

Grassland Breeding Bird Survey Report

September 2021

Mill Point Solar Project

Town of Glen Montgomery County, New York

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Executive Summary

TRC was contracted by ConnectGen Montgomery County LLC, a subsidiary of ConnectGen, LLC (the "Applicant"), to perform grassland breeding bird surveys for the proposed Mill Point Solar Project (Project), an approximately 250-megawatt (MW) photovoltaic (PV) solar energy generating facility located in the Town of Glen, Montgomery County, New York (Figure 1). The Project Area is approximately 2,700 acres; however, the entirety of land within the Project Area is not anticipated to be necessary for siting Project components.

The surveys were performed at the recommendation of the New York State Department of Environmental Conservation (NYSDEC) in order to determine the presence and site use by State-listed threatened (T), endangered (E), or special concern (SC), grassland bird species during the breeding season. Surveys were performed from late May through July of 2021. This effort supports the development of an application to the Office of Renewable Energy Siting (ORES) under Section 94-c of the New York Executive Law.

Point count surveys were conducted at 42 survey locations (hereafter "points") within the Project Area between May 21, 2021 and July 14, 2021 ("Study Period"). The number of points fluctuated during the survey period due to changes in land access, survey protocols and habitat shifts due to agricultural production. Six rounds of point count surveys were conducted over the course of the Study Period, with each location visited between one and six times, resulting in a total of 155 point count surveys.

A total of 1,636 bird observations of 31 species occurred within the Project Area during the regular (point count) surveys. An additional 24 species were recorded incidentally throughout the Study Period. The most frequently observed species during surveys was the red-winged blackbird (*Agelaius phoeniceus*) (203 individuals), comprising 30.9% of all birds observed. Thereafter, the most frequently observed species were the song sparrow (*Melospiza melodia*), savannah sparrow (*Passerulucus sandwichensis*), bobolink (*Dolichonyx oryzivorus*), and common yellowthroat (*Geothylpis trichas*). The five most frequently observed species during regular surveys comprised 80.9% of all individuals observed.

In general, grassland bird observations fluctuated throughout the Study Period. The number of observations recorded was highest on June 11 (n=196). Observations were lowest on June 21 (n=27). The grassland bird community observed in the Project Area is composed of species widely distributed in and typical of New York State. Observed species are representative of those expected where suitable grassland habitat is present.

One	was documented both
during and incidentally to surveys. Four birds were observed on three occa	asions during the Study
Period. Three of four individuals observed were recorded incidentally to	surveys. No essential
behaviors, nests, or evidence of breeding were observed for this species.	One
was obse	rved on two occasions.
Two singles were decomposed within the Draiget Area	

I wo singing males were documented within the Project Area.



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Figure 4. Number of Species Observed by Point

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ATTACHMENTS

Attachment A. Mill Point Breeding Bird Survey Study Plan and Study Plan Addendum

Attachment B. Mill Point Solar Breeding Bird Survey Data Sheets



1.0 Introduction

1.1 Project Description

TRC was contracted by ConnectGen Montgomery County LLC, a subsidiary of ConnectGen, LLC (the "Applicant"), to perform grassland breeding bird surveys for the proposed Mill Point Solar Project (Project), an approximately 250-megawatt (MW) photovoltaic (PV) solar energy generating facility located in the Town of Glen, Montgomery County, New York (Figure 1). The Project Area is approximately 2,700 acres; however, the entirety of land within the Project Area is not anticipated to be necessary for siting Project components. Proposed components include commercial-scale solar arrays, access roads, electric collection lines, and electrical interconnection facilities.

The Applicant proposes to permit, construct and operate the Project under Section 94-c of the New York Executive Law implemented by the Office of Renewable Energy Siting (ORES). This survey effort supports the development of such an application.

1.2 Purpose and Objectives

The purpose of the grassland breeding bird survey was to determine the presence and site use by State-listed threatened (T), endangered (E), or special concern (SC) grassland bird species during the breeding season. State-listed grassland nesting birds in New York State include the following: northern harrier (T), upland sandpiper (T), short-eared owl (E), Henslow's sparrow (T), sedge wren (T), grasshopper sparrow (SC), vesper sparrow (SC), and homed lark (SC).

2.0 Methods

2.1 Survey Site Selection

Survey locations were selected as outlined in the Mill Point Breeding Bird Survey Study Plan (Attachment A). Initial site selection was based on the 2015 *Draft Survey Protocol for State-listed Breeding Grassland Bird Species* by the New York State Department of Environmental Conservation (NYSDEC) (Draft Survey Protocol) and revised following release of the Office of Renewable Energy Siting (ORES) *Draft Field Survey Protocol for State-listed Breeding Grassland Bird Species 2021* (ORES Draft Survey Protocol) to comply with changes therein. Based on this NYSDEC Survey Protocols, suitable grassland sites are areas larger than 12 acres that are dominated by grasses and forbs. Multiple grassland patches may exist in any given area separated by obstructions (e.g., forests, hedgerows, large roads, and developed areas).

Communication received from NYSDEC on July 19, 2021 indicated that in addition to the habitat considerations described above, fields containing alfalfa as the dominant forb provide suitable habitat for nesting grassland birds. Survey site selection included consideration of these fields where present within the Project Area during revisions to the overall study design upon receipt of this communication (Attachment A).

A landowner survey and habitat verification effort was conducted to determine habitat conditions within the Project Area during the 2021 growing season. Landowners were canvassed to



determine crop planting plans for any areas of open habitat within the Project Area. Surveyors visited each survey location and documented actual land cover (i.e., grassland versus row crops). Point count locations (hereafter "points") were established in suitable grassland sites meeting the above criteria. Where on the ground verification resulted in a determination of habitat that differed with landowner survey data, areas of habitat suitable for grassland birds were surveyed until planted to row crop as indicated.

Locations were non-randomly placed at the approximate center of each grassland patch, identified through aerial imagery. A Geographic Information System (GIS) was used to place points at least 100 meters (m) from obstructions within the patch, or at the greatest distance possible, and to maintain a minimum distance of 250 m from adjacent point locations.

Based on the landowner survey, 20 points were selected. Following a review of the updated guidance from NYSDEC and habitat verification efforts, an additional 18 points were added in areas of suitable habitat and 10 points removed due to unsuitable habitat conditions (Table 1). Fields dominated by alfalfa were initially included beginning with Visit 2, removed following field verification (Visit 3), then added back to the survey effort for Visits 4-6 (Table 2).

2.2 Point Count Surveys

Surveys were conducted throughout the breeding season for grassland breeding birds. Both the NYSDEC and ORES Draft Survey Protocol recommends surveys be conducted during the breeding season, specifically between 15 May and 20 July (hereafter "Study Period"), the peak dates for grassland bird breeding activity in New York.

The NYSDEC Draft Survey Protocol required a total of four survey visits during the Study Period, with on visit conducted in May, two in June, and one in July. On May 25, 2021, ORES released the ORES Draft Survey Protocol requiring surveys to be performed weekly at each point count location. Input from NYSDEC was received on June 16, 2021 recommending compliance with the newly released ORES Draft Survey Protocol. Weekly visits were implemented beginning with Visit 3. Surveys were conducted at each point approximately every 7 days throughout the remainder of the Study Period. A total of six survey visits were completed. No point was surveyed more than once within a seven-day period.

Surveys began one-half hour before sunrise, when feasible, and ended no later than 10:30 a.m. Survey order was rotated each visit, such that stations were surveyed during different time periods over the course of the study. When mowing or other forms of habitat management occurred, this was noted on the data sheets and is reported in the results section (Section 3.0) of this report.

Point counts began following a 2-minute acclimation period, with the observer waiting in silence after arriving at the point to allow birds to recover from any disturbance. Counts were conducted for five minutes at each point, during which all birds identified by sight or sound were recorded.

Meandering surveys were conducted while walking between points during each visit to record species incidentally observed outside of the point-count survey boundaries while still within grassland habitat on the Project Area.



2.3 Weather Observations

Weather conditions were noted at the beginning of each survey and when conditions changed significantly during the survey. Parameters recorded include:

- wind speed (based on the Beaufort scale), and direction,
- temperature (in degrees Celsius),
- relative humidity (percent),
- barometric pressure (in mm of mercury [mmHg]),
- percent cloud cover,
- visibility (approximate distance in kilometers [km]), and
- precipitation.

Surveys were not conducted in adverse weather conditions (e.g. winds >10-12 miles per hour [mph], heavy rain or fog, etc.)

2.4 Data Collection

Detailed observation data was collected during each survey. All data was entered into the cloud-based data management program Fulcrum© using a smart phone or tablet.

At each point, the following site- and survey-specific information was recorded:

- date,
- observer name(s),
- site name,
- point number,
- start and end time of observation period,
- visit number, and
- weather information.

During the 5-minute point count, the following data were recorded:

- species identification,
- number of individuals per species,
- sex (if known),
- mode of detection (song, call, visual),
- distance from observer,
- behavior (nesting, flying, perching, singing, etc.), and
- "highest" behavior code for each species based on breeding bird atlas definitions.



Probable breeding behavior includes:

- Singing males present or breeding calls heard,
- o an observed pair,
- territorial displays (i.e. males chasing other males),
- o courtship displays,
- visiting a nest site,
- building a nest (i.e. carrying nesting material),
- Confirmed breeding behavior includes:
 - o Distraction display,
 - used nest found,
 - o recently fledged young,
 - o adult carrying a fecal sac,
 - o adult carrying food,
 - nest with eggs, and
 - nest with young.

Field biologists also recorded any species heard or seen during the surveys that were greater than 100 m from the point, as well as flyover species, or species detected outside of grassland habitat. Species detected outside of the scheduled survey time, during meander surveys, or otherwise incidentally observed, were recorded separately.

The following site description and vegetation measurements were recorded at each survey location at the conclusion of each point count:

- parcel size (digitally confirmed with GIS),
- habitat type (old field, warm-season grass, row crop, pasture, etc.),
- distance from a trail or road,
- distance from hedgerow or woodline,
- vegetation measurements within 25 m of the survey point:
- percent cover of each vegetation type (grass, forb, woody, etc.),
- dominant grass and forb,
- percent bare ground,
- average vegetation height,
- litter depth,
- nearest shrub above vegetation height,
- vegetation density (sparse, moderate, or dense)¹
- presence and extent of invasive species, and
- recent management practices.



Average height and density of vegetation were visually estimated by the surveying biologists.

2.5 Field Quality Assurance and Quality Control

Digital data sheets were reviewed for completeness and accuracy prior to leaving the survey site. Any discrepancies noted were resolved at that time. All data records were synced to an electronic database where they received an additional quality review on a weekly basis.

3.0 Results

3.1 Survey Effort

A total of 38 points were initially identified based upon reviews of aerial photography, United States Department of Agriculture Cropland Data, landowner crop survey data, and a preliminary field survey of habitat within the Project Area to determine presence and extent of grassland habitat. Points were summarily eliminated from the study as they were converted to active agricultural production. Surveys were conducted at each of the points until visually confirmed to no longer meet the criteria for grassland habitat (e.g. evidence of plowing, planting, or identification of row crop plants). Refer to Section 2.1 for further explanation of survey site selection procedures.

Surveys were conducted biweekly for the first two Visits, and weekly throughout the remainder of the Study Period. Six of the original points were eliminated (Points 10, 15, 32, 34, 35 and 42) following Visit 1 based on habitat conditions. Point 10 was in a shrubland with >50% shrub cover and Point 15 was an inundated emergent wetland. Points 32, 34, 45 and 42 were planted to corn. An additional three points (, 18 and 19) were eliminated following Visit 3 as these fields were converted to agriculture. A total of 155 point count surveys were completed in grassland habitat, including alfalfa-dominated fields during the Study Period. Table 1 provides an overview of the points included in the Study.

Survey parcels ranged in size from 11.7 to 141.0 acres, averaging 39.5 acres. One point was placed for every 25 acres of habitat where obstructions did not limit placement (Figure 2). Points were spaced at least 250 m apart.

3.2 Weather

Table 2 provides weather data for each survey conducted during the Study Period. No surveys were conducted during adverse weather conditions (e.g. high winds, rain). There were no patterns observed which may have created variation in observations throughout the Study Period. No disturbance events that would have significantly impacted observer ability to detect birds occurred.

3.3 Vegetation

Of the 29 points remaining in the Study following elimination due to habitat changes, 16 were located in hay, 10 in mixed grass, 1 in wet meadow and 1 in cool-season grass. Vegetative and cover conditions were documented for all points and are reported in Table 3. Additionally,



documentation of conditions observed in all areas surveyed during the habitat verification effort are provided along with data forms in Attachment B.

Average vegetation height was notably taller at Points than at Points 20-42 throughout the entire Study Period. Additionally, Points overall exhibited higher percent forb cover than Points 20-42, though grass was dominant at all points surveyed. Woody cover was not present at most points, observed only at Points 1, 2, 6, 8 and 11. Litter depth was negligible throughout. Table 3 summarizes vegetation data recorded at points during each visit.

Dominant grass species include smooth brome (*Bromus inermis L.*), perennial ryegrass (*Lolium perenne L.*), orchardgrass (*Dactylis L.*), and timothy grass (*Phleum L.*).

Dominant forbs included alfalfa (*Medicago L.*), goldenrod (*Oligoneuron*), milkweed (*Asclepias L.*), and clover (*Trifolium* spp.).

Reed canary grass (Phalaris arundinacea L.) was documented within the vicinity of Point 37.

3.4 Avian Use

Over the entire Study Period, surveyors recorded a total of 2,481 bird observations during regular surveys and incidentally to surveys. These observations represented 55 distinct species (Tables 4, 5). Of the species observed 24 species (845 observations) were observed only incidentally to surveys and are described in Section 3.6.

A total of 1,263 observations of 31 species were recorded during regular surveys. Observations included 656 individual birds observed within grassland habitat in the Project Area during point count surveys (Table 4). The species observed most often during point count surveys was the red-winged blackbird (203 individuals), comprising 30.9% of all individual birds observed. Red-winged blackbirds were observed at 31 of 38 points.

Following the red-winged blackbird, the next most frequently observed species were song sparrow (94 individuals observed at 35 points; 14.3% of individuals), savannah sparrow (89 individuals observed at 26 points; 13.6% of individuals), bobolink (85 individuals observed at 12 points; 13.0% of total individuals observed), and common yellowthroat (60 individuals observed at 29 points; 9.1% of individuals).

The five most frequently observed species comprised 80.9% of all individuals observed. The remaining 26 bird species observed had 21 or fewer individuals observed, averaging 5 individuals for species, and collectively accounted for 19.1% of all individuals observed. Additional information on individuals observed, as well as behaviors documented and abundance by species, can be found in Table 4.

Temporal Use

In general, bird observations peaked during the beginning of the Study Period in Visit 2 on June 11; however, numbers of observations fluctuated irregularly throughout with a second peak during early July surveys (Figure 3). The number of observations was highest on June 11 (n=196). The



number of observations was lowest on June 21 (n=27). The average number of observations across all survey days was 104.

Species richness remained relatively consistent throughout the Study Period, with highest number of species recorded on June 11 (n=17) and the lowest number of species recorded (n=7) on June 21 and June 26 (Figure 3). The average number of species recorded across all survey days was 11.

Spatial Use

Species richness varied across survey points, with an average of 5 species observed per point. Points with higher numbers of species were located in mixed grass (Points 2, 3, and 12) habitat. Species richness ranged from 3 to 12 species (Figure 4).

The highest number of individuals were documented at Point 13, with 35 individuals across 9 species. Number of individuals ranged at remaining points from 3 to 34, averaging 17 individuals per point (Figure 5).

3.5 Listed Species

One , was observed during the Study Period
(Tables 4, 5). Three observations of four individuals were documented during the study, including
three incidental sightings. Individuals were observed on June 18, June 25 and July 2, 2021 flying
over and foraging in the vicinity of the Project Area.
Three of four observations were of individuals flying over the Project Area. One individual was
incidentally observed flying over on June 18, 2021.
Two individuals were observed
incidentally flying approximately
individuals were observed outside of the Project Area flying east.
One individual was decumented during regular curveys, foreging in the visinity of
One individual was documented during regular surveys, foraging in the vicinity of on July 2, 2021. This observation occurred in
z, 2021. This observation occurred in
Behaviors observed were not consistent with any breeding activity, suggesting that the species
may use this area for foraging or to travel between foraging and roosting or other activity locations.
The exact location of this observation is provided on Figure 6.
The was observed during regular
surveys on two occasions. One singing male was documented within
one singing male observed within both on June 29, 2021 (Figure 6).

3.6 Incidental Observations

Among the 31 species identified during point count surveys, 373 of 1,636 observations were incidental either due to detection outside of the 100 m survey radius, in non-grassland habitat, or as fly-overs (Table 4). Incidental observations accounted for 22.8% of total observations recorded



during surveys. One state-listed species was observed incidentally during surveys, (Section 3.5). An additional 845 observations of 24 species not observed during regular surveys were detected incidentally either outside the normal survey window or during meander surveys conducted throughout the Project Area during transit between survey points (Table 5). None of the species observed incidentally are federally listed as T or E.

4.0 Discussion

Over the course of the Study Period, 155 surveys were conducted. A total of 2,481 observations from 55 species were recorded. During regular surveys, 656 individuals from 31 species were documented. The bird community observed in the Project Area is composed of species widely distributed in and typical to New York State. The most frequently observed species included redwinged blackbird, bobolink, song sparrow, savannah sparrow and common yellowthroat, collectively representing 80.9% of all individuals recorded. Observed species are representative of those expected where grassland and old field habitat is present.

Observations were distributed throughout the Project Area, with the highest number of individuals documented in mixed grass habitats within the Project Area. Temporal use appeared to peak early in the Study Period, with lower numbers of individuals recorded during mid-June and July survey dates. Species richness remained relatively consistent throughout.

Probable breeding behavior was observed for most species recorded, determined predominantly
by the presence of singing males. No possible, probable or confirmed breeding activity was observed for any documented within the Project Area. The one individual
documented within the Project Area was observed in
No nests were observed for any species documented within
the Project Area.
In addition to energies detected during regular concern. 24 energies were absorbed only
In addition to species detected during regular surveys, 24 species were observed only incidentally. Many of these observations were of individuals singing from adjacent wooded areas
bordering grassland patches. Species observed incidentally are more representative of the
broader community of birds known to breed in New York State and include a number of forest-
associated species (e.g., eastern wood-pewee (Contopus virens), scarlet tanager (Piranga
olivacea), black-capped chickadee (Poecile atricapillus), etc.).
One was documented during the Study Period. Of four
individuals documented, three were observed incidentally as fly-overs and one was observed
foraging within the Project area, a behavior not indicative of breeding behavior, in an area of
One species

5.0 Recommendations

The results of this study indicate that grassland habitat within the Project Area is not presently supporting breeding populations of threatened or endangered grassland birds, rather community assemblages found are representative of those common in grassland habitats throughout the



areas within the Project Area for foraging, but no behaviors consistent with breeding (see Section 2.4) were recorded within the Project Area. Impacts to the breeding of State-listed grassland bird species are not anticipated to result from Project development, and no direct take of any listed grassland breeding bird species will occur. No additional studies are recommended to assess potential impacts of the Mill Point Solar Project on grassland breeding birds at this time.



Tables



Table 1. Summary of Point Count Locations Surveyed During Study Period

Point No.	Habitat Type	Latitude	Longitude	Patch Size (ac)	Distance to Road/ Trail (m)	Distance to Woodline/ Hedgerow (m)	Distance to Nearest Shrub (m)	No. Surveys Completed	Habitat Notes ¹
1	Mixed Grass	42.94281	-74.3880	11.7	30	80	15	6	
2	Mixed Grass	42.94073	-74.3924	14.3	200	70	5	6	
3	Mixed Grass	42.93932	-74.3887	26.2	30	100	5	6	
4	Mixed Grass	42.9402	-74.3849	35.0	200	100	20	6	
5	Mixed Grass	42.93903	-74.3822	35.0	200	100	20	6	
6	Mixed Grass	42.93662	-74.3815	23.1	400	100	10	6	
8	Mixed Grass	42.93644	-74.3883	48.1	200	80	5	6	
10	Wet Meadow	42.93326	-74.3929	6.1	125	80	2	1	>50% shrub cover
11	Mixed Grass	42.93433	-74.3874	13.7	300	100	5	6	
12	Mixed Grass	42.93413	-74.3840	23.1	400	100	5	6	
13	Hay	42.935	-74.3981	25.2	150	125	125	6	
15	Wetland	42.88772	-74.3962	1.9	150	75	1	1	fully inundated emergent wetland
16	Cool-Season Grass	42.88628	-74.3860	19.0	100	100	75	6	
									耳
18	Row Crop	42.90725	-74.3387	46.3	150	100	40	3	Planted to row crop following Visit 3
19	Row Crop	42.91058	-74.3377	46.3	200	75	75	3	Planted to row crop following Visit 3
21	Hay	42.8898	-74.3919	129.0	300	100	20	4	
22	Hay	42.89248	-74.3861	129.0	200	125	125	4	
23	Hay	42.89177	-74.3903	129.0	200	100	100	4	
24	Hay	42.89501	-74.3876	129.0	125	175	60	4	
25	Hay	42.89273	-74.3944	129.0	100	100	100	3	Missed visit 4



Point No.	Habitat Type	Latitude	Longitude	Patch Size (ac)	Distance to Road/ Trail (m)	Distance to Woodline/ Hedgerow (m)	Distance to Nearest Shrub (m)	No. Surveys Completed	Habitat Notes ¹
									due to farm activity in field
26	Hay	42.88558	-74.3820	28.7	100	100	100	4	Alfalfa
27	Hay	42.87976	-74.3751	34.0	125	100	40	4	
28	Hay	42.88246	-74.3711	34.5	200	100	100	4	
29	Hay	42.90043	-74.3681	33.7	125	125	125	4	
32	Row Crop	42.91115	-74.3221	18.7	250	100	100	1	Planted to corn
33	Hay	42.90257	-74.3374	14.4	100	100	100	4	
34	Row Crop	42.90478	-74.3353	141.0	100	100	100	1	Planted to corn
35	Row Crop	42.90395	-74.3323	141.0	400	100	100	1	Planted to corn
37	Row Crop	42.9053	-74.3444	55.5	200	100	70	1	
38	Hay	42.89804	-74.3502	63.4	100	150	150	4	Alfalfa
39	Hay	42.90037	-74.3503	63.4	200	125	125	4	Alfalfa
40	Hay	42.8947	-74.3494	52.2	175	125	50	4	Alfalfa
41	Hay	42.89527	-74.3536	52.2	200	100	100	4	
42	Row Crop	42.92051	-74.3344	29.5	100	90	30	1	Planted to corn



Table 2. Survey Weather Data

					Visit 1					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	5/27/2021	2	W	21	88	760.22	20	None	16	None
2	5/27/2021	2	W	22	82	762.00	100	None	16	None
3	5/27/2021	2	W	22	82	762.00	100	None	16	None
4	5/27/2021	2	W	21	88	760.48	0	None	16	None
5	5/27/2021	2	W	21	87	760.48	0	None	16	None
6	5/27/2021	2	W	22	87	760.73	0	None	16	None
7	5/27/2021	2	W	22	85	760.73	0	None	16	None
8	5/27/2021	2	W	23	80	762.00	100	None	16	None
9	5/27/2021	2	W	23	81	761.75	100	None	16	None
10	5/27/2021	2	W	23	84	761.49	100	None	16	None
11	5/27/2021	2	W	23	86	761.24	0	None	16	None
12	5/27/2021	2	W	22	85	760.98	0	None	16	None
13	5/27/2021	2	W	23	83	761.75	100	None	16	None
14	5/24/2021	0	SE	8	97	767.84	0	Fog	16	None
15	5/24/2021	0	SE	8	97	767.84	0	None	16	None
16	5/24/2021	0	SE	7	97	767.84	0	None	16	None
17	5/24/2021	0	SE	45	97	767.84	0	None	16	None
18	5/24/2021	0	SE	10	97	767.84	0	None	16	None
19	5/24/2021	0	SE	9	94	767.84	0	None	16	None
26	5/24/2021	2	SE	23	81	762.25	75	None	16	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



					Visit 2					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	6/11/2021	0	E	15	74	763.02	50	None	16	None
2	6/11/2021	0	Е	11	74	763.02	50	None	16	None
3	6/11/2021	0	Е	11	74	763.02	50	None	16	None
4	6/11/2021	0	Е	15	74	763.02	90	None	16	None
5	6/11/2021	0	Е	15	74	763.02	50	None	16	None
6	6/11/2021	0	Е	14	74	763.02	90	None	16	None
7	6/11/2021	0	E	15	74	763.02	50	None	16	None
8	6/11/2021	0	E	11	74	763.02	40	None	16	None
9	6/11/2021	0	E	12	74	763.02	30	None	16	None
11	6/11/2021	0	Е	14	74	763.02	75	None	16	None
12	6/11/2021	0	Е	14	74	763.02	90	None	16	None
13	6/11/2021	0	E	12	74	763.02	10	None	16	None
14	6/1/2021	1	W	20	80	768.10	100	None	16	None
16	6/1/2021	1	W	21	80	768.10	100	None	16	None
17	6/1/2021	1	W	21	80	768.10	100	None	16	None
18	6/2/2021	1	NE	14	90	767.59	0	None	16	None
19	6/2/2021	1	NE	13	90	767.59	0	None	16	None
21	6/1/2021	1	W	20	80	768.10	100	None	16	None
22	6/1/2021	1	W	19	80	768.10	100	None	16	None
23	6/1/2021	1	W	20	80	768.10	100	None	16	None
24	6/1/2021	1	W	19	80	768.10	100	None	16	None
25	6/1/2021	1	SW	19	79	768.10	100	None	16	None
27	6/1/2021	1	W	22	80	768.10	100	None	16	None
28	6/1/2021	1	W	23	83	768.10	100	None	16	None
29	6/1/2021	2	W	22	84	768.10	100	None	16	None
32	6/2/2021	0	NE	15	90	767.59	0	None	16	None
33	6/2/2021	0	NE	11	90	767.59	0	None	16	None
34	6/2/2021	0	NE	12	90	767.59	0	None	16	None
35	6/2/2021	0	NE	11	90	767.59	0	None	16	None
37	6/2/2021	0	NE	13	90	767.59	0	None	16	None
38	6/2/2021	1	NE	10	90	767.59	0	None	16	None
39	6/2/2021	1	NE	10	92	767.59	0	None	16	None
40	6/2/2021	1	W	9	90	767.33	0	None	16	None
41	6/2/2021	1	SW	9	89	767.59	0	None	13	None
42	6/1/2021	1	W	23	84	768.10	100	None	13	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



					<u>Visit 3</u>					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	6/21/2021	0	Е	19	94	754.38	0	None	10	None
2	6/21/2021	0	Е	22	94	754.38	0	None	16	None
3	6/21/2021	0	Е	22	94	754.38	0	None	16	None
4	6/21/2021	0	Е	19	94	754.38	25	None	16	None
5	6/21/2021	0	Е	20	94	754.38	0	None	16	None
6	6/21/2021	0	Е	20	94	754.38	0	None	16	None
7	6/21/2021	0	Е	20	94	754.38	50	None	16	None
8	6/21/2021	0	Е	21	94	754.38	20	None	16	None
9	6/21/2021	0	Е	21	94	754.38	10	None	16	None
11	6/21/2021	0	Е	21	94	754.38	25	None	5	None
12	6/21/2021	0	Е	21	94	754.38	30	Fog	16	None
13	6/21/2021	0	Е	21	94	754.38	0	None	16	None
14	6/8/2021	0	NE	10	45	736.60	20	None	16	None
16	6/8/2021	0	NE	10	45	736.60	20	None	16	None
17	6/8/2021	0	NE	10	40	736.60	20	None	16	None
18	6/8/2021	0	SE	10	40	736.60	20	None	16	None
19	6/8/2021	0	NE	10	87	762.25	0	None	16	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



					Visit 4					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	6/29/2021	0	W	24	98	766.57	0	None	16	None
2	6/29/2021	0	W	21	97	766.32	0	Fog	16	None
3	6/29/2021	0	W	23	98	766.57	0	None	13	None
4	6/29/2021	0	W	23	95	766.83	0	None	16	None
5	6/29/2021	0	W	24	98	766.83	0	None	16	None
6	6/29/2021	1	W	23	95	766.57	0	None	16	None
7	6/29/2021	0	W	23	98	766.57	0	None	16	None
8	6/29/2021	0	W	23	94	766.83	0	None	16	None
9	6/29/2021	0	W	22	98	766.57	0	Fog	13	None
11	6/29/2021	0	W	23	95	766.57	0	None	16	None
12	6/29/2021	0	W	23	95	766.83	0	None	16	None
13	6/29/2021	0	W	23	94	766.57	0	Fog	13	None
14	6/25/2021	0	NE	12	90	762.00	30	None	16	None
16	6/25/2021	0	NE	15	91	769.87	0	None	16	None
21	6/25/2021	0	N	12	90	762.00	25	None	16	None
22	6/25/2021	0	NE	12	85	762.00	35	None	16	None
23	6/25/2021	0	NE	12	85	762.00	25	None	16	None
24	6/25/2021	0	NE	12	87	762.00	30	None	16	None
26	6/25/2021	0	Е	12	80	762.00	25	None	16	None
27	6/25/2021	0	NE	10	10	762.00	40	None	16	None
28	6/25/2021	0	Е	10	60	762.00	30	None	16	None
29	6/25/2021	0	N	10	50	736.60	20	None	16	None
33	6/25/2021	1	NE	14	65	762.00	30	None	16	None
38	6/25/2021	1	N	14	70	762.00	25	None	16	None
39	6/25/2021	1	NE	14	68	762.00	25	None	16	None
40	6/25/2021	1	Е	14	90	762.00	50	None	16	None
41	6/25/2021	1	NE	14	90	762.00	40	None	16	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



					<u>Visit 5</u>					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	7/6/2021	0	W	18	92	759.46	100	None	16	None
2	7/6/2021	0	W	20	92	759.46	50	None	16	None
3	7/6/2021	1	W	18	92	759.46	100	None	16	None
4	7/6/2021	1	W	18	92	759.46	100	None	16	None
5	7/6/2021	1	W	18	92	759.46	100	None	16	None
6	7/6/2021	0	W	19	92	759.46	100	None	16	None
7	7/6/2021	0	W	18	92	759.46	100	None	16	None
8	7/6/2021	0	W	20	92	759.46	100	Light Rain	16	None
9	7/6/2021	1	W	19	92	759.46	100	None	16	None
11	7/6/2021	0	W	19	92	759.46	100	None	16	None
12	7/6/2021	0	W	19	92	759.46	100	None	16	None
13	7/6/2021	1	W	19	92	759.46	100	None	16	None
14	7/2/2021	0	N	18	96	755.90	100	None	16	None
16	7/2/2021	0	N	17	96	755.90	100	None	16	None
21	7/2/2021	0	N	17	96	755.90	100	None	16	None
22	7/2/2021	0	N	17	96	755.90	100	None	16	None
23	7/2/2021	0	N	17	96	755.90	100	None	16	None
24	7/2/2021	0	N	17	96	755.90	100	None	16	None
25	7/2/2021	0	N	17	96	755.90	100	None	16	None
26	7/2/2021	0	N	17	96	755.90	100	None	16	None
27	7/2/2021	0	N	16	96	755.90	100	None	16	None
28	7/2/2021	0	N	17	96	755.90	100	None	16	None
29	7/2/2021	0	N	16	96	755.90	100	None	16	None
33	7/2/2021	0	N	15	96	755.65	100	None	16	None
38	7/2/2021	0	N	15	96	755.90	100	None	16	None
39	7/2/2021	0	N	15	96	755.90	100	None	16	None
40	7/2/2021	0	N	16	96	755.90	100	None	16	None
41	7/2/2021	0	N	16	96	755.90	100	None	16	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



					Visit 6					
Point Number	Date	Wind Speed ¹	Wind Direction	Temperature (°C)	Humidity (%)	Pressure (mmHg)	Cloud Cover (%)	Precipitation	Visibility (km)	Disturbance
1	7/13/2021	0	Е	15	94	767.33	100	None	16	None
2	7/13/2021	2	Е	16	94	765.05	100	None	16	None
3	7/13/2021	0	Е	15	94	767.33	100	None	16	None
4	7/13/2021	0	Е	15	94	767.33	100	None	16	None
5	7/13/2021	0	Е	15	94	767.33	100	None	16	None
6	7/13/2021	0	Е	15	94	767.33	100	None	16	None
7	7/13/2021	0	Е	15	94	767.33	100	None	16	None
8	7/13/2021	0	Е	16	94	767.33	100	None	16	None
9	7/13/2021	1	Е	16	94	767.33	100	None	16	None
11	7/13/2021	0	Е	16	94	767.33	100	None	16	None
12	7/13/2021	1	Е	16	94	767.33	100	None	16	None
13	7/13/2021	1	E	16	94	767.33	100	None	16	None
14	7/9/2021	0	SE	17	90	761.75	100	None	16	None
16	7/9/2021	0	SE	17	90	761.75	100	None	16	None
21	7/9/2021	0	SE	17	90	761.75	100	Fog	16	None
22	7/9/2021	1	SE	17	90	761.75	100	None	16	None
23	7/9/2021	1	SE	17	90	761.75	100	Fog	16	None
24	7/9/2021	0	SE	17	90	761.75	100	None	16	None
25	7/9/2021	1	SE	17	90	761.75	100	None	16	None
26	7/9/2021	0	SE	17	90	761.75	100	None	16	None
27	7/9/2021	0	SE	16	90	761.75	100	None	16	None
28	7/9/2021	0	SE	16	90	761.75	100	None	16	None
29	7/9/2021	1	SE	17	90	761.75	100	None	16	None
33	7/9/2021	1	SE	17	90	761.75	50	None	16	None
38	7/9/2021	1	SE	18	90	761.75	100	None	16	None
39	7/9/2021	1	SE	17	90	761.75	75	None	16	None
40	7/9/2021	1	SE	17	90	761.75	100	None	16	None
41	7/9/2021	1	SE	17	90	761.75	100	None	16	None

¹ 0=<1 mph; 1=1-3 mph; 2=4-8 mph; 3=9-12 mph; 4=13-18 mph



Table 3. Vegetation Data Summarized by Point Count Location

Visit	Vegetation																		Point N	lumber																			
Number	Measurements	1	2	3	4	5	5	6		8	10	11	12	13		15	16	18	19	20	21	22	23	24	25	26	27	28	29	32	33	34	35	36	37	38	39	40	41
	Avg. Veg. Height (cm)	33.8	22.5	27.5	22.5	5 2	25	20		23.8	57.5	22.5	20	20		50	35	3.7 5	0							11													
	Grass Cover	50	40	60	70	7	70	35		35	35	35	30	30		25	80	40	0							40													
	Forb Cover	40	40	25	20	2	20	40		50	35	35	50	70		25	20	0	5							40													
1	Bare Ground	0	10	0	0	(0	20		5	0	10	10	0		0	0	60	95							20													
	Litter Depth (cm)	1	3	1	0	1	1	3		2	1	1	2	1		1	1	0	0							0													
	Woody Cover	10	10	15	10	1	10	5		10	30	20	10	0		50	0	0	0							0													
	Vegetation Density ¹	D	D	D	D		D	D		D	D	D	D	D		S	S	S	S							М													
	Avg. Veg. Height (cm)	70	60	60	90	7	70	70		50		58.8	60	35			28.8	5	5		15	20	11.3	20	16.3		15	20	25	20	10	10	11	23	15	15	15	15	5
	Grass Cover	40	45	40	60	6	60	50		25		35	50	35			60	20	0		60	65	75	60	50		45	50	55	90	40	50	50	25	20	20	35	50	20
	Forb Cover	40	50	40	40	4	10	50		60		50	50	65			40	30	10		30	30	20	35	40		40	40	40	10	50	0	0	35	70	75	60	50	30
2	Bare Ground	0	0	0	0	(0	0		0		0	0	0			0	45	90		5	5	5	5	10		15	10	5	0	10	50	50	40	10	5	5	0	50
	Litter Depth (cm)	0	2	1	0	1	1	1		1		0	1	1			1	0	0		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
	Woody Cover	20	5	20	0	(0	0		15		15	0	0			0	5	0		5	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
	Vegetation Density ¹	D	D	D	D		D	D		D		D	D	D			D	М	S		D	D	D	D	D		D	D	D	D	D	М	М	М	D	D	D	D	М
	Avg. Veg. Height (cm)	90	50	70	150	9	90	45		60		70	45	35			15	5	0																				
	Grass Cover	50	50	70	60	7	75	70		50		50	60	50			80	10	5																				
	Forb Cover	45	40	20	40	2	25	20		40		30	40	50			15	5	5																				
3	Bare Ground	0	0	0	0	(0	0		0		0	0	0			5	85	90																				
	Litter Depth (cm)	1	1	1	1	1	1	1		1		1	2	0			0	0	0																				
	Woody Cover	5	10	10	0		0	10		10		20	0	0			0	0	0																				
	Vegetation Density ¹	D	D	D	D		D	D		D		D	D	D			D	S	S																				
	Avg. Veg. Height (cm)	80	80	60	50	10	00	90		90		120	75	5			50				5	5	5	5		5	5	5	5		5					5	5	5	5
	Grass Cover	50	45	70	70	6	30	50		60		60	65	50			65				90	80	80	70		70	80	75	60		80					70	80	80	90
	Forb Cover	35	45	30	30	4	10	40		30		30	35	50			35				10	15	15	25		25	15	25	40		20					20	15	15	10
4	Bare Ground	0	0	0	0	(0	0		0		0	0	0			0				0	5	5	5		5	5	0	0		0					10	5	5	0
	Litter Depth (cm)	1	0	0	0	(0	1		1		1	0	0			0				0		0	0		0	0	0	0		0					0	0	0	0
	Woody Cover	15	10	0	0	(0	10		10		10	0	0			0				0	0	0	0		0	0	0	0		0					0	0	0	0
	Vegetation Density ¹	D	D	D	D		D	D		D		D	D	D			D				D	D	D	D		D	D	D	D		D					D	D	D	D
	Avg. Veg. Height (cm)	90	90	50	100	4	10	90		50		120	45	10			60				10	20	30	10	20	15	20	30	30		10					15	15	10	10
	Grass Cover	50	40	70	75	7	70	70		45		60	70	50			65				70	60	90	50	90	35	75	60	65		70					15	25	40	40
	Forb Cover	40	50	30	25	3	30	30		45		30	30	45			35				20	35	0	20	0	55	0	30	35		30					75	65	50	60
5	Bare Ground	0	0	0	0		0	0		0		0	0	5			0				5	5	10	30	10	10	25	10	0		0					10	10	10	0
	Litter Depth (cm)	1	1	1	1	1	1	2		2		2	1	0			0				0	0	0	0	0	0	0	0	0		0					0	0	0	0
	Woody Cover	10	10	0	0		0	0		10		10	0	0			0				5	0	0	0	0	0	0	0	0		0					0	0	0	0
	Vegetation Density ¹	D	D	D	D	_	D	D	_	D		D	D	M	_		D				D	D	D	D	D	D	D	D	D		D					D	D	D	D
	Avg. Veg. Height (cm)	120	70	90	120			60				90	80	20			45				30	20	30	20	20	40	20	30	30		15					35	40	20	15
	Grass Cover	50	40	60	75			45				30	60	30			65				80	90	90	80	70	20	80	60	50		50					0	0	45	30
	Forb Cover	45	55	35	25			50		45		50	40	70			35				5	5	5	10	15	80	10	40	50		50					95	100	50	65
6	Bare Ground	0	0	0	0		0	0		0		0	0	0			0				10	5	5	10	15	0	10	0	0		0					5	0	5	5
	Litter Depth (cm)	1	1	1	1		0	1		1		1	1	0			0				0	0	0	0	0	0	0	0	0		0					0	0	0	0
	Woody Cover	5	5	5	0		0	5	_ <u> </u> _	10		20	0	0	_ <u></u> _		0				5	0	0	0	0	0	0	0	0		0					0	0	0	0
	Vegetation Density ¹	D	D	D	D		D	D		D		D	D	D			D				D	D	D	D	М	D	D	D	D		D					D	D	D	D

Cover measurements are reported as percent cover within 25m of survey location

¹ S= sparse, M= moderate, D= dense



Table 4. Summary of Bird Observations

						Numbe	er of Ind	ividuals		No. of				
Common Name	Scientific Name	No. Observations ¹	No. Incidental Observations ²	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	<u>Total³</u>	Percent of Total Individuals ⁴	Points Where Observed	Highest Behavior⁵	
American Goldfinch	Spinus tristis	21	8	0	0	0	9	4	0	13	2.0%	4	Р	
American Robin	Turdus migratorius	45	16	6	8	2	2	8	3	21	3.2%	15	Р	
American Tree Sparrow	Spizelloides arborea	2	0	2	0	0	0	0	0	2	0.3%	1	S	
Barn Swallow	Hirundo rustica	4	3	0	0	0	1	0	0	1	0.2%	1	FT	
Blue Jay	Cyanocitta cristata	34	20	1	3	0	0	3	7	13	2.0%	8	Р	
Bobolink	Dolichonyx oryzivorus	262	33	58	49	26	35	20	41	85	13.0%	12	Т	
Brown Thrasher	Toxostoma rufum	1	0	0	1	0	0	0	0	1	0.2%	1	NONE	
Chipping Sparrow	Spizella passerina	9	4	1	1	0	0	1	2	4	0.6%	4	S	
Common Grackle	Quiscalus quiscula	3	1	0	2	0	0	0	0	2	0.3%	2	NONE	
Common Yellowthroat	Geothlypis trichas	160	50	9	26	12	10	24	29	60	9.1%	29	S	
Eastern Kingbird	Tyrannus tyrannus	7	5	0	0	0	1	1	0	2	0.3%	2	S	
Eastern Meadowlark	Sturnella magna	7	2	3	0	0	0	0	2	5	0.8%	3	S	
Eastern Phoebe	Sayornis phoebe	13	8	1	3	0	0	0	1	5	0.8%	3	S	
Field Sparrow	Spizella pusilla	28	0	3	4	4	5	4	8	16	2.4%	9	S	
												ı		
Gray Catbird	Dumetella carolinensis	13	8	2	2	0	0	0	1	2	0.3%	3	S	
Great Blue Heron	Ardea herodias	2	1	0	0	1	0	0	0	1	0.2%	1	NONE	
Great Crested Flycatcher	Myiarchus crinitus	6	5	0	1	0	0	0	0	1	0.2%	1	S	
House Wren	Troglodytes aedon	6	3	0	0	0	0	0	3	3	0.5%	3	S	
Killdeer	Charadrius vociferus	15	8	0	2	0	0	3	2	7	1.1%	5	NONE	
Least Flycatcher	Empidonax minimus	1	0	0	1	0	0	0	0	1	0.2%	1	S	
Northern Cardinal	Cardinalis cardinalis	40	35	1	1	0	2	0	1	4	0.6%	3	S	
							_							
Northern Mockingbird	Mimus polyglottos	2	0	0	1	0	0	0	1	2	0.3%	2	S	



						Numbe	er of Ind	ividuals		No. of			
Common Name	Scientific Name	No. Observations ¹	No. Incidental Observations ²	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Total ³	Percent of Total Individuals ⁴	Points Where Observed	Highest Behavior⁵
Ovenbird	Seiurus aurocapilla	8	6	0	0	0	2	0	0	2	0.3%	2	S
Red-tailed Hawk	Buteo jamaicensis	6	5	0	0	0	0	0	1	1	0.2%	1	NONE
Red-winged Blackbird	Agelaius phoeniceus	478	96	52	106	45	90	73	16	203	30.9%	31	Т
Savannah Sparrow	Passerculus sandwichensis	193	3	14	47	5	30	50	44	89	13.6%	26	Р
Song Sparrow	Melospiza melodia	240	39	22	43	31	17	54	34	94	14.3%	35	Р
Swamp Sparrow	Melospiza georgiana	6	0	6	0	0	0	0	0	6	0.9%	1	S
Yellow Warbler	Setophaga petechia	18	11	1	3	2	1	0	0	7	1.1%	6	S
	Total	1636	373	182	304	128	207	246	196	656	100.0%		

¹ Number of observations of this species recorded; observations are summed over the duration of the study period, including incidental observations recorded during regular surveys

² Number of incidental observations over the duration of the study period; incidental observations = outside of scheduled survey, >100m away, observed out of habitat, or fly-over

³ Total number of individuals recorded over the duration of the study period where individuals observed on multiple visits constitute one individual; Excludes individuals observed incidentally

⁴ Percent contribution of species to overall observations (e.g. #ind of species/#individuals of all species); Excludes individuals observed incidentally

⁵ FT= flying through; F= foraging; X= in nesting habitat; S= singing male; P= pair observed; T= territorial display;

⁶ Listed as a State Threatened (T), Endangered (E), or as a Species of Special Concern (SC)



Table 5. Species Observed Incidentally to Surveys

Common Name	Scientific Name
Alder Flycatcher	Empidonax alnorum
American Crow	Corvus brachyrhynchos
Black-capped Chickadee	Poecile atricapillus
Canada Goose	Branta canadensis
Chestnut-sided Warbler	Setophaga pensylvanica
Common Gallinule	Gallinula galeata
Common Raven	Corvus corax
Downy Woodpecker	Picoides pubescens
Eastern Towhee	Pipilo erythrophthalmus
Eastern Wood-Pewee	Contopus virens
Mallard	Anas platyrhynchos
Mourning Dove	Zenaida macroura
Pileated Woodpecker	Dryocopus pileatus
Red-eyed Vireo	Vireo olivaceus
Rose-breasted Grosbeak	Pheucticus Iudovicianus
Ruffed Grouse	Bonasa umbellus
Scarlet Tanager	Piranga olivacea
Tree Swallow	Tachycineta bicolor
Tufted Titmouse	Baeolophus bicolor
White-breasted Nuthatch	Sitta carolinensis
Wild Turkey	Meleagris gallopavo
Wilson's Snipe	Gallinago delicata
Wood Duck	Aix sponsa
Wood Thrush	Hylocichla mustelina

Table 6. Observations of State-listed Species

Common Name	Scientific Name	Listing Status	Dates Observed	Points Where Observed	Total Number of Observations	Number of Incidental Observations	Behaviors Recorded	Essential Behaviors within Project Area
			6/29/2021		2	0	Singing Male	No
			6/18/2021, 6/25/2021, 7/2/2021		4	3	Foraging, Pair observed flying over	No



Figures



Figure 1. Regional Project Location, Mill Point Solar Project

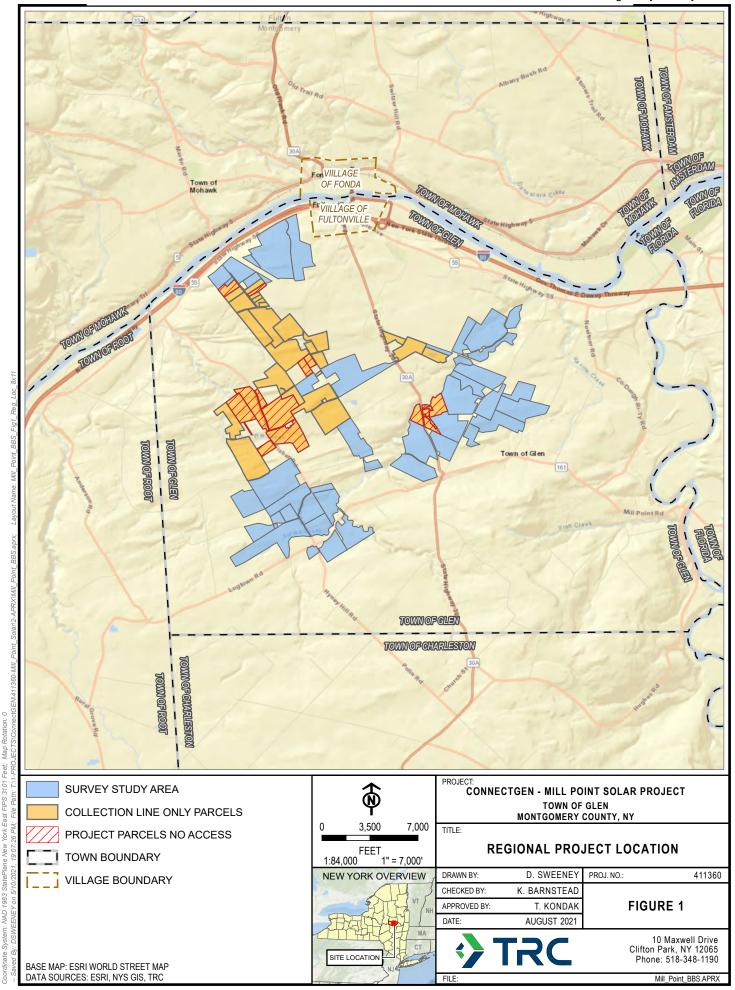
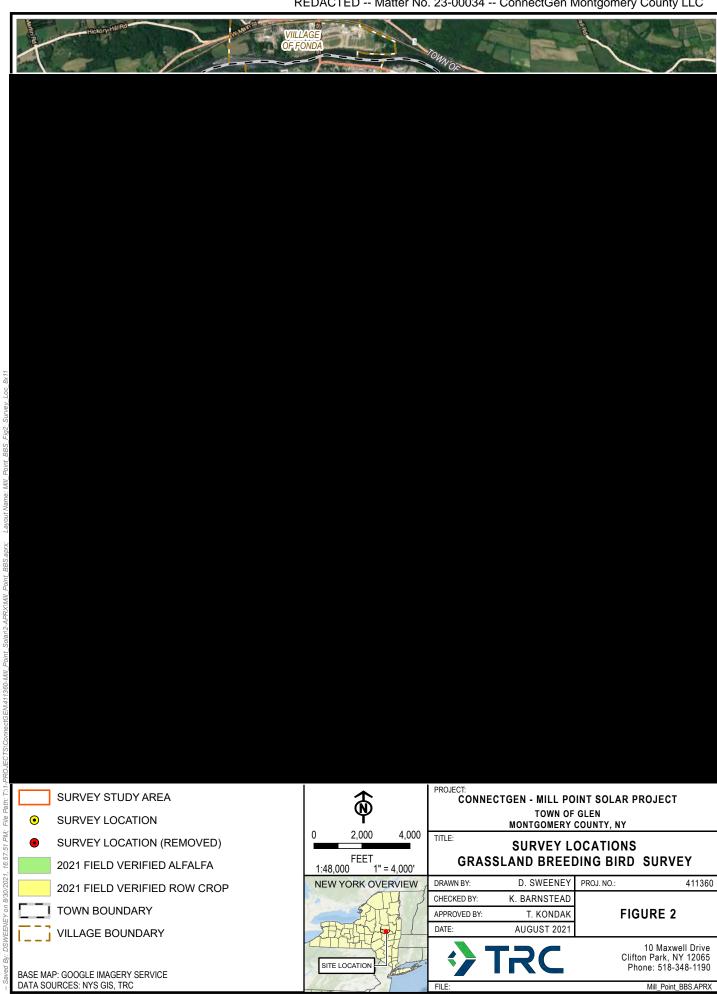




Figure 2. Survey Locations, Grassland Breeding Bird Survey



Map Rotation: 0 York East FIPS 3101 Feet; NAD 1983 StatePlane New



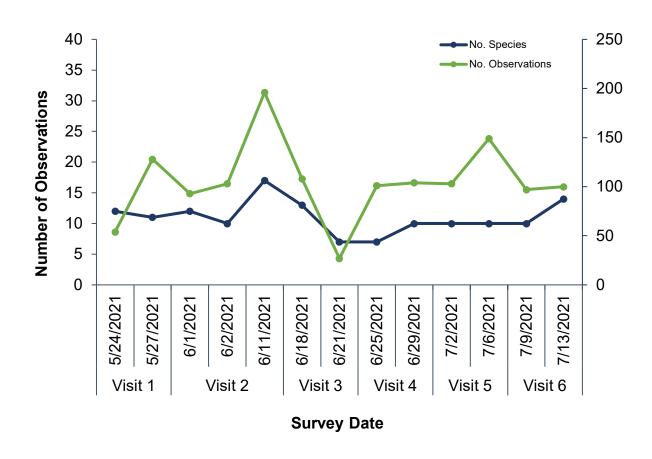


Figure 3. Summary of Species and Observations by Survey Date



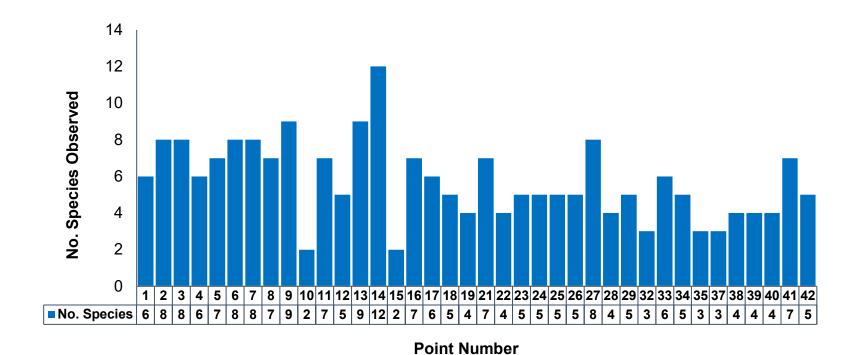


Figure 4. Number of Species Observed by Point



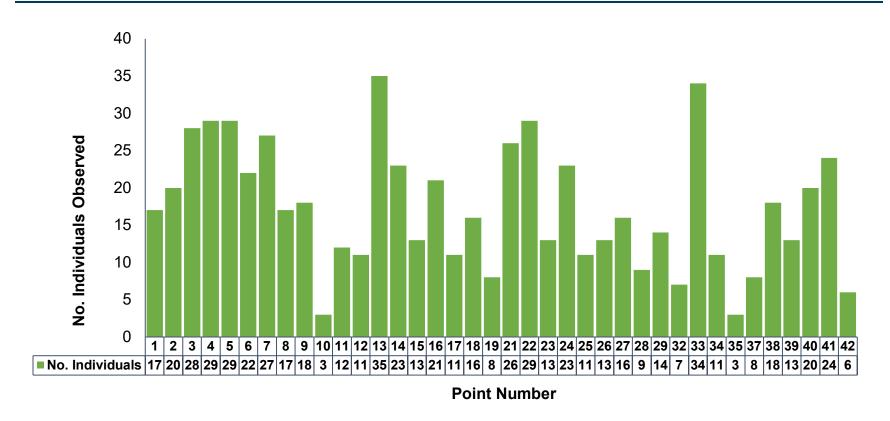
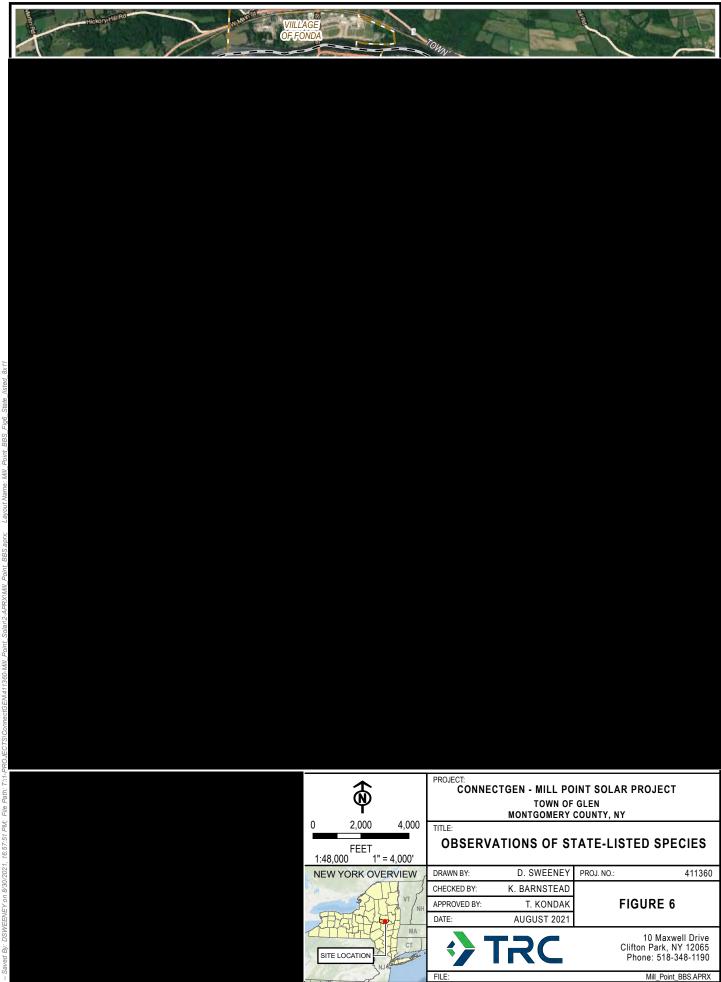


Figure 5. Number of Individuals Observed by Point.



Figure 6. Observations of State-listed Species



Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet; Map Rotation: 0 - Saved By: DSWEENEY on 8/20/2021 16:57-14 PM: File Beth: TV1.PRO IECTS/Connect/SEM411360Mill Point Soled 2-ABEX



Attachment A. Mill Point Breeding Bird Survey Study Plan and Study Plan Addendum



Grassland Breeding Bird Survey Study Plan

Draft May 2021

Mill Point Solar Project

Prepared For:

ConnectGen Montgomery County, LLC 1001 McKinney Street, Suite 700 Houston, TX 77002

Prepared By:

TRC Environmental Corporation 215 Greenfield Pkwy, Suite 102 Liverpool, NY 13088



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Figure 1. Study Area

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Appendix A. NYSDEC Survey Protocol for State-listed Breeding Grassland Bird Species

Appendix B. Example Data Form



1.0 Introduction

1.1 Project Description

ConnectGen Montgomery County LLC, a subsidiary of ConnectGen, LLC (the "Applicant") is proposing to build the Mill Point Solar Project (the Project), an approximately 250-megawatt (MW) utility-scale solar energy generating facility located in the Town of Glen, Montgomery County, New York (Figure 1). The Project Area currently includes approximately 2,739 acres of land being considered for placement of Project components (Survey Study Area), of which only a portion would be utilized for the proposed solar energy center. Mill Point Solar Project has contracted TRC Environmental Corporation (TRC) to conduct a breeding bird survey to support the development of this Project.

1.2 Background Information

Information provided by the New York State Department of Environmental Conservation (NYSDEC) on November 23, 2020 indicated that the Project Area is not within occupied habitat for any state-listed species, however it is within

Additionally, a review of habitat within the Survey Study Area identified several areas of potentially suitable breeding habitat for grassland birds. Given proximity to occupied habitat and the presence of potentially suitable habitat, the Applicant is proposing to conduct a grassland breeding bird survey of the Survey Study Area.

1.3 Purpose and Objectives

The purpose of the grassland breeding bird survey is to determine the presence and site use by state-listed threatened or endangered and rare grassland bird species during the breeding season. Rare, threatened, and endangered (RTE) and special concern (SC) grassland nesting birds in New York State include: northern harrier (*Circus hudsonius*;T), upland sandpiper (T), short-eared owl (*Asio flammeus*; E), Henslow's sparrow (*Ammodramus henslowii*; T), sedge wren (*Cistothorus stellaris*; T), grasshopper sparrow (*Ammodramus savannarum*; SC), vesper sparrow (*Pooecetes gramineus*; SC), and horned lark (*Eremophila alpestris*; SC). This study plan was developed using the *NYSDEC Survey Protocol for State-listed Breeding Grassland Bird Species* (Draft 2015; hereafter "Draft Survey Protocol") which recommends a survey of areas of potentially suitable breeding habitat to determine the extent to state-listed grassland birds are present within and utilizing the Survey Study Area to meet essential life cycle needs (i.e. foraging, nesting, cover).

The main objectives of the survey are to:

- document presence and use of state-listed species,
- summarize and map use of the Survey Study Area by state-listed species, and



• characterize the breeding bird community present within grassland habitat in the Survey Study Area.

2.0 Study Protocol

2.1 Survey Site Selection

The Survey Study Area consists of approximately 2,739 acres which was reviewed to determine the extent of grassland habitat which meets the criteria specified in the Draft Survey Protocol (Survey Area). The Survey Area is a subset of the Project Area and includes parcels where solar panel arrays will be located. Portions of the Project Area that are slated for collection line only, have been excluded from the Study Area (see Figure 1).

Survey areas were delineated based upon reviews of aerial photography, United States Department of Agriculture (USDA) Cropland Data Layer¹ and previous studies within the Survey Study Area. Additionally, a survey of landowners within the Survey Study Area was completed to confirm field conditions for the 2021 growing season. Areas identified as row crop agriculture (e.g. corn, soy, alfalfa) in the USDA Cropland Data Layer and confirmed to be planted to a row crop for the coming season were excluded from the surveyable area. The total area of grassland habitat (non-alfalfa hayfields, pasture, fallow field, and grassland) available for survey based upon this desktop review was approximately 710 acres. The results of this effort are shown in Figure 2.

Not all areas of open habitat were able to be confirmed during the landowner survey. Any areas not confirmed were included in the total area available for survey. A field verification will be completed during the first round of surveys for areas not confirmed, and the survey area refined as appropriate.

A total of 22 survey locations were selected for the study, shown in Figure 2. Survey locations were placed in areas of potentially suitable breeding habitat for grassland birds based on guidance in the Draft Survey Protocol. Point count stations (survey locations) were selected in fields of unobstructed grassland habitat (including non-alfalfa hay, pasture, fallow fields, wet meadows and successional old fields), greater than 12 acres. Locations were non-randomly placed in potentially suitable breeding habitat within the surveyable area in a manner intended to maximize the number of locations per sampling area. One survey location was placed in each field up 25 acres, with a minimum distance of 250 m between survey locations. For fields greater than 25 acres, a survey location was added for every 25 acres of contiguous habitat, provided that minimum distance between locations can be maintained. Each location was placed at least 100 meters (m) from obstructions including woodlines, hedgerows, overstory trees, existing structures, and roads. The effective survey radius for each survey location is 100 m with a circular plot centered on the observation point.

¹ USDA Cropland Data layer available online at: https://nassgeodata.gmu.edu/CropScape/



2.2 Number and Timing of Surveys

Point-count surveys will be conducted during the breeding season for grassland breeding birds in New York, defined in the Draft Survey Protocol as May 20 to July 20. The Survey Study Area will be visited weekly throughout the study period to achieve consistent temporal presence during each week of the study period. Each survey location will be visited bi-weekly throughout the study period, with at least one visit during late May, two during June and one during early July. A complete survey event will consist of surveys at each survey location conducted over a one-week period, with each site visited once during the survey event. No location will be surveyed more than once in a seven-day period.

Surveys will be completed in the morning starting as early as 30 minutes before sunrise until no later than 10:30 AM. The order of surveys will be rotated in each survey event such that every survey location will be surveyed during different time periods within the survey window over the course of the study. At least one survey will be completed before haying or mowing is done at the site, if possible. If any of the fields in which survey locations are proposed are converted to row crops, surveys at these locations will cease.

Meander surveys will be conducted while walking between survey locations during each survey period to record species incidentally observed outside of the point-count surveys, wherein any birds observed while the surveyor is walking to/from survey locations will be recorded as incidental observations.

2.3 Observer Preparedness

Field biologists with experience in conducting standard point-count surveys, including identification of birds by call, will complete the surveys. In addition, observers will receive onsite training to familiarize themselves with the stationary point locations, routes between survey patches, and the Survey Study Area as a whole. This training will also note the importance of maintaining the acclimation period between survey points. Biologists will be outfitted with binoculars with magnification of 10x42 or higher.

2.4 Weather Observations

Weather conditions will be noted at the beginning of each survey and whenever they change significantly during the surveys. The following parameters will be recorded for every survey:

- wind speed and direction,
- temperature,
- relative humidity,
- barometric pressure,
- percent cloud cover,
- visibility (approximate distance in kilometers [km]), and



precipitation.

Surveys will not be conducted in adverse weather conditions (e.g., winds >10-12 mph, heavy rain or fog, etc.)

2.5 Conducting Surveys

Point counts will be conducted for five minutes at each survey location during which all birds detected within 100 m by sight and sound will be recorded. Point counts will begin after waiting one to two minutes in silence after arriving at the point to allow birds to recover from any disturbance (acclimation period). Birds detected greater than 100 m from the location during the five-minute count or during meander surveys while walking between locations will be documented in a separate column on field data forms as incidental observations. Birds detected as fly-overs or fly-throughs will also be noted as incidental observations.

3.0 Data Management and Recordkeeping

3.1 Recording Data

Detailed weather and bird observation data will be collected during each survey. All data will be entered into the cloud-based data management program Fulcrum©, which can be accessed by smartphone or tablet. An example of the data form is provided as Appendix B.

At each survey location, information to be recorded will include:

- date,
- observer name(s),
- site name,
- patch name,
- point number,
- start and end time of observation period,
- survey period, and
- weather information.

During the 5-minute point count, the following data will be recorded:

- · species identification,
- number of individuals per species,
- mode of detection (song, call, visual),
- distance of bird(s) from observer (to the closest 5 m)
- behavior (nesting, flying, perching, singing, etc.), and



• "highest" behavior code for each species.

Observations for listed species will be as detailed as possible. Observers will document behaviors consistent with the definitions and codes used in the New York Breeding Bird Atlas. Exact locations of observations will be recorded, as well as documentation of any active nests, perches, or flight paths.

Site description information and vegetation data will also be recorded on a data form after completion of the point counts, including:

- patch size (in acres),
- habitat type,
- distance from a trail or road (to closest 5 m),
- distance from hedgerow or woodline (to closest 5 m),
- vegetation measurements within 25 m of the survey point:
 - vegetation density (rank, moderate, sparse)
 - o percent cover of each vegetation type (grass, forb, woody, etc.),
 - o dominant grass and forb species,
 - o percent bare ground,
 - o average vegetation height (in centimeters [cm]),
 - o litter depth (in cm),
 - o nearest shrub above vegetation height (in m),
- · presence of invasive species, and
- recent management practices.

Vegetation measurements will be visually estimated for percent cover metrics. Vegetation height will be measured using a meter stick, or comparable equipment. Density will be measured from four cardinal directions and then averaged.

3.2 Field Quality Assurance and Quality Control

Digital data sheets will be reviewed by the surveyor for completeness and accuracy prior to leaving the survey site. Any discrepancies noted will be resolved at that time. All data will undergo an additional weekly quality assurance review by the survey coordinator.

4.0 Reporting

A final field report will be prepared following completion of the survey season. The report will include:

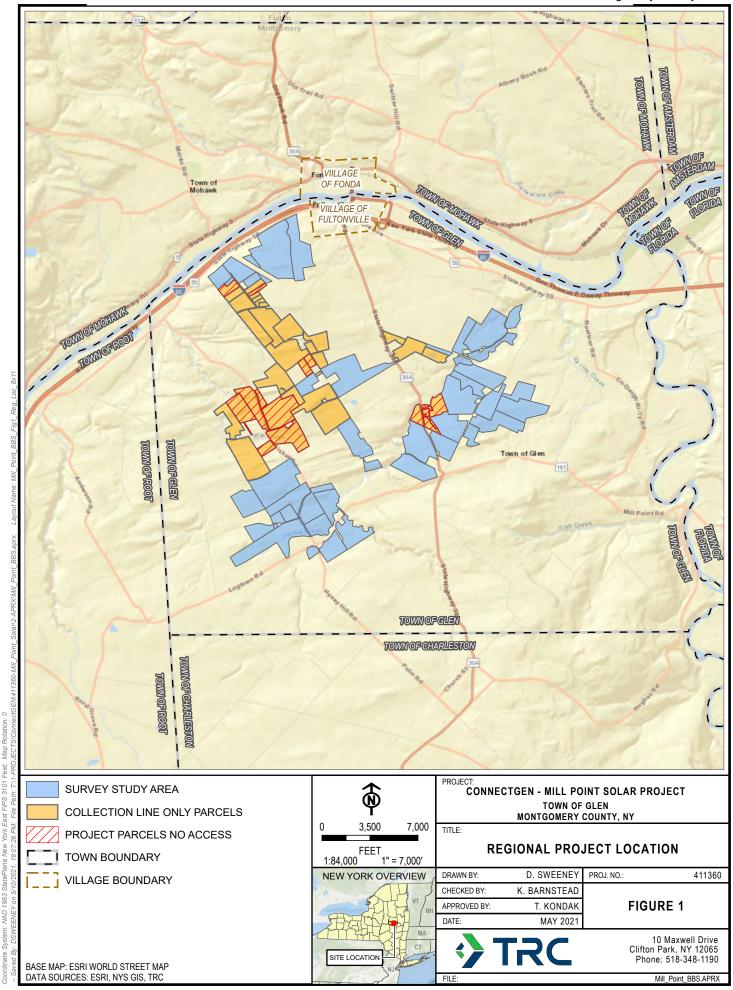
- data forms.
- maps with an aerial photograph basemap, and shapefiles of Survey Study Area, Survey Area and survey locations,

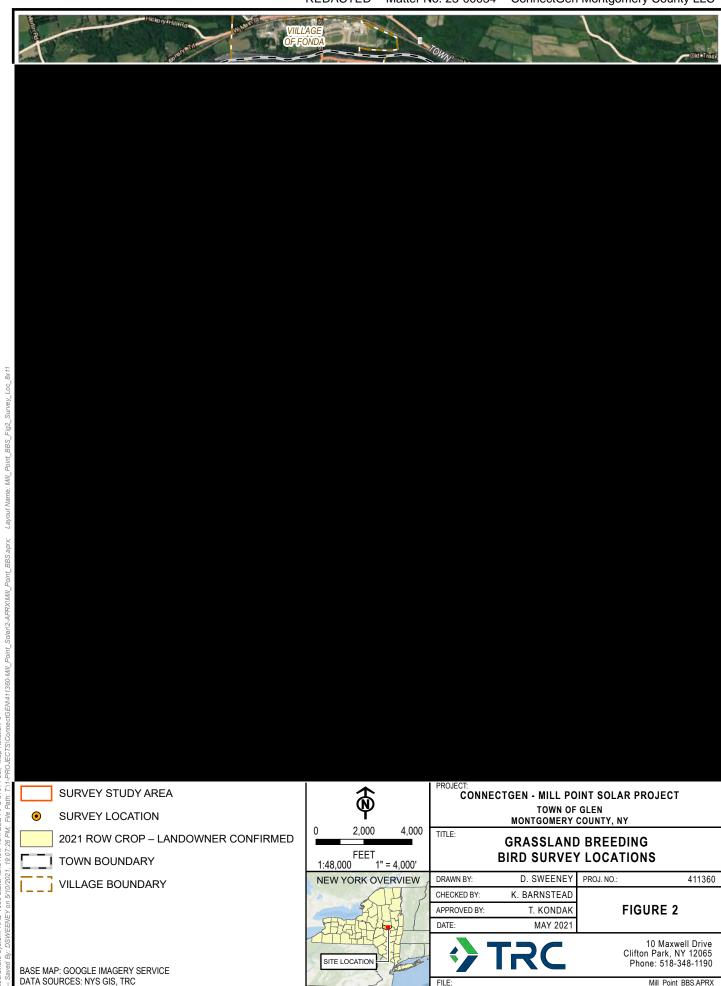


- · summary of observations,
- summaries of state-listed bird use of the Survey Study Area,
- maps and shapefiles showing location of observations, individual movements (when relevant), and locations of nests for state-listed species observed,
- a conclusion regarding whether more comprehensive studies may be necessary to assess
 the potential for the Project to negatively affect endangered or threatened grassland
 nesting species.



Figures





System: NAD 1983 StatePlane New York East FIPS 3101 Feet; Map Rotation: 0 .: DSWEENEY on 5/10/2021, 19:07:36 PM: File Path: T.VI-PROJECTS\ConnectG



Appendix A: NYSDEC Draft Survey Protocol for State-Listed Breeding Grassland Bird Species

New York State Department of Environmental Conservation Survey Protocol for State-listed Breeding Grassland Bird Species DRAFT- 2015

These protocols describe requirements for determining presence and site use by state-listed threatened/endangered and rare grassland bird species during the breeding season as part of the NYSDEC permit review process for a project application. Rare, threatened, and endangered (RTE) and special concern (SC) grassland nesting birds in New York State include: Northern Harrier (T), Upland Sandpiper (T), Short-Eared Owl (E), Henslow's Sparrow (T), Sedge Wren (T), Grasshopper Sparrow (SC), Vesper Sparrow (SC), and Horned Lark (SC). Habitat characteristics of project sites will also be recorded. Information obtained from these surveys will be considered in determining the possible need for additional comprehensive studies, regulatory review and, if necessary, avoidance, minimization, and/or mitigation strategies pursuant to 6 NYCRR Part 182.9.

Survey Periods

Surveys should be conducted during the breeding season from 20 May through 20 July. The survey protocols are geared toward the **optimal** window for surveys for all RTE grassland species that might be expected, while the regulatory guidelines are intended to span the earliest through latest dates of possible breeding across all RTE grassland species. At a minimum, there will be one survey period in late May, two in June, and one in July. At least one survey period should be completed before any haying or mowing is done at the site. Additional surveys may be required in late April or early May if breeding Short-Eared Owls and/or Northern Harrier are to be targeted. During each survey period, the study area will be surveyed once in the morning. In addition, if the project review indicated the potential for Henslow's Sparrow to be on the site, an evening survey should also be done during each survey period.

Establishing Survey Points

Point count surveys will be the accepted methodology, and all points will be placed in suitable grassland habitat. Suitable grassland sites are areas ("patches") larger than 12 acres (approximately 5 hectares) that are dominated by grasses and forbs. There may be multiple grassland patches at each site separated by obstructions such as forests, hedgerows, large roads, and developed areas. Sampling areas within patches will be defined by outlining the section of each grassland patch that is 100 meters from obstructions as mentioned above.

Each point count will be a circular plot survey centered on the observation point. Each point will have a 100-meter radius and the minimum distance between survey point centers in all directions will be 250 meters. The size of the grassland sampling area determines the number of points that are established. Survey points are placed to obtain the maximum number of points per sampling area. The initial placement of the circles/points does not need to be random, although, they need to be systematically located

to cover the entire sampling area. As many points at each site as possible will be surveyed, but in larger grassland patches the actual points to survey will be randomly selected from all possible points in the sampling area. At least 1 point per 25 acres (approximately 10 hectares) should be surveyed. The surveys should also include qualitative meander surveys. Meander surveys should be done between points and will help to ensure that the most suitable habitats for RTE grassland birds have been adequately covered.

Timing of Surveys

Morning surveys will be conducted starting at a half hour before sunrise when feasible until no later than 10:30am. Evening surveys will be conducted one hour before sunset until two hours after sunset. At least seven days must pass between surveys. The order in which points are surveyed will be reversed during each count, so that the same point is not always surveyed during the same time period.

Surveys will not be conducted during inclement weather, including precipitation, fog, or strong winds (i.e. greater than 10-12mph).

Conducting Surveys

Standard point counts are to be conducted for five minutes after an initial 1-2 minutes of silence after arriving at the point to allow birds to recover from any disturbance. All birds observed within approximately 100 meters of points will be recorded, and birds observed beyond 100 meters from the point and during meander surveys (while walking between points) will be recorded in a separate column on the data sheet.

Recording Data (sample data sheet attached)

Data recorded for each survey point will include: date; observer name(s); site name; patch name; point number; start and end time of observation period; survey period; whether an evening survey or not, and weather information (including temperature, wind speed and direction, precipitation and cloud cover). During the five minute point count, species identification, number of individuals per species (<5, 6-10, or > 10, but if possible actual number), behavior (nesting, flying, perching, singing, etc.) and the "highest" behavior code will be recorded for each species. Also recorded will be species heard or seen while doing meander surveys or walking between points and flyover species.

Site description information will be collected on a separate data sheet after the point counts are complete during each survey period and will include information such as: patch size, habitat type, distance from a trail or road, distance from hedgerow or wood line and vegetation measurements within 25 meters of the survey point.

Vegetation measurements are as follows: Percent cover of each vegetation type (i.e. grass, forb, woody, etc.); dominant grass and forb; percent bare; average vegetation height; litter depth; and nearest shrub above vegetation height. A robel pole should be used for average height and density measured from four cardinal directions and then averaged. The

presence of invasive species, and any recent management practices should also be recorded.

Reporting Requirements

A detailed, site-specific work plan, including survey point locations should be developed and submitted to NYSDEC for review and written approval prior to the start of field work. A final report should be submitted to NYSDEC at the conclusion of each year of surveys. Final reports should include: data sheets; maps (ideally recent aerial photographs); summaries of all observations of grassland birds (and any other state-listed species observed); and a conclusion regarding whether more comprehensive studies may be necessary to assess the potential for the project to negatively affect endangered or threatened grassland nesting species.



Appendix B: Example Data Form

Survey Record ID Number
Created
Updated
Location
Overview
Client
Project
Visit Number
Observer
Observer Initials
Point
Survey ID
Survey Date
Start Time
Begin Time
End Time
Address
Weather and Site Condition
Wind Speed
Temperature (C)
Precipitation
Humidity (%)
Pressure (inHG)
Cloud Cover(%)
Visibility (km)
Noise Disturbance
Observation Record (One for each observation is shown)
Observation ID
Species Observed
Species Code
Species Common Name
Species Scientific Name
Fly Over?
>100 m away?
Out of habitat?
Detection Type
Sex
Approximate Distance (m)
Special Behavior

Out of habitat?		
Detection Type		
Sex		
Approximate Distance (m)		
Special Behavior		
Survey Comments		
Species Summary		
Observations Summary		
NOHA Summary		
NOHA Count	0	
NOHA Male Count	0	
NOHA Female Count	0	
NOHA Unknown Count	0	
NOHA >100m Fly-over Count	0	
, 	-	
UPSA Summary		
UPSA Count	0	
UPSA Male Count	0	
UPSA Female Count	0	
UPSA Unknown Count	0	
UPSA >100m Fly-over Count	0	
SEOW Summary		
SEOW Count	0	
SEOW Male Count	0	
SEOW Female Count	0	
SEOW Unknown Count	0	
SEOW >100m Fly-over Count	0	
HESP Summary		
HESP Count	0	
HESP Male Count	0	
HESP Female Count	0	
HESP Unknown Count	0	
HESP >100m Fly-over Count	0	
SEWR Summary		
SEWR Count	0	
SEWR Male Count	0	
SEWR Female Count	0	
SEWR Unknown Count	0	
SEWR >100m Fly-over Count	0	
GRSP Summary		
GRSP Count	0	

GRSP Male Count	0	
GRSP Female Count	0	
GRSP Unknown Count	0	
GRSP >100m Fly-over Count	0	
VESP Summary		
VESP Count	0	
VESP Male Count	0	
VESP Female Count	0	
VESP Unknown Count	0	
VESP >100m Fly-over Count	0	
HOLA Summary		
HOLA Count	0	
HOLA Male Count	0	
HOLA Female Count	0	
HOLA Unknown Count	0	
HOLA >100m Fly-over Count	0	
Vegetation Measurements		
Habitat Type		
Describe management		
Vegetation height (cm) - North		
Vegetation height (cm) - East		
Vegetation height (cm) - South		
Vegetation height (cm) - West		
Average vegetation height (cm)		
Vegetation density		
Percent grass		
Percent forb		
Percent bare ground		
Percent woody		
Total percent cover		
Dominant grass		
Dominant forb		
Dominant forb Litter depth (cm)		



102-106 West State St. 3rd Floor Ithaca, NY 14850 **T** 607.330.4332 TRCcompanies.com

July 13, 2021

Mr. Joseph Murray State of New York Office of Renewable Energy Siting Empire State Plaza 240 State Street, P-1 South, J Dock Albany NY 12242

Submitted via email to: joseph.murray@ores.ny.gov

RE: Mill Point Solar Project – Breeding Bird Survey Study Plan

Dear Mr. Murray,

On behalf of ConnectGen Montgomery County, LLC, TRC has prepared this response to your comments on the Mill Point Solar Breeding Bird Study Plan, submitted to your office on May 14, 2021. Please consider this an addendum to the previously provided study plan.

Based on the newly released "Field Survey Protocol for State-listed Breeding Grassland Bird Species," and recommendations from your office, ConnectGen has implemented weekly surveys at the proposed survey locations. The increased effort will result in a total of four (4) survey periods in June and two (2) survey periods in July, wherein each location is visited once during each survey period. Although the release date of the above referenced protocol precluded the completion of an additional survey period, all locations were surveyed once during late May yielding a total of seven (7) survey periods.

During subsequent field reconnaissance efforts, several areas of the Project were confirmed to contain both monocrop alfalfa fields and fields containing alfalfa intercropped with rye grass. As requested, survey locations have been added to these areas as shown on Figure 1 and will be surveyed for a minimum of four visits between June and July in an effort to comply with the recommendations of ORES, however we ask for additional clarification on this issue as noted further below. Additionally, the field effort resulted in the identification of several areas of the Project planted with corn. Survey locations in these areas have been removed from the study. Figure 1 shows the current distribution of survey locations.

The original methods for selecting survey locations complied with the "New York State Department of Environmental Conservation Survey Protocol for State-listed Breeding Grassland Bird Species DRAFT- 2015." In prior years, it has not been the recommendation of the agency to require surveys be conducted in fields comprised of row crops, including monocrops of alfalfa. Alfalfa when planted in a monocrop does not provide the vegetative structure and diversity consistent with habitat requirements for at-risk grassland birds, as described in "A Plan for Conserving Grassland Birds in New York," (Morgan & Burger 2008), which identifies a low tolerance for forbs (<20% cover) among four of five listed species discussed in the report. Additional clarification and perhaps discussion on this recommendation is requested.

We thank you for your comments and welcome any additional discussion regarding these changes to the proposed Study Plan.

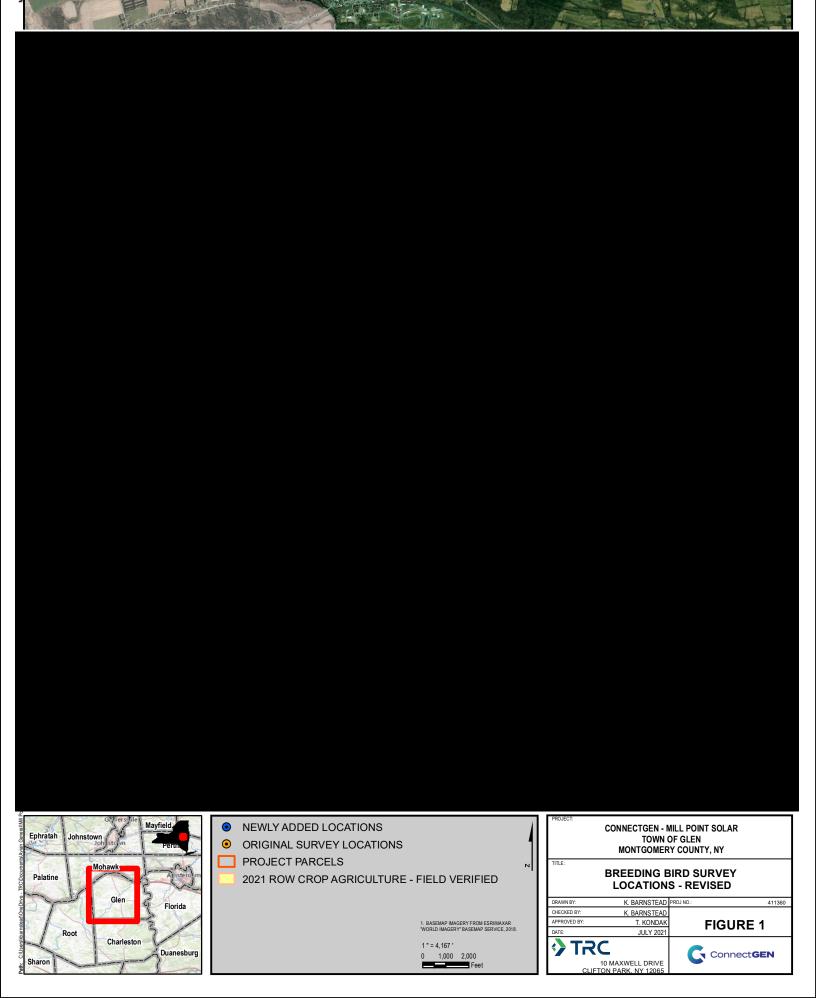
Thank you,

Kirsten E. Barnstead Environmental Scientist

cc: Houtan Moaveni, ORES
Dan Rosenblatt, NYSDEC
Rande Patterson, ConnectGen, LLC
Eddie Barry, ConnectGen, LLC
James Muscato, Young / Sommer, LLC
Tegan Kondak, TRC

Figures

Figure 1. Revised Breeding Bird Survey Locations





Attachment B. Mill Point Solar Project Breeding Bird Survey Data Sheets (provided as .zip file)