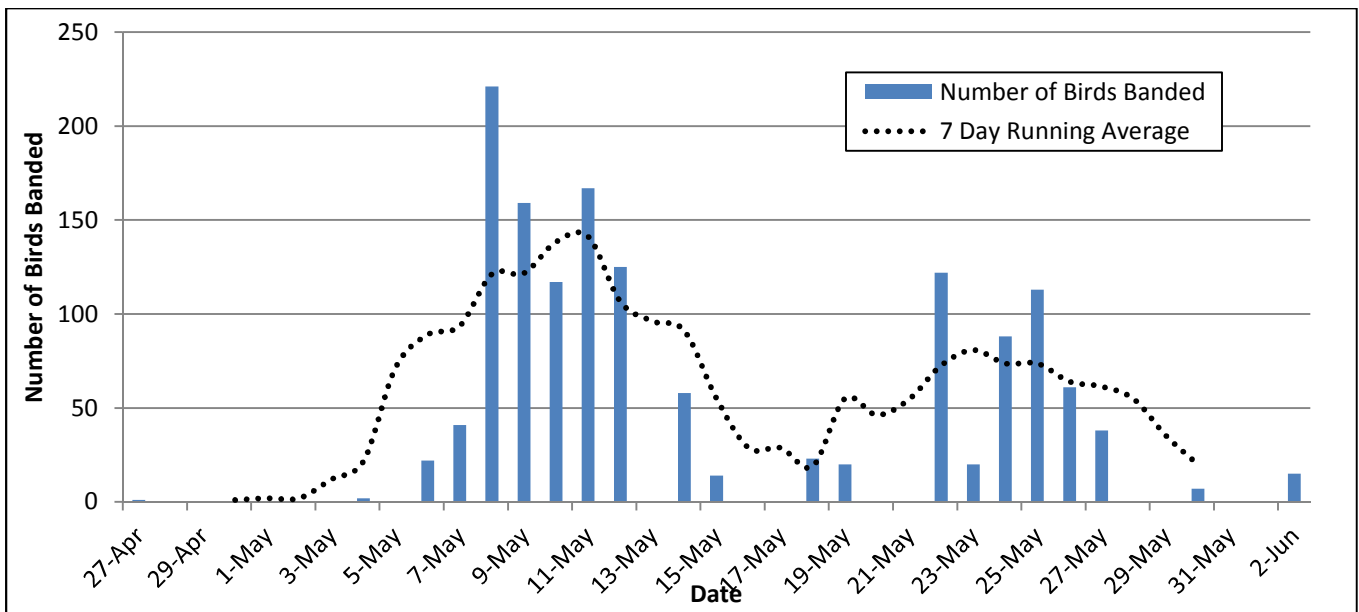
**Table 4.** Summary of weather conditions at McIntyre Marsh during 2013.

Weather Parameter	Week						
	1	2	3	4	5	6	7
Average Opening Temperature	-2.5	-7	1.3	4.5	2.2	5.5	6.0
Average Closing Temperature	3.5	-1	10.7	11.0	10.0	21.0	20.0
Average Opening Wind	0.0	0.0	1.3	1.0	1.3	0.5	0
Average Closing Wind	0.5	1.0	1.5	2.4	0.8	1.3	2
Days with Rain	0	0	0	1	1	0	0
Days with Snow	0	0	1	0	0	0	0

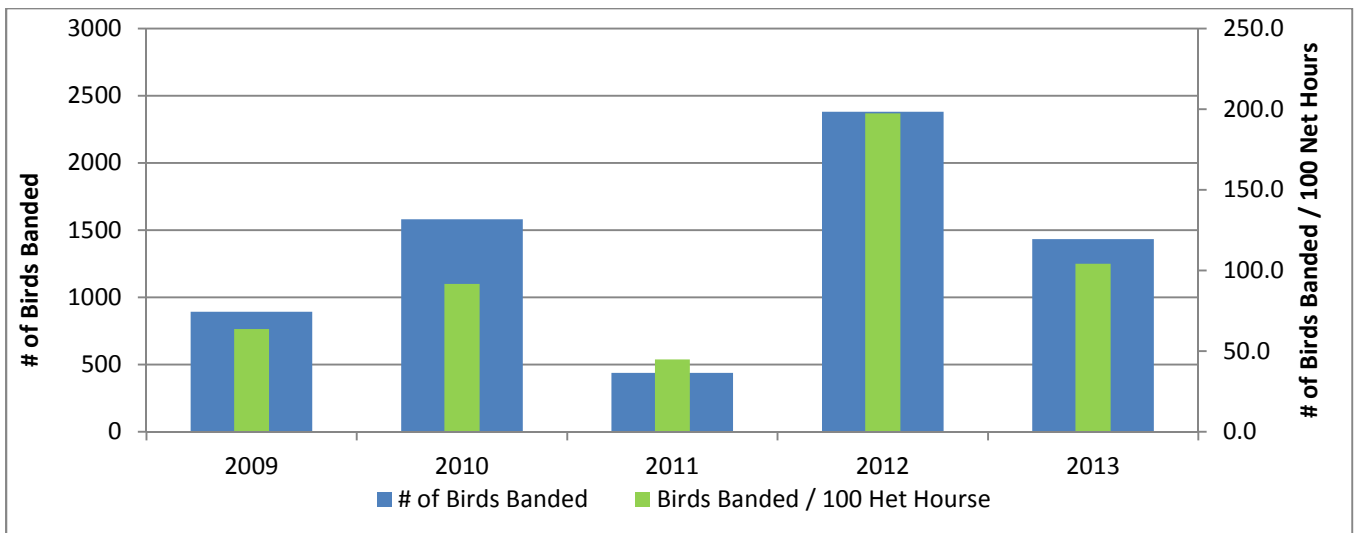
The 2013 spring season included 22 days of mist netting effort between April 27 and June 2. The highest daily banding totals occurred from May 8 to 12 and also on the 22 and 26 (Figure 2). The first peak in birds banded was due largely to the high numbers of White-crowned Sparrows banded although captures of Violet-green Swallow, Ruby-crowned Kinglet, Myrtle Warbler and Savannah Sparrow also contributed to high banding totals during this period. Also of note, the daily banding total of 221 birds on May 8 only required 21.5 mist net hours. The number of birds in the marsh on

this data was so high that only 2 sets of mist nets could be operated due to bird safety concerns. The second peak in daily banding totals occurred on May 22 and 26 when 122 and 61 birds were banded, respectively. The species composition of the banding totals constituted a variety of swallows, warblers and sparrows contributed to the banding today's.

The overall number of birds banded at McIntyre Marsh during 2013 was near average compared to previous years both in terms of cumulative banding totals and birds banded per 100 net hours. It is important to note that the birds/100 net hours at McIntyre Marsh are very high in comparison to most other bird banding stations. For example, the spring birds/100 net hours at the Albert Creek Bird Observatory near Watson Lake averages 57.1 birds/100 net hours. This compares to the McIntyre Marsh average of 100.4 birds/100 net hours.



**Figure 2.** Summary of birds banded per day at McIntyre Marsh during the spring 2013. Note mist netting was not conducted on a number of days including: April 29 - May 3, May 5, 13, 16, 17, 20, 21, 28, 29, 31 and June 1.



**Figure 3.** Summary of birds banded at McIntyre Marsh from 2009 to 2013.

The productivity of individual mist nets can provide information on which habitats within the study site are used more extensively by birds (Figure 4). However, with McIntyre Marsh operated primarily by volunteers, there is often insufficient qualified personnel onsite to operation all mist nets to their full extent. Net 8 had the highest capture rate during 2013. This particular net is a string of three mist nets placed end to end along a rudimentary walkway directly out into the marsh. The top of the mist net nearly reaches the maximum height of the adjacent shrubs and therefore, this particular net is very effective at catching birds. During times when insufficient personnel are onsite, this is often the primary mist net used due to the high species diversity captured by this net. A feeder located adjacent to net 5 influenced the capture rate of this net, particularly early in the season when high numbers of White-crowned Sparrow were captured. Net 9 is located along a walkway across the creek directly downstream of the Fish Lake Road; the close proximity to the creek often results in the capture of species banded infrequently at the station such as shorebirds. Net 10 on the north side of the marsh would have undoubtedly had a higher capture rate if used throughout the season. During the early part of the season this net was not used due to the high number of birds in the area and the walking distance from the central banding area. When used extensively in the last two weeks of May, net 10 was relatively effective in the capture of warblers.

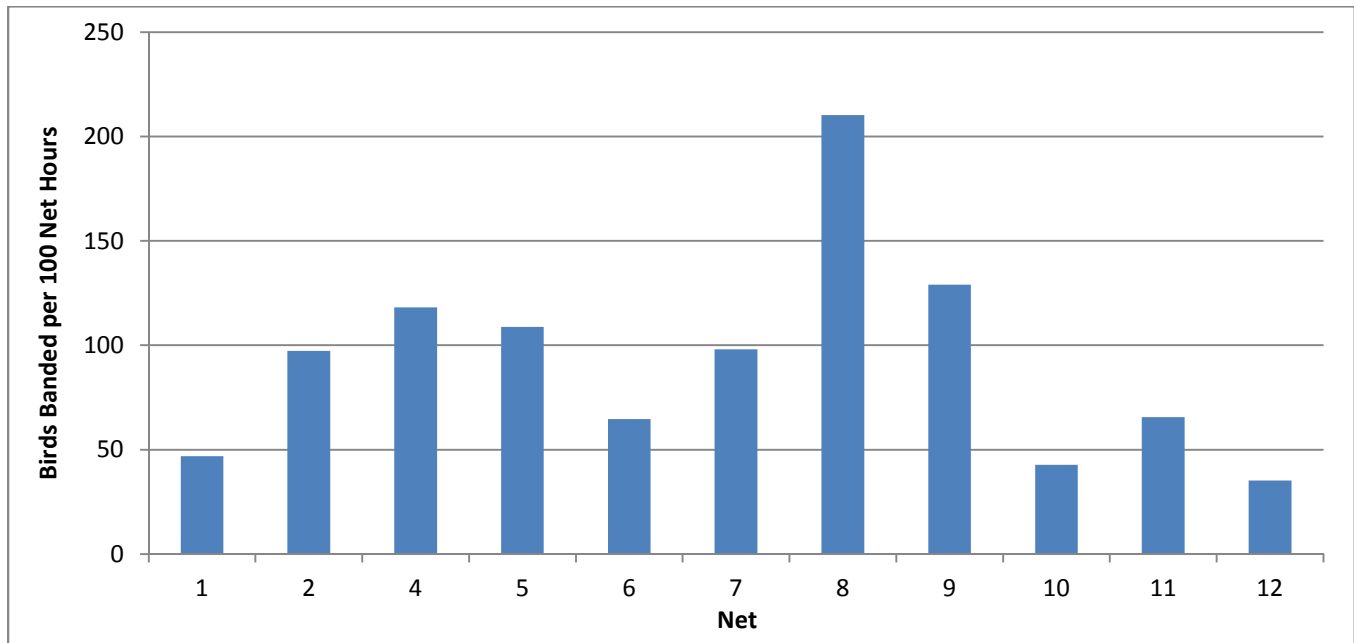


Figure 4. Number of birds banded per mist net at McIntyre Marsh during 2013.

### 3.1 Migration Timing

Generalized migration timing for temperate, neotropical and irruptive migrants/residents during the spring of 2013 is presented in Figure 5<sup>1</sup>. In spring, there is a notable difference in migration timing between temperate and neotropical migrants, with the latter typically arriving later in the season. This is presumably due to a number of factors including diet (most neotropical migrants are insect eaters as compared to seed eaters) and distance required for migration (temperate migrants winter closer). Comparison of the generalized migration timing by species group during 2012 and 2013 indicates that the timing of migration in 2013 was relatively late, particularly for temperate migrants.

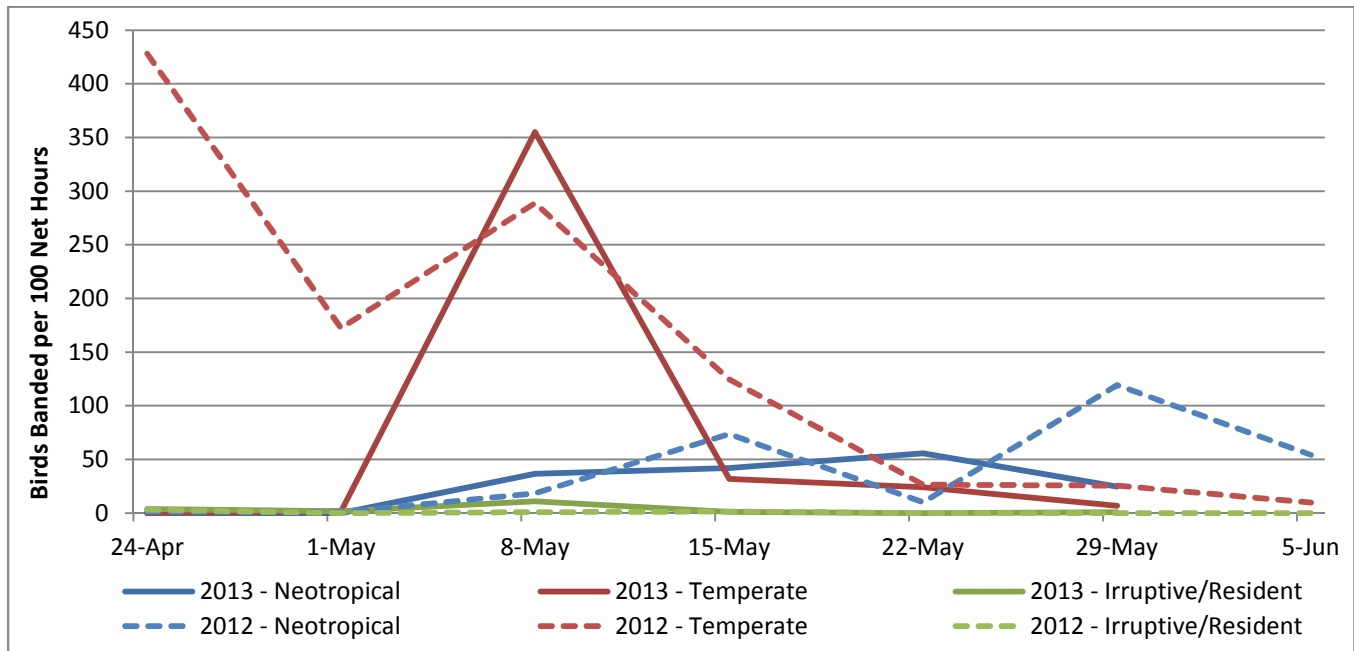


Figure 5. Generalized migration timing for species groups at McIntyre Marsh during the spring of 2013.

For species which are encountered regularly during spring migration, it is possible to investigate arrival dates between years through a combination of available banding and general observation data (Table 5). Most species show a high degree of consistency in arrival dates between years; however, there is a small degree of variation which is likely a result of varying weather conditions between years. With McIntyre Marsh not operating daily during the migration period, it is difficult to make comparisons in arrival dates between years. However, there is still some utility in making such comparisons; for example, Yellow-rumped Warbler arrived 9 days later than average during 2013.

<sup>1</sup> Temperate migrants are species which primarily overwinter in the temperate zone of North America (i.e., north of Mexico). Neotropical migrants include species which overwinter in the tropics (i.e., south of the USA). Irruptive migrants/residents are those species which migrate irregularly or may be year round residents in the Yukon.

**Table 5.** Arrival dates for common species at McIntyre Marsh from 2009 to 2013.

Species	Spring Arrival Dates					
	2013	2012	2011	2010	2009	2009 – 2012
Station Opening Date	27 April	20 April	22 April	18 April	18 April	Average
Solitary Sandpiper	8 May	4 May	14 May	10 May	9 May	9 May
Lesser Yellowlegs	4 May	5 May	5 May	28 April	3 May	2 May
Hammond’s Flycatcher	6 May	6 May	5 May	24 April	2 May	1 May
Swainson’s Thrush	22 May	26 May	24 May	21 May	27 May	24 May
Orange-crowned Warbler	11 May	2 May	14 May	1 May	12 May	7 May
Yellow Warbler	23 May	26 May	22 May	18 May	24 May	22 May
Yellow-rumped Warbler	5 May	20 Apr	30 Apr	24 April	2 May	26 Apr
Blackpoll Warbler	22 May	20 May	22 May	20 May	27 May	22 May
Northern Waterthrush	22 May	15 May	15 May	18 May	13 May	15 May
Common Yellowthroat	23 May	26 May	22 May	18 May	23 May	22 May
Wilson’s Warbler	7 May	14 May	14 May	8 May	3 May	9 May
Savannah Sparrow	6 May	4 May	14 May	28 April	2 May	4 May
Fox Sparrow	8 May	20 Apr	15 May	23 April	3 May	30 Apr
Lincoln’s Sparrow	6 May	20 Apr	1 May	24 April	2 May	26 Apr
White-crowned Sparrow	5 May	20 Apr	2 May	23 April	2 May	26 Apr
Golden-crowned Sparrow	5 May	28 Apr	14 May	24 April	2 May	2 May
Lapland Longspur	8 May	28 Apr	14 May	1 May	18 April	30 Apr
Red-winged Blackbird	8 May	12 May	1 May	2 May	2 May	4 May
Rusty Blackbird	8 May	24 Apr	1 May	23 April	2 May	27 Apr

### 3.2 Band Returns & Recoveries

Band returns (individuals banded at the site in previous years) typically represent individuals that breed within the study site as the likelihood of re-trapping migrants is relatively low. During 2013, the station had 18 band returns representing 11 species (Table 6). As the station is relatively new, all band returns were of birds banded at the site during 2009, 2010, 2011 and 2012. Species very well represented in the band returns provide an indication of the breeding birds at McIntyre Marsh; Common Yellowthroat, and Myrtle Warbler are among the most common breeding bird species within and adjacent to the study site.



**Table 6.** Band returns at McIntyre Marsh during the spring of 2013.

Species	Band Number	Banded		Recaptured
		Date	Age – Sex	Date
Tree Swallow	2511-93050	1 Jun 2012	AHY – U	15 May 2013
Violet-green Swallow	2610-64319	11 May 2010	AHY – M	8 May 2013
Black-capped Chickadee	2610-92946	22 Apr 2012	SY – U	27 Apr 2013
Boreal Chickadee	2610-91785	24 Apr 2011	AHY – U	6 May 2013
Boreal Chickadee	2610-91796	25 Apr 2011	SY – M	11 May 2013
Ruby-crowned Kinglet	2570-10787	29 Apr 2012	ASY – M	12 May 2013
American Robin	1212-58377	26 May 2012	ASY – M	9 May 2013
Yellow Warbler	2610-63447	31 May 2012	AHY – M	25 May 2013
Myrtle Warbler	2610-64482	24 May 2010	SY – F	12 May 2013
Myrtle Warbler	2610-63361	26 May 2012	ASY – M	10 May 2013
Myrtle Warbler	2610-63450	31 May 2012	ASY – M	24 May 2013
Myrtle Warbler	2610-63529	3 Jun 2012	ASY – M	12 May 2013
Common Yellowthroat	2610-63353	26 May 2012	ASY – M	26 May 2013
Common Yellowthroat	2610-63367	27 May 2012	AHY – M	26 May 2013
Common Yellowthroat	2610-63522	2 Jun 2012	AHY – F	26 May 2013
Wilson’s Warbler	2550-75615	3 Jun 2012	ASY – M	25 May 2013
Slate-colored Junco	2401-65034	23 May 2011	SY – F	23 May 2013
Slate-colored Junco	2511-90315	29 May 2012	SY – M	25 May 2013

Long distance (foreign) band recoveries are those where a bird banded at the station is recaptured or recovered in another location or vice versa; to date, there have been three such recoveries of birds banded at McIntyre Marsh as outlined below.

- A Yellow-rumped “Myrtle” Warbler banded in Portland, Oregon in March 2008 was recaptured at McIntyre Marsh on May 4, 2009.
- An American Green-winged Teal banded at McIntyre Marsh on May 14, 2009 was shot by a hunter near Los Banos, California on October 28, 2009.
- A Yellow-rumped “Myrtle” Warbler banded at the Teslin Lake Bird Observatory near Teslin, YT on September 7, 2010 was recaptured at McIntyre Marsh on May 25, 2013.

### 3.3 Visitors and Volunteers

The banding station was very successful in attracting visitors during 2013, in total 411 different individuals visited the site and totaled over 800 visitor hours (Table 7). Included in the visitor totals were 10 school groups from the Whitehorse area and a group from Copper Ridge Place who visited the site. These visitor numbers are slightly higher than during 2012 due to the increased advertising of the project and the increased number of school groups hosted at the station. Overall, these visitor rates are very high as compared to the Teslin Lake and Albert Creek bird observatories which typically total 100 to 150 visitor hours per year.

**Table 7.** Summary of paid, volunteer and visitor hours at McIntyre Marsh during 2013.

Paid		Volunteers		Visitors	
# of Individuals	Hours	# of Individuals	Hours	# of Individuals	Hours
7	68	18	263.75	411	801.25

During 2013, the operation of the demonstration site was completed primarily by volunteers. Aside from providing visitor opportunities, the station also provides an opportunity for volunteer involvement. Individuals willing to attend the station on a number of occasions have the opportunity to receive training in the techniques used to capture and band birds (under the supervision of permitted/qualified individuals). Note that the paid individuals who operated the station were a result of a partnership with EDI Environmental Dynamics Inc. who provided two staff biologists (including the Bander In Charge) to operate the station on 7 weekday mornings to host local school groups.

The Society of Yukon Bird Observatories has begun to use social media to promote the field stations (including McIntyre Marsh) by providing regular station updates and photos of birds banded and observed. A Facebook group page (Yukon Bird Observatories) now has 196 members and the society’s new website ([www.yukonbirdobservatories.org](http://www.yukonbirdobservatories.org)) had 923 page views by 152 unique visitors during May 2013 including 74 page views on the McIntyre Marsh project page.

## 4.0 Conclusion & Recommendations

The bird monitoring data collected at the demonstration site have continued to reinforce the belief that McIntyre Marsh is an important stopover and breeding habitat for migratory birds within the City of Whitehorse. The productive marsh environment and diversity of nearby environments provide suitable habitat for a high diversity of birds. Although the total number of birds banded is less than that of the Teslin Lake and Albert Creek bird observatories, these results are not directly comparable. McIntyre Marsh operates with far fewer mist nets and is not open on a daily basis. If the protocols in place at Teslin Lake and Albert Creek were to be mimicked at McIntyre Marsh, the number and diversity of birds banded would likely increase substantially.

The number of visitors and total visit hours totaled at the site in 2013 are representative of the value of the banding station as a public education opportunity. Individuals who visit the site leave with an increased understanding of the Yukon's bird life and a level of environmental stewardship which has a positive effect well beyond the conservation of birds. For children who visit the site, having the opportunity to see songbirds "up close and personal" often has a lasting effect and may lead to a future appreciation of not only birds, but our natural surroundings as a whole.

For 2014, it is hoped that adequate personnel and resources can once again be made available for the operation of the banding station during the spring migration season. If possible, it would be advantageous to operate the station on more days during the migration period to boost the number of visitors and school groups which may visit the site. More extensive coverage would also increase the utility of the bird monitoring data collected. Efforts should also be made to include some sort of standardized monitoring protocol for the station. This may include the collection of observations outside of the immediate mist netting area through methods such as a fixed duration census route or point count locations.

## Appendix A – Species Checklist

**Table A1.** Summary of birds banded and observed at McIntyre Marsh from 2009 to 2012.

Species	Banded / Observed					TOTAL BANDED (2009 - 2013)
	2009	2010	2011	2012	2013	
Horned Grebe		✓				
Common Loon				✓		
Greater White-fronted Goose	✓			✓	✓	
Canada Goose	✓	✓	✓	✓	✓	
Trumpeter Swan	✓		✓	✓	✓	
Tundra Swan	✓		✓	✓	✓	
American Wigeon	✓	✓	✓	✓	✓	
Mallard	✓	1	✓	✓	✓	1
Gadwall	✓					
Northern Shoveler		✓	✓	✓	✓	
Northern Pintail	✓	✓		✓	✓	
American Green-winged Teal	4	✓	✓	✓	✓	4
Blue-winged Teal			✓	✓		
Lesser Scaup				✓		
Bufflehead	✓		✓	✓		
Common Goldeneye	✓	✓				
Barrow's Goldeneye	✓	✓	✓	✓	✓	
Osprey	✓			✓		
Bald Eagle	✓	✓	✓	✓	✓	
Northern Harrier	✓	✓	✓	1	✓	1
Sharp-shinned Hawk	1	3	✓	1	✓	5
Northern Goshawk	✓		✓		✓	
Red-tailed Hawk	✓	✓	✓	✓	✓	
Rough-legged Hawk	✓		✓			
Golden Eagle			✓			
American Kestrel		✓		✓	✓	
Merlin	✓		✓	✓	✓	
Peregrine Falcon				✓		
Ruffed Grouse		✓		✓		
Semi-palmated Plover	✓		✓			
Greater Yellowlegs					✓	
Lesser Yellowlegs	1	✓	✓	✓	✓	1
Solitary Sandpiper	7	7	6	7	1	28
Spotted Sandpiper		1	✓		✓	1
Semi-palmated Sandpiper	✓					
Long-billed Dowitcher				✓	✓	
Least Sandpiper					1	1
Pectoral Sandpiper	✓		✓	✓	2	2
Upland Sandpiper				✓		
Wilson's Snipe	5	8	2	5	15	35

Species	Banded / Observed					TOTAL BANDED (2009 - 2013)
	2009	2010	2011	2012	2013	
Bonaparte's Gull	✓		✓	✓	✓	
Mew Gull	✓	✓	✓	✓	✓	
Herring Gull	✓	✓	✓	✓	✓	
Arctic Tern					✓	
Great Horned Owl	✓			✓	✓	
Boreal Owl			✓			
Belted Kingfisher	1	1	1	✓	✓	3
Yellow-bellied Sapsucker				✓	✓	
Hairy Woodpecker	✓	✓				
American Three-toed Woodpecker		✓	✓			
Northern Flicker	✓	✓	✓	✓	1	1
Olive-sided Flycatcher	✓	1	2	✓	2	5
Western Wood-Pewee	✓			✓	2	2
Alder Flycatcher		✓	3	8	1	12
Yellow-bellied Flycatcher				✓		
Hammond's Flycatcher	✓	6	✓	3	7	16
Say's Phoebe	✓		✓	1	✓	1
Northern Shrike	1					1
Warbling Vireo					1	1
Gray Jay	✓	✓	✓	✓	4	4
Black-billed Magpie	✓	✓	✓	✓	✓	
Common Raven	✓	✓	✓	✓	✓	
Tree Swallow	89	1	18	235	35	378
Violet-green Swallow	103	22	36	116	146	423
Bank Swallow	✓	✓	✓	30	2	32
Cliff Swallow	✓	✓	✓		✓	
Barn Swallow	✓	✓		1	1	2
Black-capped Chickadee	8	4	2	7	3	24
Mountain Chickadee	2					2
Boreal Chickadee	9	1	9	1	✓	20
Red-breasted Nuthatch			✓		✓	
Golden-crowned Kinglet		✓	✓	✓		
Ruby-crowned Kinglet	5	25	15	64	88	197
Townsend's Solitaire						
Gray-cheeked Thrush		✓	1	1	1	3
Swainson's Thrush	1	3		3	5	12
Hermit Thrush				1	1	2
American Robin	6	15	✓	11	11	43
Varied Thrush	✓	2	✓	15	14	31
American Pipit	4	6	✓	10	3	23
Bohemian Waxwing	✓	✓	✓	✓	✓	

Species	Banded / Observed					TOTAL BANDED (2009 - 2013)
	2009	2010	2011	2012	2013	
Tennessee Warbler		2	✓	1	2	5
Orange-crowned Warbler	9	16	20	25	98	168
Yellow Warbler	3	8	27	23	19	80
Yellow-rumped 'Myrtle' Warbler	70	212	54	179	133	648
Yellow -rumper 'Integrade' Warbler	2			1		3
Townsend's Warbler			✓	✓	2	2
Blackpoll Warbler		5	14	10	30	59
Northern Waterthrush	8	16	7	6	23	60
American Redstart				✓		
Common Yellowthroat	26	53	21	27	42	169
Wilson's Warbler	57	144	57	174	135	567
Song Sparrow			1			1
Lapland Longspur	39	1	✓	✓	2	42
American Tree Sparrow	63	75	3	151	45	337
Chipping Sparrow		5	✓	8	1	14
Savannah Sparrow	58	83	10	43	104	298
Fox Sparrow	6	109	✓	7	4	126
Lincoln's Sparrow	25	75	12	55	59	226
White-crowned Sparrow	113	342	4	620	310	1,389
Golden-crowned Sparrow	18	34	1	33	37	123
Dark-eyed 'Slate-colored' Junco	77	247	9	490	18	841
Dark-eyed 'Oregon' Junco				1		1
Rusty Blackbird	25	11	2	1	4	43
Red-winged Blackbird	5	3	2	1	2	13
Brown-headed Cowbird			✓		✓	
Purple Finch	1			3	✓	4
Red Crossbill	✓		✓			
White-winged Crossbill	✓		4		✓	4
Common Redpoll	31	33	97	1	17	79
Hoary Redpoll		1				1
Pine Siskin	3	✓	✓	✓	✓	3
TOTAL BIRDS BANDED	886	1,582	440	2,381	1,434	5,295
TOTAL SPECIES BANDED	36	38	29	42	44	54

## Appendix B – Daily Species Total Summary



**Table B1.** Summary of McIntyre Marsh daily species total (DST) data during the spring of 2013.

Species	# of Days	# of Bird Days	First Date	Last Date	High Count	
Greater White-fronted Goose	1	202	27-Apr	-	202	27-Apr
Canada Goose	2	8	27-Apr	4-May	6	27-Apr
Trumpeter Swan	12	89	20-Apr	12-May	22	4-May
Tundra Swan	3	26	4-May	6-May	12	4-May
American Wigeon	11	208	4-May	24-May	95	8-May
Mallard	24	307	20-Apr	2-Jun	25	4-May
Northern Shoveler	7	19	11-May	23-May	4	14, 15 May
Northern Pintail	2	45	6-May	22-May	44	6-May
American Green-winged Teal	22	238	27-Apr	2-Jun	38	6-May
Barrow's Goldeneye	22	94	27-Apr	2-Jun	16	5-May
American Kestrel	1	1	5-May	-	1	5-May
Bald Eagle	24	96	20-Apr	2-Jun	8	4-May
Northern Harrier	8	25	4-May	22-May	10	6-May
Sharp-shinned Hawk	6	6	6-May	12-May	1	all days
Northern Goshawk	1	1	14-May	-	1	14-May
Red-tailed Hawk	4	6	20-Apr	6-May	3	20-Apr
Merlin	1	1	2-Jun	-	1	2-Jun
Greater Yellowlegs	1	1	6-May	-	1	6-May
Lesser Yellowlegs	20	47	4-May	2-Jun	5	8-May
Solitary Sandpiper	13	30	8-May	2-Jun	6	9-May
Spotted Sandpiper	7	7	22-May	2-Jun	1	all days
Least Sandpiper	6	16	11-May	25-May	4	12-May
Pectoral Sandpiper	5	18	22-May	26-May	6	22, 24 May
Long-billed Dowitcher	1	1	22-May	-	1	22-May
Wilson's Snipe	21	209	4-May	2-Jun	21	6-May
Mew Gull	5	11	5-May	23-May	3	14-May
Herring Gull	19	165	4-May	2-Jun	29	26-May
Bonaparte's Gull	7	12	7-May	27-May	4	14-May
Arctic Tern	1	2	26-May	-	2	26-May
Great Horned Owl	1	1	2-Jun	-	1	2-Jun
Belted Kingfisher	15	17	7-May	2-Jun	2	27, 30 May
Yellow-bellied Sapsucker	1	1	22-May	-	1	22-May
Northern Flicker	9	12	10-May	2-Jun	2	many days
Olive-sided Flycatcher	1	2	12-May	-	2	12-May
Western Wood-Pewee	2	2	12-May	14-May	1	both days
Alder Flycatcher	1	1	25-May	-	1	25-May
Hammond's Flycatcher	8	10	6-May	14-May	2	11, 12 May
Say's Phoebe	1	1	11-May	-	1	11-May
Gray Jay	4	11	11-May	27-May	4	26, 27 May
Black-billed Magpie	2	2	20-Apr	14-May	1	both days
Common Raven	23	145	20-Apr	2-Jun	18	4-May
Tree Swallow	19	358	6-May	2-Jun	60	23-May

Species	# of Days	# of Bird Days	First Date	Last Date	High Count	
Violet-green Swallow	19	693	6-May	2-Jun	130	12-May
Bank Swallow	6	49	22-May	2-Jun	25	2-Jun
Cliff Swallow	5	26	22-May	2-Jun	6	22, 23 May
Barn Swallow	4	4	8-May	14-May	1	all days
Black-capped Chickadee	20	30	20-Apr	27-May	4	6-May
Boreal Chickadee	11	14	27-Apr	26-May	2	many days
Red-breasted Nuthatch	5	5	8-May	18-May	1	all days
Ruby-crowned Kinglet	24	162	20-Apr	2-Jun	35	9-May
Gray-cheeked Thrush	2	2	24-May	2-Jun	1	both days
Swainson's Thrush	7	17	22-May	2-Jun	4	25, 26 May
Hermit Thrush	2	2	5-May	12-May	1	both days
American Robin	21	120	4-May	2-Jun	8	many days
Varied Thrush	20	96	4-May	2-Jun	19	6-May
American Pipit	8	40	4-May	14-May	8	4-May
Bohemian Waxwing	4	11	4-May	2-Jun	5	14-May
Lapland Longspur	4	75	8-May	11-May	45	9-May
Tennessee Warbler	3	4	25-May	27-May	2	26-May
Orange-crowned Warbler	14	153	11-May	2-Jun	45	24, 25 May
Yellow Warbler	7	50	23-May	2-Jun	18	25-May
Myrtle Warbler	20	274	5-May	2-Jun	27	6-May
Townsend's Warbler	3	4	10-May	23-May	2	10-May
Blackpoll Warbler	7	41	22-May	2-Jun	9	25, 27 May
Northern Waterthrush	8	40	22-May	2-Jun	8	26-May
Common Yellowthroat	7	85	23-May	2-Jun	22	27-May
Wilson's Warbler	18	190	7-May	2-Jun	30	11-May
American Tree Sparrow	9	66	6-May	25-May	26	8-May
Chipping Sparrow	7	12	23-May	2-Jun	4	2-Jun
Savannah Sparrow	19	190	6-May	2-Jun	45	8-May
Fox Sparrow	5	15	8-May	14-May	4	8-May
Lincoln's Sparrow	19	133	6-May	2-Jun	16	8-May
White-crowned Sparrow	15	880	5-May	26-May	328	8-May
Golden-crowned Sparrow	10	71	5-May	22-May	17	11-May
Slate-colored Junco	18	77	6-May	2-Jun	6	11, 14 May
Red-winged Blackbird	12	38	8-May	2-Jun	6	26-May
Rusty Blackbird	15	49	8-May	2-Jun	11-Jan	14-May
Brown-headed Cowbird	1	1	22-May	-	1	22-May
Purple Finch	4	4	11-May	2-Jun	1	all days
Pine Siskin	6	34	24-May	2-Jun	8	2-Jun
Common Redpoll	10	239	20-Apr	11-May	132	8-May
White-winged Crossbill	1	1	23-May	-	14	23-May