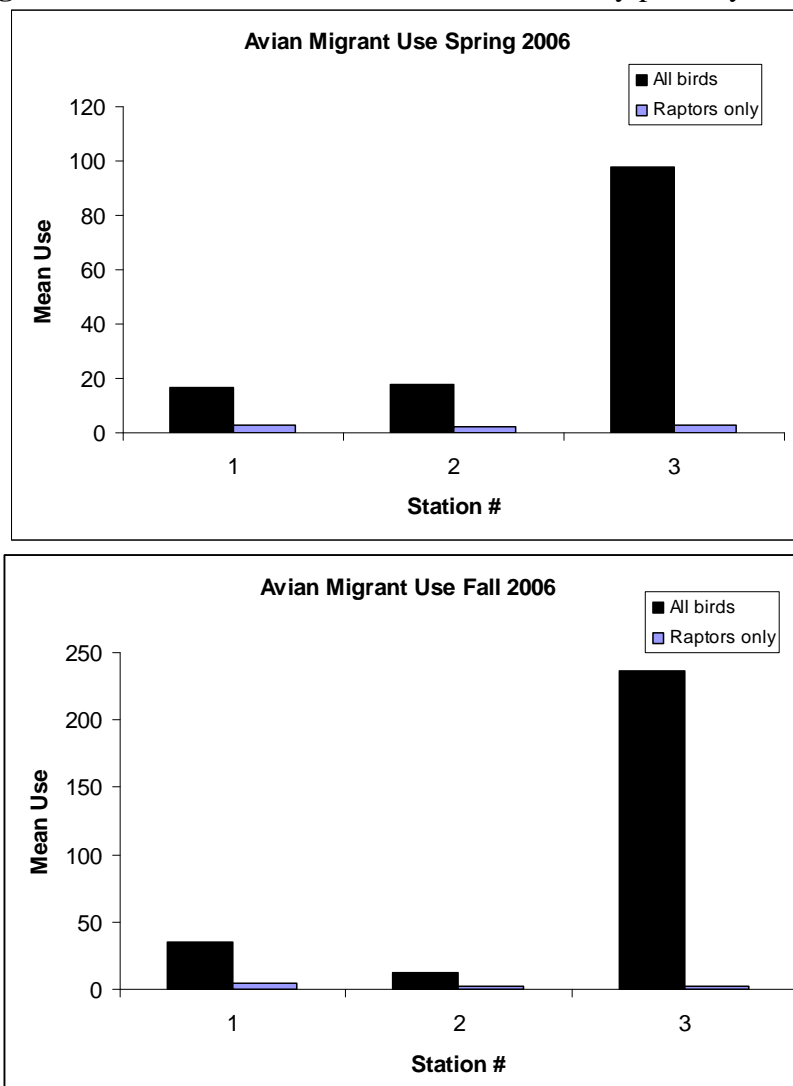


Figure 13. Diurnal avian estimates for each survey point by season.



3.3 Breeding Bird Survey

The objective of the breeding bird surveys was to estimate the spatial and temporal use of the proposed development area by breeding resident birds. The emphasis of the surveys was locating and counting breeding resident birds within the area proposed for development. The surveys were conducted based on the regional timing recommended for USGS BBS in central New York (USGS 2001).

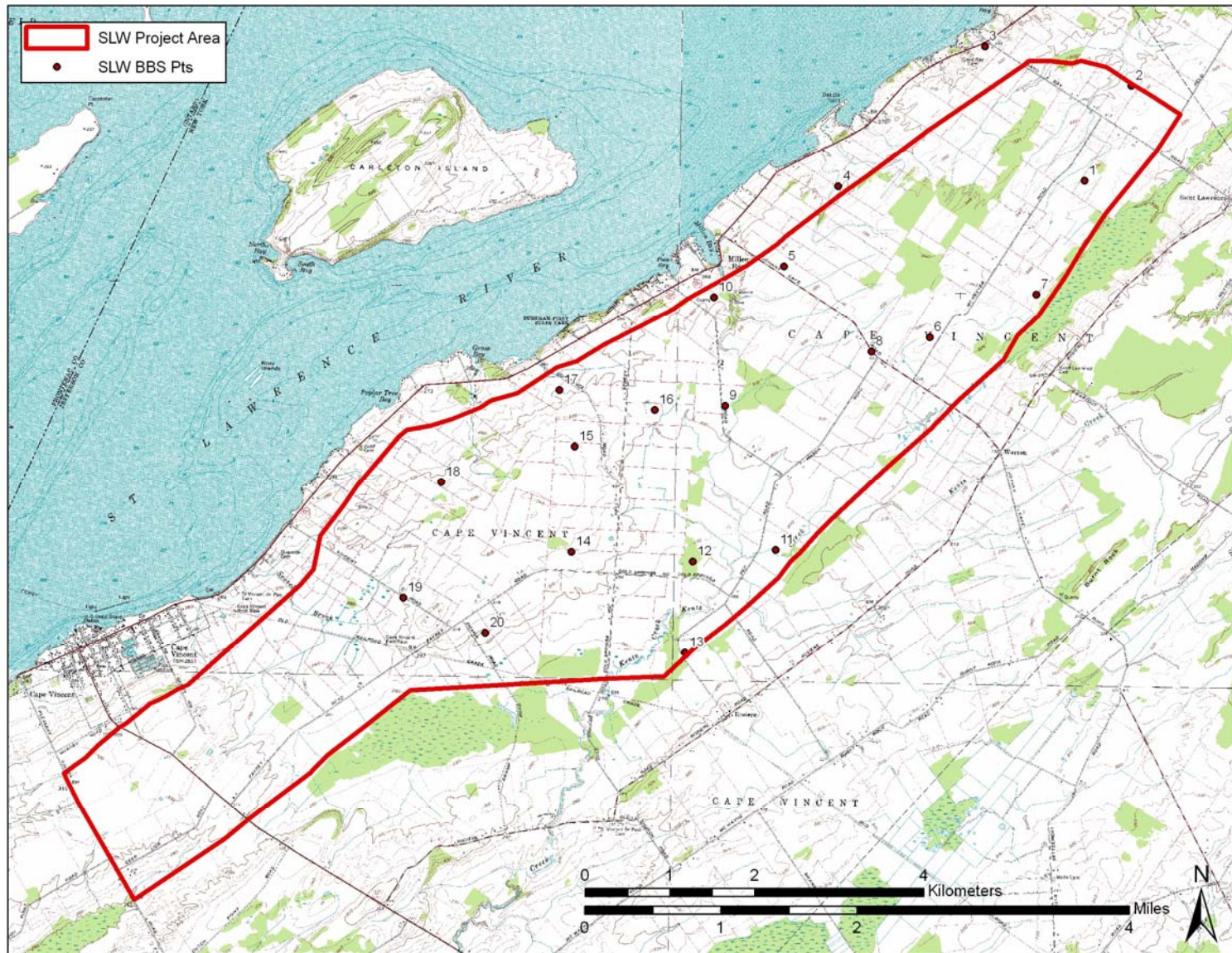
3.3.1 Methods

Twenty survey points were established within the project area. The survey points were selected to cover as much of the proposed development area and habitat types as possible. Each survey station was marked on a map and GPS coordinates were recorded for each point (Figure 14). The habitat at each survey point was described to examine the applicability of the site to represent other areas within the proposed development area.

U.S. Geological Survey Breeding Bird Survey (USGS 2001) methods were used for the surveys. Each survey plot was a variable circular plot centered on the observation point. All birds observed were recorded; however, the survey effort was concentrated within an approximate 400 m (0.25 mi) radius circle centered on the observation point. All points were surveyed twice during the recommended survey period (June - July) and seven days were skipped between the surveys to spread the effort over the breeding season.

Survey periods at each point were 3 minutes long, similar to the BBS method. The date; start and end time of the observation period; and weather information such as temperature, wind speed, wind direction, and cloud cover were recorded for each survey. Species or best possible identification, number of individuals of each species, how observed (visual or auditory), and behavior (flying, perching, singing, etc.) were recorded for each observation during the 3-minute count at each survey point.

Figure 14. Breeding bird survey point count locations for the project area.



3.3.2 Results

Point count surveys were conducted on June 30 and July 7, 2006. Each point was surveyed twice, for a total of 40 survey periods. A total of 1080 individual birds were observed in 425 groups (Table 3). Fifty-nine species were observed during the surveys. European starling, red-winged blackbird, and bobolink were the most common passerines observed based on mean use estimates (number observed within 400 m per 3-minute survey). The majority of the species recorded during breeding bird surveys are species commonly associated with agriculture, grasslands, and/or edge habitat. Several species of interest were recorded during the breeding bird surveys including northern harrier, a New York state threatened species; horned lark and grasshopper sparrow, two New York state species of concern; and bobolink and wood thrush, two species on the USFWS 2002 Birds of Conservation Concern list for the Lower Great Lakes/St. Lawrence Plain region.

Table 3. Avian species observed during breeding bird surveys within the St. Lawrence Windpower project area.

Species/Group	# of individuals	# of groups	Mean Use
Waterbirds			
Great blue heron	4	4	0.1
Green heron	1	1	0.025
Ring-billed gull	47	6	1.175
Unidentified gull	38	2	0.95
Waterfowl			
Canada goose	27	4	0.675
Mallard	2	1	0.05
Shorebirds			
Killdeer	16	10	0.4
Raptors/Vultures			
American kestrel	2	2	0.05
Northern harrier ^T	4	3	0.1
Red-tailed hawk	4	3	0.1
Turkey vulture	9	7	0.225
Passerines			
American crow	53	11	1.325
American goldfinch	23	15	0.575
American robin	30	25	0.75
Baltimore oriole	6	3	0.15
Barn swallow	23	6	0.575
Black-capped chickadee	5	3	0.125
Blue jay	2	2	0.05
Bobolink ^{BCC}	76	32	1.9
Brown-headed cowbird	11	4	0.275

Species/Group	# of individuals	# of groups	Mean Use
Cedar waxwing	4	1	0.1
Chestnut-sided warbler	1	1	0.025
Common grackle	29	3	0.725
Common yellowthroat	29	20	0.725
Eastern bluebird	2	2	0.05
Eastern kingbird	4	3	0.1
Eastern meadowlark	32	28	0.8
Eastern towhee	1	1	0.025
Eastern tufted titmouse	1	1	0.025
Eastern wood pewee	5	5	0.125
<i>Empidonax</i> spp.	1	1	0.025
European starling	235	19	5.875
Grasshopper sparrow ^{SC}	1	1	0.025
Gray catbird	6	5	0.15
Horned lark ^{SC}	6	2	0.15
House wren	3	3	0.075
Indigo bunting	1	1	0.025
Northern cardinal	2	1	0.05
Ovenbird	11	11	0.275
Red-eyed vireo	7	7	0.175
Red-winged blackbird	136	49	3.4
Rose-breasted grosbeak	1	1	0.025
Savannah sparrow	37	26	0.925
Scarlet tanager	2	2	0.05
Song sparrow	48	35	1.2
Tree swallow	13	3	0.325
Unidentified passerine	1	1	0.025
Unidentified sparrow	1	1	0.025
Veery	1	1	0.025
Willow flycatcher	4	4	0.1
Wood thrush ^{BCC}	6	5	0.15
Yellow warbler	31	18	0.775
Upland Gamebirds			
Ruffed grouse	1	1	0.025
Wild turkey	4	1	0.1
Doves			
Mourning dove	10	6	0.25
Rock pigeon	14	5	0.35
Other Birds			
Hairy woodpecker	1	1	0.025
Northern flicker	2	2	0.05
Unidentified woodpecker	3	3	0.075
<hr/>			
All Birds	1080	425	

T = State listed threatened

SC = State listed species of special concern