

Annexe G

TCI Renewables

**Status Report
Preliminary Version**

**Pre-Assessment of Environmental Impact on Bird Fauna,
St-Blaise/St-Valentin Wind Farm Project,
Fall Migration Survey**

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1 Introduction and Problematic

Although qualified as environmentally friendly, wind energy industry has the potential to cause fatalities to birds and bats. Negative impacts on birds may be induced by habitat lost or by collision with wind turbines. In order to integrate environmental factors into the planning of the construction of wind farms, both federal and provincial governments request assessments on bird fauna. Those assessments allow minimization of adverse environmental impacts. In fall of 2006, Enviro Science Inc conducted various surveys in order to gather baseline information concerning bird use of the site during fall migration.

The study conducted aims at gathering information on migrating birds that might travel through or use the site proposed for construction of a wind farm. It is important to estimate migrating birds of prey use of the selected site throughout fall since this particular group of birds, managed under provincial government authorities, is one of the most affected by wind farms.

Additionally, we want to assess the number of birds flying through the selected area during fall migration. Birds mainly concern in this case are songbirds and waterfowl. The proximity of the Richelieu River to the studied site suggests that waterfowl may use the area abundantly.

Although the main habitat of the site selected is cultivated fields, there are a few isolated woodlots. Some birds, during migration, might use this kind of habitat as a stopover. It is important to make a quantitative evaluation of those birds.

Fall migration is an important period to evaluate bird use of a site; however, it is possible that wind turbines affect birds even in winter time. For that reason, surveys to evaluate quantitatively the presence of over wintering birds could be conducted. Spring migration as and breeding season are two other important periods and they should also be surveyed in order to have a complete picture of the birds life cycle and its implication with wind turbine farm development. Those periods will be surveyed in further studies.

Based on those elements, the study has three different objectives

For migrating birds (federal jurisdiction)

1. Assess the number of birds flying through the selected area during fall migration (songbirds and waterfowl)
2. Evaluate quantitatively the stopover use by birds of the selected site

For birds of prey (provincial jurisdiction)

3. Estimate migrating birds of prey use of the selected site throughout fall

Although a fourth objective was stated in the pre-assessment protocol suggested, it has been abandoned following suggestion by federal government biologists. We planned to conduct over wintering surveys but instead, time scheduled to complete this objective was devoted to the second objective, which was thought to be more important.

2 Material and Methods

Methods used for this study are based on documents produced by federal and provincial authorities (Environment Canada 2006a and b, Maisonneuve *et al.* 2006).

2.1 Studied Territory

The development of a wind farm is planned in the Montérégie in Québec province, Canada. The study site originally selected corresponds to the territory of St-Blaise and St-Valentin municipalities in the Haut-Richelieu MRC (Figure 1). Those municipalities are located west of the Richelieu River. The territory is mainly use for agriculture, especially for corn and soy cropping. Small fragments of forests are located North of the territory as well as in between the two municipalities. A few streams are present in the territory but there are no large water plan or wetland. Important habitat for birds in the area includes the Richelieu River and its Bleury Bay, the South River and the Swanton Reserve in Vermont. The construction of 25 wind turbines is now planned in three different sectors in the St-Valentin municipality only (Figure 1)

2.2 Location of observation points

For the birds of prey survey as well as for the passage migration count, six (6) points have been chosen throughout the site in order to conduct observation. The location of the points has been selected in order to cover most of the territory and to offer a good view. In order to carry stopover counts, two transects of 150m have been located in two different woodlots (Figure 2).

Figure 1 Map of the Site Selected for Wind Farm Project Including the Three Sectors Where the Wind Turbines are Projected

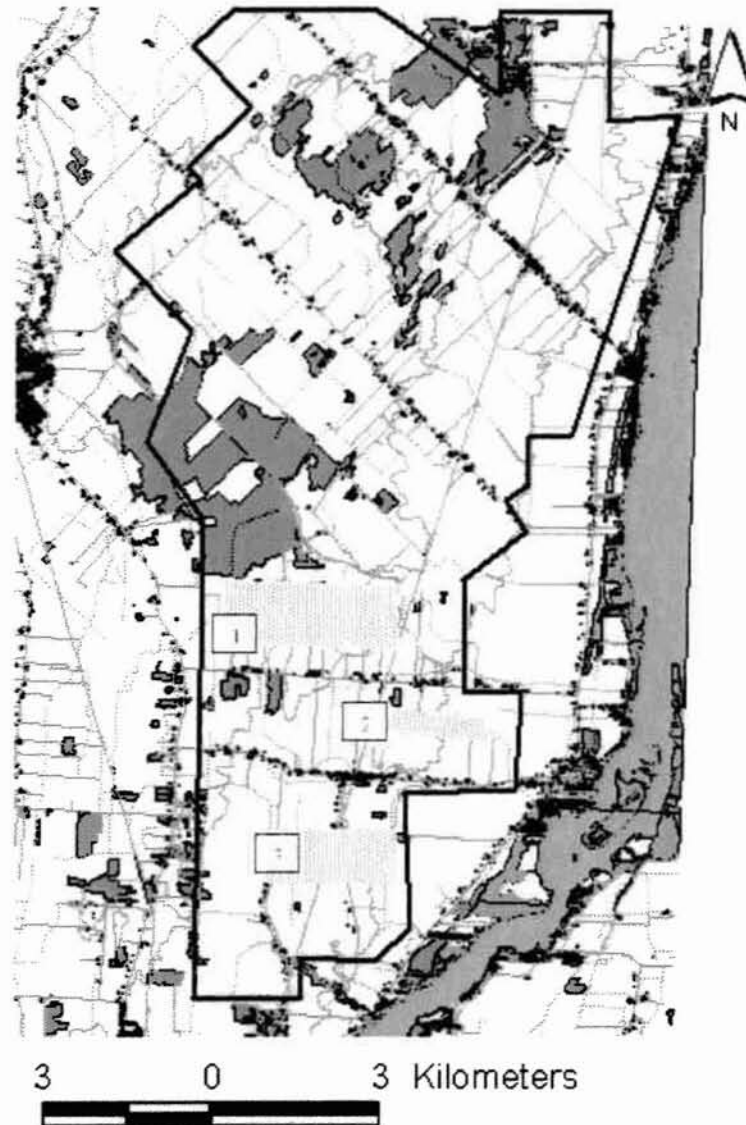


Figure 2 Location of the Six Points of Observation and the Two Transects



2.3 Data collection

Birds of prey surveys as well as passage migration counts have been conducted from September 15th to November 15th 2006. Binoculars as well as a scope (45X) were used to

achieve the observations. Data recorded included species, activity, altitude, direction of flight, sex and age group when possible. Good weather conditions were favoured for observation of birds of prey. However, the fall of 2006 did not offer very good weather. Birds of prey surveys were conducted from 9 a.m. to 4 p.m. while passage migration counts were conducted from sunrise to 9 a.m. and from 4 p.m. to sunset.

For stopover counts, transects were walked by a biologist and all birds seen or heard was identified, as well as its position on the transect and the distance from it. Stopover counts were done at sunrise.

2.4 Data analyses

For both birds of prey surveys and passage migration counts, we calculated the number of sightings per point of observation for each day of survey for the most common species. We also calculated a mean number of sightings per hour of observation for each day of survey for the most common species. Lastly, we calculated the mean number of sightings per point of observation for common species. As very little birds were sighted during stopover counts, no calculation has been carried; only a list of species will be presented. All results obtained will eventually be compared to those calculated for spring migration of 2007 as well as to general migration observed in bird observatories of the province.

3 Results

3.1 General Results

Approximately 11 989 individuals have been sighted (Annex 1). The majority of them have been identified to species. The most abundant species were Canada Geese, Snow Geese and Crows. No threatened or at risk species was observed, although special attention was given to their recognition.

3.2 Birds of prey

The location where most sightings happened is at point 2 with 12 sightings followed by point 4 with 8 sightings (Table 1).

The most frequent observation of birds of prey is attributed to Northern Harriers (25 sightings). Of all Northern Harriers seen, 16 females, 4 males, 1 juvenile were identified (Table 2). Red-tailed Hawk, American Kestrel, Turkey Vulture are the other species identified. Seven (7) observations were attributed to the Buteo sub-family, 1 to the Accipiter sub-family but the species was not identified. No mean observation rates was higher than 0,57 sighting per hour in a day and it was attributed to Northern Harriers (Table 2).

3.3 Waterfowl and Songbirds

The location with most sightings was point 2 (Table 1). This could be explained by the fact that it is the closest to the Richelieu River and it offers feeding grounds to waterfowl.

Canada Geese and Snow Geese were the most abundant species. Up to 290 individuals per hour for Canada Geese (Table 3) and 191 for Snow Geese were seen (Table 4). Snow Geese were more abundant at the end of the season, in November. Over 500 Ring-billed gulls were seen but 400 were counted in a single flock resulting in a rate of observation of 133,33 individuals per hour (Table 5). Very few ducks were seen although historically they are abundant in the area.

Crows were very common in the area, 874 individuals have been counted with a maximum of 200 individuals per hour (Table 6). The most common migrating song birds were Red-winged black birds with 198 individuals seen and maximum rates of observation of 33,3 ind/h (Table 7), Horned Larks with 42 individuals seen and maximum rates of observation of 10 ind/h (Table 8) and Savannah sparrows with 53 individuals seen and maximum rates of observation of 6,66 ind/h (Table 9).

3.4 Stopover Counts

Very few birds were observed during the stopover counts (Table 10). Woodlots in the selected site are very small and offer relatively little habitat suitable for forest species.

4 Conclusion and Further Analyses

In general, the presence of birds in the St-Blaise and St-Valentin municipalities was not important. This could be explained in part by the poor weather conditions characteristic of the fall of 2006 in that area. In addition, since the fields were not harvested until late in the fall, they offered poor feeding grounds for waterfowl, which is usually abundant in the area.

However, abundance and rates of observation will be compared, in the final report, to results obtained from spring surveys as well as to data collected by bird observatories of the province. This will allow a clear understanding of the situation in regards to the development of the wind turbine project.

5 Literature Cited

- Environment Canada 2006 a, Wind turbines and birds; a guidance document for environmental assessment, Final July 2006, Canadian Wildlife Service, 50 pp.
- Environment Canada 2006 b, Recommended protocols for monitoring impacts of wind turbines on birds, Final July 2006, Canadian Wildlife service, 33pp.
- Maisonneuve, C., H. Bastien, N. Fournier, G. Guérin, M. Léveillé et C. Pelletier 2006, Protocole d'inventaires d'oiseaux de proie dans le cadre de projets d'implantation d'éoliennes au Québec. Ministère des Ressources naturelles et de la Faune, Québec, 11 pp.

Tables

Table 1 Number of Individual Birds Observed for Each Point of Observation

Number of Individuals	Point of Observation						Total
	1	2	3	4	5	6	
Waterfowl and Songbirds	2301	4611	538	863	1133	2500	11946
Birds of Prey	5	12	7	8	4	7	43

Table 2 Observation for the Northern Harrier

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	1	0	0	0	0	1	0,14
9-20-06	0	0	0	1	0	1	2	0,29
9-21-06	0	1	0	2	0	0	3	0,43
9-26-06	1	0	1	0	0	0	2	0,29
9-27-06	1	0	0	0	0	1	2	0,29
10-02-06	0	1	0	0	1	0	2	0,29
10-05-06	0	1	0	1	0	2	4	0,57
10-10-06	0	1	1	0	0	0	2	0,29
10-13-06	0	0	2	0	0	0	2	0,29
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	1	0	1	0	2	0,29
10-30-06	0	1	1	0	0	0	2	0,29
11-02-06	0	1	0	0	0	0	1	0,14
11-07-06	0	0	0	0	0	0	0	0
11-15-06	0	0	0	0	0	0	0	0
Total	2	7	6	4	2	4	25	
Mean Obs./ Day	0,13	0,47	0,40	0,27	0,13	0,27	1,67	

Table 3 Observations for the Canada Goose

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	0	0	0	0	0	0	
9-20-06	0	0	5	4	140	0	149	37
9-21-06	150	60	0	0	0	0	210	105
9-26-06	436	92	0	0	0	0	528	132
9-27-06	0	0	97	81	87	88	353	88
10-02-06	0	60	1	0	0	0	61	15
10-05-06	0	0	0	0	1	660	661	330
10-10-06	0	0	0	203	0	45	248	62
10-13-06	375	20	0	0	0	0	395	131
10-14-06	0	0	122	80	0	0	202	67
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	80	0	0	792	872	290
11-02-06	0	3345	0	0	223	0	3568	1784
11-07-06	0	0	0	0	0	0	0	0
11-15-06	0	0	0	0	0	40	40	20
Total	961	3577	305	368	451	1625	7287	
Mean Obs./ Day	64	238	20	24	30	108		

Table 4 Observations for the Snow Goose

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	0	0	0	0	0	0	0
9-20-06	0	0	0	0	0	0	0	0
9-21-06	0	0	0	0	0	0	0	0
9-26-06	0	0	0	0	0	0	0	0
9-27-06	0	0	0	0	0	0	0	0
10-02-06	0	40	0	0	0	0	40	10
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	0	105	0	0	105	26
10-13-06	0	0	0	0	0	0	0	0
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	0	0	0	250	250	83
11-02-06	0	0	0	0	450	0	450	225
11-07-06	125	450	0	0	0	0	575	191
11-15-06	0	0	0	0	0	0	0	0
Total	125	490	0	105	450	250	1420	0
Mean Obs./ Day	8	33	0	7	30	17		

Table 5 Observations for the Ring-Billed Gull

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	0	0	0	0	0	0	0
9-20-06	0	0	0	0	0	0	0	0
9-21-06	0	0	0	0	0	0	0	0
9-26-06	0	0	0	0	0	0	0	0
9-27-06	0	0	0	0	0	30	30	8
10-02-06	0	0	0	0	0	0	0	0
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	0	0	0	0	0	0
10-13-06	0	0	0	0	0	0	0	0
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	0	0	0	0	0	0
11-02-06	0	80	0	0	10	0	90	15
11-07-06	400	0	0	0	0	0	400	133
11-15-06	0	0	0	0	0	0	0	0
Total	400	80			10	30	520	0
Mean Obs./ Day	27	5	0	0	0,7	2		

Table 6 Observations for the American Crow

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	17	3	0	5	0	1	26	4
9-20-06	0	0	12	0	0	3	15	3,8
9-21-06	0	0	0	0	0	0	0	0
9-26-06	2	2	0	0	0	0	4	1
9-27-06	0	0	3	3	2	5	13	3,3
10-02-06	0	0	6	0	0	0	6	1,5
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	1	13	3	2	19	4,8
10-13-06	12	10	0	0	0	0	22	7,3
10-14-06	0	10	4	20	0	0	34	11,3
10-29-06	0	0	20	0	0	0	20	6,7
10-30-06	0	0	10	0	0	20	30	10
11-02-06	0	50	0	0	22	0	72	36
11-07-06	350	250	0	0	0	0	600	200
11-15-06	0	0	12	1	0	0	13	6,5
Total	381	325	68	42	27	31	874	
Mean Obs./ Day	25,4	21,7	4,5	2,8	1,8	2,1		

Table 7 Observations for the Red-winged Black Bird

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	0	0	0	5	0	5	0,8
09-20-06	0	0	0	0	0	0	0	0
9-21-06	0	0	0	0	0	0	0	0
9-26-06	0	0	0	0	0	0	0	0
9-27-06	0	0	0	0	10	60	70	5,8
10-02-06	0	0	0	0	0	0	0	0
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	0	2	0	1	3	0,4
10-13-06	0	0	0	0	0	0	0	0
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	100	0	0	0	100	33,3
11-02-06	0	0	0	0	0	0	0	0
11-07-06	20	0	0	0	0	0	20	6,7
11-15-06	0	0	0	0	0	0	0	0
Total	20	0	100	2	15	61	198	
Mean Obs./ Day	1,3	0	6,7	0,1	1	4,1		

Table 8 Observations for the Horned Lark

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	0	0	0	0	0	0	0	0
9-20-06	0	0	0	0	0	0	0	0
9-21-06	0	0	0	0	0	0	0	0
9-26-06	0	0	0	0	0	0	0	0
9-27-06	0	0	0	0	0	0	0	0
10-02-06	0	0	0	0	0	0	0	0
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	0	0	0	0	0	0
10-13-06	2	10	0	0	0	0	12	4
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	0	0	0	0	0	0
11-02-06	0	0	0	0	0	0	0	0
11-07-06	0	30	0	0	0	0	30	10
11-15-06	0	0	0	0	0	0	0	0
Total	2	40	0	0	0	0	42	
Mean Obs./ Day	0,13	2,67	0	0	0	0		

Table 9 Observations for the Savannah Sparrow

DATE	Point of Observation						Total	Ind./ hr
	1	2	3	4	5	6		
9-15-06	40	0	0	0	0	0	40	6,7
9-20-06	0	0	0	0	0	0	0	0
9-21-06	0	0	0	0	0	0	0	0
9-26-06	5	0	0	0	0	0	5	1,3
9-27-06	0	0	0	0	0	0	0	0
10-02-06	0	0	0	0	0	0	0	0
10-05-06	0	0	0	0	0	0	0	0
10-10-06	0	0	0	5	0	0	5	1,3
10-13-06	0	0	0	0	0	0	0	0
10-14-06	0	0	0	0	0	0	0	0
10-29-06	0	0	0	0	0	0	0	0
10-30-06	0	0	0	0	0	1	1	0,3
11-02-06	0	2	0	0	0	0	2	1
11-07-06	0	0	0	0	0	0	0	0
11-15-06	0	0	0	0	0	0	0	0
Total	45	2	0	5	0	1	53	
Mean Obs./ Day	3	0,13	0	0,33	0	0,07		

Table 10 List of Species Observed During Stopover Counts

Species	Number Observed
Goldfinch	10
American Crow	2
Starling	15
Blue Jay	3
Cedar Waxwing	1
American Robin	2
Black-capped Chickadee	11
Downy Woodpecker	1
Common Grackle	1
Golden-crowned Kinglet	10
Ruby-crowned Kinglet	5
Morning Dove	7
Total	68

Annex 1

Number of Bird Sightings by Species for Each Period of Survey

1. All Birds Except Birds of Prey

DATE	P of O	SPECIES	PERIOD		TOTAL	
			0	2		
2006-09-15	PE1	BR SP	50		50	
		BRCH	3	1	4	
		BRPR	40		40	
		CHJA		5	5	
		COAM	16	1	17	
		ETSO	15		15	
		HIBI	3		3	
		MODO	5		5	
		PIBI		12	12	
		TOTR	3		3	
	VATE	1		1		
	PE2	BRCH	1		1	
		CA SP				
		CHJA				
		COAM	3		3	
		MEAM	2		2	
		QUBR	1		1	
	PE4	COAM		5	5	
		ETSO		12	12	
		GEBL		1	1	
PE5	CAEP		5	5		
	ETSO		50	50		
	GEBL		1	1		
PE6	TOTR		1	1		
	CHJA		1	1		
	COAM		1	1		
	ETSO		5	5		
2006-09-20	PE3	GEBL		2	2	
		BECA	5		5	
		COAM	12		12	
	PE4	BECA	4		4	
		BRCH	4		4	
		CHJA	3		3	
		GEBL	5		5	
	PE5	BECA	8		8	
		BECA		140	140	
	PE6	COAM		3	3	
ETSO			30	30		
2006-09-21	PE1	BECA		150	150	
		PIBI		6	6	
2006-09-26	PE2	BECA		60	60	
		BECA	74	362	436	
2006-09-26	PE1	BECASSEAU SP	30		30	
		BRPR	5		5	
		CHJA	1	5	6	
		COAM	2		2	
		ETSO	20		20	
		PIBI	6	2	8	
		TOTR	1		1	
		PE2	BECA	92		92
			CHJA		5	5
			COAM		2	2
	GRHE		1		1	

LEGEND

P of O Point of Observation

PERIOD 0 Sunrise to 9 a.m.

PERIOD 1 9 a.m. to 4 p.m.

PERIOD 2 4 p.m. to Sunset

DATE	P of O	SPECIES	PERIOD		TOTAL
			0	2	
		LI SP		30	30
2006-09-27	PE3	BECA		97	97
		COAM		3	3
	PE4	BECA		81	81
		BRSP		2	2
		COAM		3	3
		ETSO		260	260
		GEBL		1	1
	PE5	BECA	87		87
		BRCH	3		3
		CAEP	10		10
		CHJA	5		5
		COAM	2		2
		ETSO	75		75
		GEBL	2		2
		MEAM	4		4
	PE6	BECA	88		88
		BRCH	5		5
		CAEP	60		60
		CHJA	10		10
		COAM	5		5
		GEBL	2		2
		GOBC	30		30
		HIBI	10		10
		LI SP	40		40
2006-10-02	PE1	ETSO	6		6
		LI SP	20		20
		MEAM	1		1
		TOTR	1		1
	PE2	BECA	60		60
		OIBL	40		40
	PE3	BECA		1	1
		COAM		6	6
		GRHE		1	1
2006-10-05	PE5	BECA		1	1
		BRCH		1	1
	PE6	BECA		660	660
2006-10-10	PE3	BRSP	5		5
		COAM	1		1
	PE4	BECA	203		203
		BRCH	2		2
		BRPR	5		5
		CAEP	2		2
		CHJA	5		5
		COAM	13		13
		ETSO	8		8
		GEBL	2		2
		METN	2		2
		OIBL	105		105
	PE5	BRCH		1	1
		CHJA		5	5
		COAM		3	3
		ETSO		30	30

DATE	P of O	SPECIES	PERIOD		TOTAL
			0	2	
		GRHE		1	1
		TOTR		1	1
	PE6	BECA		45	45
		BRSP		2	2
		CAEP		1	1
		COAM		2	2
2006-10-13	PE1	ALHC		2	2
		BECA	375		375
		BESP		20	20
		BRCH	5		5
		CHGR		15	15
		COAM	3	9	12
		ETSO	60		60
		GEBL	2		2
		HIBI	15		15
		PIBI	7		7
		ROFA	2		2
	PE2	ALHC	10		10
		BECA	20		20
		CHJA	15		15
		COAM	10		10
		PIBI	5		5
2006-10-14	PE2	COAM	10		10
		PASSEREAU SP	10		10
	PE3	BECA		122	122
		BRSP		10	10
		COAM		4	4
	PE4	BECA		80	80
		BRSP		30	30
		COAM		20	20
2006-10-29	PE3	COAM	20		20
		PASSEREAU SP	20		20
2006-10-30	PE3	BECA	80		80
		BRSP	25		25
		CAEP	100		100
		COAM	10		10
	PE6	BECA	792		792
		BRPR	1		1
		CHJA	10		10
		COAM	20		20
		OIBL	250		250
		PASSEREAU SP	385		385
2006-11-02	PE2	BECA	3345		3345
		BRFAM	2		2
		BRPR	2		2
		COAM	50		50
		GOBC	80		80
	PE5	BECA	223		223
		COAM	22		22
		GOBC	10		10
		OIBL	450		450
2006-11-07	PE1	CAEP	20		20
		COAM	350		350

DATE	P of O	SPECIES	PERIOD		TOTAL
			0	2	
		ETSO	40		40
		GOBC	400		400
		OIBL	125		125
		PIBI	4		4
	PE2	ALHC	30		30
		COAM	250		250
		LI SP	25		25
		OIBL	450		450
2006-11-15	PE3	COAM	12		12
	PE4	COAM	1		1
	PE6	BECA		40	40
Total			9458	2488	11946

2. Birds of Prey

DATE	P of O	SPECIES	PERIOD	TOTAL
			1	
2006-09-15	PE2	BUMA	1	1
		CRAM	1	1
2006-09-20	PE1	EP SP	1	1
	PE4	BUMA	1	1
	PE5	URTR	1	1
	PE6	BUMA	1	1
2006-09-21	PE2	BUMA	1	1
		BUQR	1	1
	PE4	BU SP	2	2
		BUMA	2	2
2006-09-26	PE1	BUMA	1	1
	PE3	BUMA	1	1
	PE6	BU SP	1	1
2006-09-27	PE1	BUMA	1	1
	PE2	CRAM	1	1
	PE3	BUQR	1	1
	PE6	BUMA	1	1
2006-10-02	PE2	BUMA	1	1
	PE5	BUMA	1	1
2006-10-05	PE1	BU SP	1	1
	PE2	BUMA	1	1
		BUQR	1	1
	PE4	BU SP	1	1
		BUMA	1	1
	PE6	BUMA	2	2
2006-10-10	PE2	BUMA	1	1
	PE3	BUMA	1	1
	PE5	RAPACE SP.	1	1
	PE6	BU SP	2	2
2006-10-13	PE3	BUMA	2	2
2006-10-29	PE3	BUMA	1	1
	PE5	BUMA	1	1
2006-10-30	PE1	CRAM	1	1
	PE2	BUMA	1	1
		RAPACE SP.	1	1
	PE3	BUMA	1	1
2006-11-02	PE2	BUMA	1	1
2006-11-15	PE4	BUQR	1	1
Total			43	43

LEGEND

P of O Point of Observation

PERIOD 0 Sunrise to 9 a.m.

PERIOD 1 9 a.m. to 4 p.m.

PERIOD 2 4 p.m. to Sunset

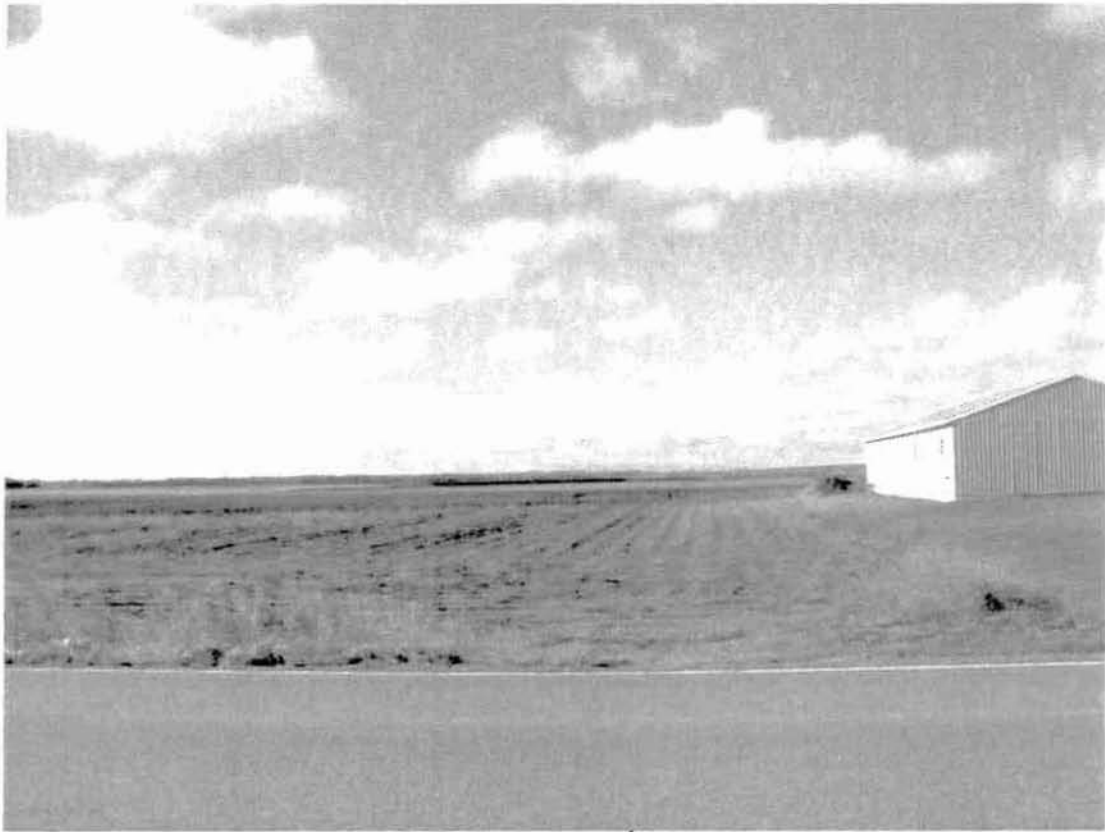
Annex 2

Species Code Equivalencies

CODE	SPECIES NAME
ALHC	Horned Lark
BECA	Canada Goose
BESP	Sandpiper Sp.
BRCH	Song Sparrow
BRFAM	Chipping Sparrow
BRPR	Savannah Sparrow
BRSP	Sparrow Sp.
BU SP	Buteo Sp.
BUMA	Northern Harrier
BUQR	Red-tailed Hawk
CA SP	Duck Sp
CAEP	Red-winged Black Bird
CHGR	Spotted Sandpiper
CHJA	Goldfinch
COAM	American Crow
CRAM	American Kestrel
ETSO	Starlings
GEBL	Blue Jay
GOBC	Ring-billed Gull
GRHE	Great Blue Heron
HIBI	Tree Swallow
LI SP	Shore bird
MEAM	American Robin
METN	Black-capped Chickadee
MODO	House Sparrow
OIBL	Snow Goose
PIBI	Rock Dove
QUBR	Common Grackle
ROFA	House Finch
TOTR	Morning Dove
VATE	Brown-headed Cowbird

Annex 3

Pictures of Points of Observation



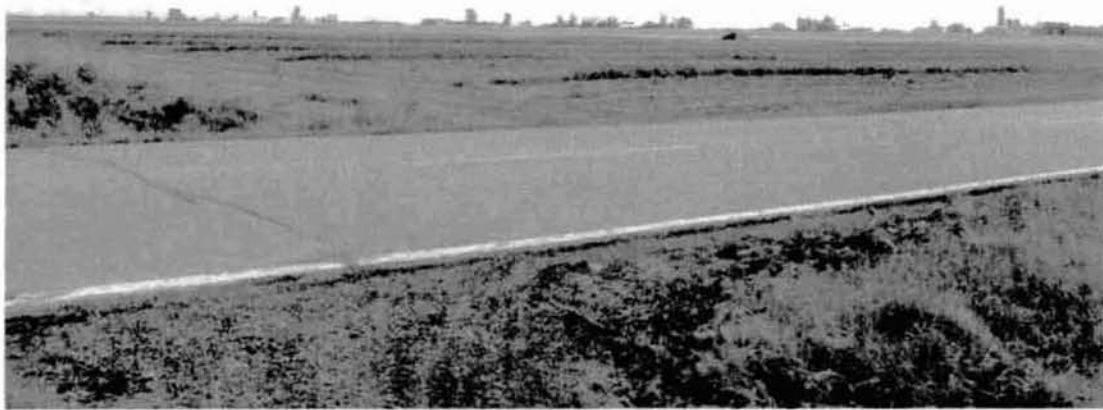
Point 1, Looking South



Point 6, Looking East



Point 6, Looking South



Point 2, Looking East