WINTERING GRASSLAND RAPTOR SURVEY

MILL POINT II SOLAR PROJECT

TOWN OF GLEN, MONTGOMERY COUNTY, NEW YORK

CONNECTGEN LLC

PROJECT NO.: 31402465.001.01-B5951
DATE: JUNE 2022

WSP USA INC.
50 LAKEFRONT BOULEVARD, SUITE 111
BUFFALO, NY 14202

WSP.COM

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LIST OF ABBREVIATIONS AND ACRONYMS

ConnectGen	ConnectGen LLC
°F	degrees Fahrenheit
Facility	Mill Point II Solar Project
mph	miles per hour
NYSDEC	New York State Department of Environmental Conservation
ORES	Office of Renewable Energy Siting
WGR	Wintering Grassland Raptor
WSP	WSP USA Inc.

1 INTRODUCTION

1.1 BACKGROUND

ConnectGen LLC (ConnectGen) is developing the Mill Point II Solar Project (Facility), a photovoltaic facility, in the town of Glen, Montgomery County, New York. Figure 1-1 presents the proposed Facility Site at the time of the wintering grassland raptor (WGR) surveys. Infrastructure proposed within the Facility Site includes construction of photovoltaic solar panels and associated racking system, pad-mounted inverter/transformers, an interconnection area, perimeter security fences, and access roads.

WSP USA Inc. (WSP) conducted WGR surveys at the Facility Site from December 15, 2021, to April 14, 2022. An avian study plan was submitted to the Office of Renewables Energy Siting (ORES) based on 19 New York Codes, Rules and Regulations § 900-1.3(g) in February 2022 (WSP 2021). The study plan was prepared consistent with the New York State Department of Environmental Conservation (NYSDEC) *Draft Survey Protocol for State-Listed Wintering Grassland Raptor Species* (NYSDEC 2021). WGR surveys typically start in mid-November; this study had a late start date due to not wanting to miss an entire winter survey season opportunity despite the early project development stage. The study plan was submitted to ORES on February 11, 2022, and ORES provided comments on the study plan on February 22, 2022.

The objectives of the wintering grassland raptor surveys were as follows:

1. Collect information on the presence of state-listed WGR species at the Facility Site.
2. Document particular areas used by state-listed WGR species, such as foraging areas or roost sites, within the Facility Site.
3. Report the baseline data resulting from surveys.
4. While it is not a direct objective of the survey or the report, it is understood that the data will be used to review whether suitable or occupied habitat for bird species listed as threatened or endangered by New York State or the U.S. Fish and Wildlife Service is identified within the Facility Site as part of the ORES 94-c application process.

The methodology and results of the 2021/2022 wintering grassland raptor survey effort are summarized in this report.

1.2 STUDY AREA

The proposed parcels containing the Facility Site encompass approximately 1,500 acres in Montgomery County, New York. Figure 1-1 depicts the locations of proposed parcels and the land cover types within these parcels. The elevation at the Facility Site is between approximately 380 feet (116 meters) and 890 feet (271 meters) above sea level. Based on data from the 2019 National Land Cover Database, most of the land cover within the proposed parcels is composed of hay/pasture (approximately 42 percent) (USGS 2019). Other land cover types throughout the Facility Site include cultivated crops (16 percent), mixed forest (16 percent), deciduous forest (8

percent), and woody wetlands (9 percent). Additional cover types, all of which are less than 3 percent each, include developed open space, developed low intensity, developed medium intensity, developed high intensity, barren land, evergreen forest, shrub/scrub, herbaceous, and emergent herbaceous wetlands. Site reconnaissance is consistent with the 2019 National Land Cover Database dataset.

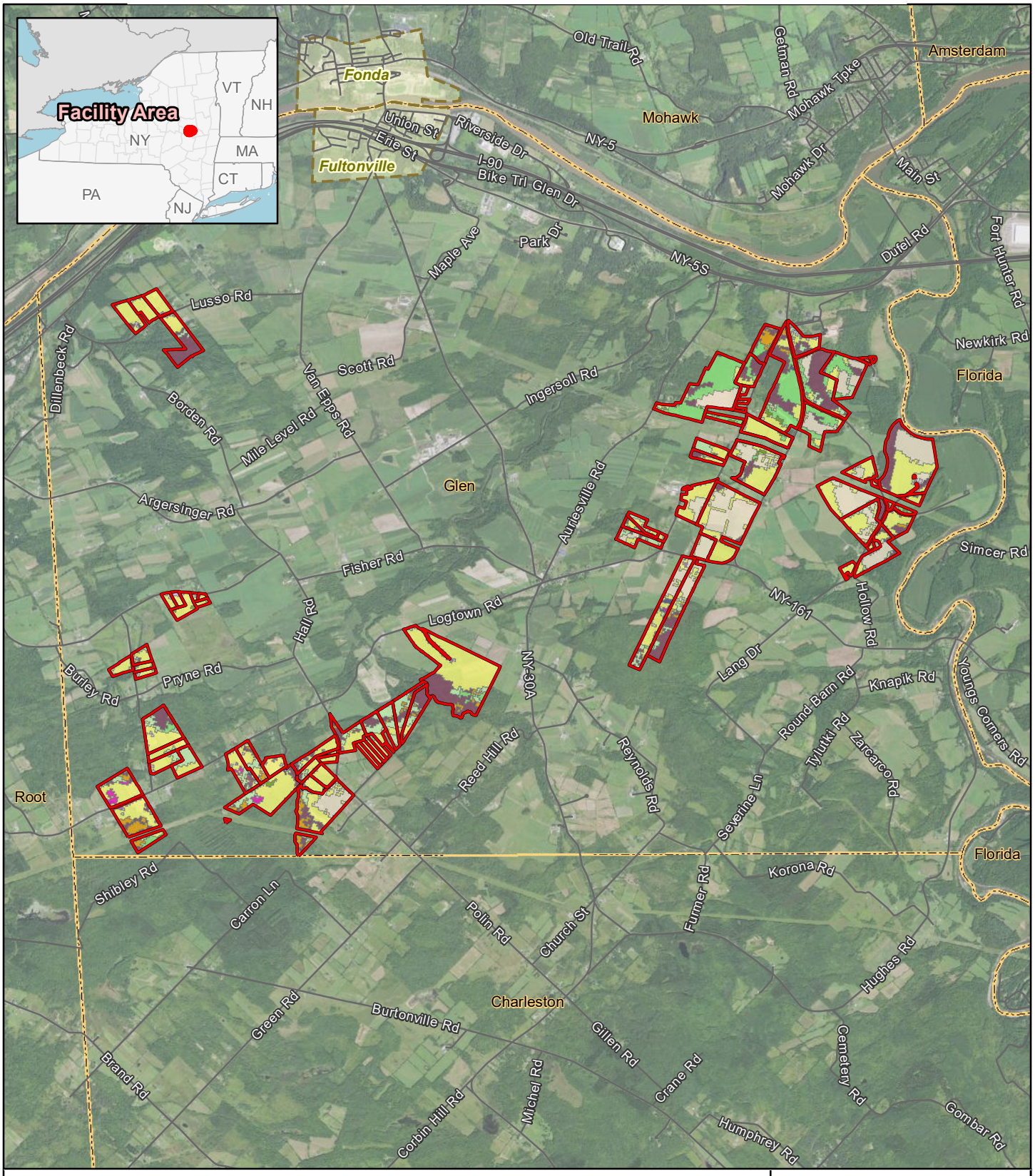

Figure 1-1
Wintering Grassland Raptor Survey
Site Vicinity and USGS National Land Cover Database (NLCD)
Mill Point II Solar
Town of Glen
Montgomery County, New York

Source: WSP 2021; ESRI 2020; NAIP 2019; NYS Office of Information Technology Services GIS Program Office (GPO) 2020, NLCD 2019.

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2 METHODS

2.1 STUDY DESIGN

The primary focus of the WGR surveys was to collect information on the occurrence and distribution of WGR species, with special attention given to New York state-listed raptor species, such as the state-listed endangered Short-eared Owl (*Asio flammeus*) and state-listed threatened Northern Harrier (*Circus hudsonius*), at the Facility Site. Survey methods to assess winter raptor use and distribution in the Facility Site were established in accordance with the study plan (WSP 2021).

As per NYSDEC guidance, both stationary evening surveys and daytime driving route surveys were employed to assess winter raptor use of the Facility Site and their distribution (NYSDEC 2021). Stationary and driving route survey locations were selected to be situated in potential open habitat within the Facility Site available for wintering Short-eared Owl and Northern Harrier. For these surveys, open habitat refers to all fields, including those in pasture, row crop, hay, alfalfa, or other field crop grown during the previous growing season; grasslands; fallow fields; early successional fields or shrubland with sparce woody growth; and wet meadows or marsh land. Stationary and driving survey locations were placed in or near open habitat at vantage points with clear visibility of the open habitat and adjusted as necessary for the surveyor's safety. The number of survey points selected were to provide full visual coverage of all open habitats greater than 25 acres in size in which project components and construction activities are proposed.

WSP identified 12 stationary evening survey locations in the study plan in open habitat that provided a wide field of view. An additional three stationary survey locations were visited one or two times early in the study and then were dropped due to the land no longer being proposed for inclusion in the Facility Site. The location of each stationary evening survey point is presented in Figure 2-1, along with a field visibility analysis for the 12 stationary evening survey points. Table 2-1 provides a description of the habitat within a 1,000-meter radius of each stationary evening survey location. Photos taken from each stationary point are provided in Appendix A.

A stationary evening survey was conducted at each of the 12 stationary points approximately four times a month from December 2021 through March 2022, totaling 16 surveys for each stationary point. Other than the late start (starting December 15 instead of November 15), which led to a reduced number of survey periods, the study plan was in accordance with the NYSDEC protocol (NYSDEC 2021). As per NYSDEC protocol, the surveys would continue into April 2022 if any Short-eared Owl or Northern Harrier were documented in the second half of March. Several [redacted] were observed after March 15, adding one survey period (17 total) concluding on April 14, 2022.

Based on the selection criteria outlined in NYSDEC's guidelines (NYSDEC 2021), the daytime driving route survey involved stopping at 12 designated roadside points during a one-day survey that includes driving all roads at the Facility Site. The survey locations were selected throughout the Facility Site with preference given to locations from which open habitat can be easily viewed (see Figure 2-1).

A driving route survey was performed each survey period (17 surveys total, conducted approximately weekly) from mid-December 2021 through mid-April 2022. As with stationary surveys, driving surveys were continued into April 2022 after [redacted] was documented at the site in the second half of March.

Table 2-1 Habitat Description within a 1,000-meter Radius of Stationary Survey Locations (S) and Driving Survey Locations (D) at the Mill Point II Solar Project

Point ID	Habitat Description
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Table 2-1 Habitat Description within a 1,000-meter Radius of Stationary Survey Locations (S) and Driving Survey Locations (D) at the Mill Point II Solar Project

Point ID	Habitat Description
[redacted]	[redacted]
D2	Hay/pastoral fields surround the survey point, with deciduous forest beyond the field to the south, and east. An isolated patch of deciduous forest surrounded by hay/pasture is north of the survey point, beyond which is a mixed forest and woody wetland.
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
D6	Hay/pastoral fields surround the survey point, with cultivated agricultural field beyond the field to the north and south. An area of low intensity development is adjacent to the survey point following Logtown Road.
D7	Hay/pastoral fields surround the survey point, with cultivated agricultural fields beyond the field to the south and east, and a mixed forest to the northeast.
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
D12	The survey point borders a cultivated agricultural field to the south and west and hay/pastoral field to the north and east. Beyond the hay/pasture is a cultivated agricultural field to the north and northeast.
D13	Hay/pastoral fields surround the survey point, with mixed and deciduous woodlands beyond the field to the north and south. A narrow area of low intensity development follows the road adjacent to the survey point.

2.2 FIELD METHODS

2.2.1 STATIONARY EVENING SURVEYS

Twelve stationary points were typically surveyed once during each of the 17 survey periods between December 15, 2021, and April 14, 2022. During a stationary evening survey, the avian surveyor scanned the open habitat with binoculars and/or a spotting scope to look for and identify raptors utilizing the Facility Site. Stationary surveys were conducted from one hour before sunset to one-half hour after sunset, which could be extended up to one hour after sunset if Short-eared Owls and/or Northern Harriers were detected, or favorable visibility conditions were present. During the survey, the avian surveyors paid particular attention to birds perching on fence posts, utility poles, and hay bales; coursing low over the ground; or perching on the ground. Observers were familiar with and listened for the bark-like call of the Short-eared Owl and rapid series of "kek" calls of the Northern Harrier.

2.2.2 DAYTIME DRIVING ROUTE SURVEYS

One driving survey was conducted for each of the 17 survey periods, approximately one week apart. Each driving survey involved stops at 12 roadside points. Five of the 17 driving surveys conducted included a thirteenth stop. At each driving point, a WSP avian surveyor exited their vehicle and scanned the surrounding open areas for a 5-minute period before recording the data and proceeding to the next roadside point. Additional time was spent at a point if one of the target species was observed to the extent practicable. The surveyor stopped to document the occurrence of any raptors observed during transit between points. The location of the sighting was noted; for analysis these individuals were categorized to the nearest driving survey point. Driving surveys were conducted during the afternoon and took place on the same days as a stationary survey. The driving route surveys started approximately 2.5 hours prior to sunset with a duration of approximately 1.75 hours, which allowed sufficient time before the start of the stationary survey on the same day.

2.2.3 DATA COLLECTION

Data recorded during the stationary and driving surveys included weather conditions, local snow depth, and species and number of raptor individuals observed. The direction of the individual(s) from the observer, behavior, flight direction (if applicable), and flight height were also noted. The probability of whether the individual had been observed previously, as well as any notes detailing potential roosting, migration, or breeding behaviors, were recorded. Flight directions were noted when raptors were observed to fly into or out of an area of visibility. Flight paths of state-listed species were sketched on aerial imagery in the field. [redacted] were noted to the best extent practicable. All other sightings of bird species encountered during the surveys were recorded as incidental observations. Additional details were noted for any federally and state-listed threatened or endangered bird species encountered as well as other grassland bird species (e.g., Horned Lark [*Eremophila alpestris*], Snow Bunting [*Plectrophenax nivalis*], and Lapland Longspur [*Calcarius lapponicus*]), provided such observations did not detract from the detection of winter raptors.

2.3 DATA ANALYSIS

Following each survey day, data sheets were scanned and uploaded to a secure server, and data were entered into a Microsoft Excel spreadsheet. Flight path sketches were drawn in Google Earth. Prior to any analysis, the data were checked for accuracy and completeness.

Data were analyzed from each survey location using raptor abundance and species richness as baseline measures. Abundance was calculated as the number of sightings for each raptor species at each survey point for stationary and driving surveys over the entire survey period. Species composition was generated as a list of all raptor species observed, while species diversity was the number of species observed at each stationary or driving survey point over the entire survey period. Sighting rate was calculated as the total number of sightings divided by hours of effort. The duration of each visit to a stationary point was a minimum of 1.5 hours, while the duration of each visit to a driving survey point was a minimum of 5 minutes; however, the unit of sighting rate (sightings per hour) was used for both survey types for consistency and ease of comparison. Sighting rate was used to calculate raptors per hour by survey point and by survey period for both stationary and driving surveys.

Relative abundance was calculated as the proportion of the number of each species relative to the total sightings for the entire survey period. Species frequency was calculated as the percentage of stationary or driving surveys in which a raptor species was observed.

2.4 SPECIES OF CONCERN

All federally and/or state-listed threatened and endangered species and species of special concern were identified and recorded, along with the number observed, survey point, approximate location and/or flight path, behavior, and date and time observed. The data recorded for target species is otherwise consistent as described in Section 2.2.3. Shapefiles of point count survey locations and any sightings of all federally and/or state-listed threatened and endangered species were provided to ORES separately.

2.5 INCIDENTAL OBSERVATIONS

Incidental observations included non-raptor bird species that were identified during stationary and driving surveys. The surveyor recorded the species and number for these incidental observations, provided such observations did not detract from the detection of winter raptors. Given the relatively brief amount of time spent at each driving survey point, incidental observations during driving surveys were rarely recorded. The incidental data were not used in the final quantitative analysis.

2.6 WEATHER CONDITIONS

Surveys were completed during appropriate weather conditions to allow target species to be detected. Surveys were generally not conducted during periods of precipitation, fog, or moderate to strong winds (i.e., sustained wind speeds greater than 12 miles per hour [mph], or Beaufort Scale 3), although some stationary surveys experienced periods of precipitation or maximum winds

greater than 12 mph. If a survey location experienced sub-optimal weather conditions during one visit, surveyors made a point to time the next survey at that location during optimal weather conditions.

Weather data, including temperature, cloud cover, and wind speed and direction were recorded at the start of each stationary survey and driving survey. Temperature, wind speed, and wind direction were obtained using the Wunderground or Weather Channel mobile application and verified by the surveyor's observations in the field. Cloud cover was estimated by the surveyor.

2.7 QUALITY ASSURANCE AND QUALITY CONTROL

Field staff were responsible for reviewing their data forms for completeness, accuracy, and legibility at the end of each survey date. The data were reviewed by the project manager for quality assurance. Irregular or potentially questionable data were flagged and discussed with field personnel.

Street
Town Boundary
Village Boundary
Facility Area
Driving Route Stop
Stationary Point
Field-observed Visibility Range from Stationary Points

Note: Points S1, S3, and S15 were suveyed once or twive and then dropped from the study.

0 0.5 1 Miles

Figure 2-1
Wintering Grassland Raptor Survey
Survey Locations and Viewable Areas for Stationary Survey Locations
Mill Point II Solar
Town of Glen
Montgomery County, New York

Source: WSP 2021; ESRI 2020; NAIP 2019; NYS Office of Information Technology Services GIS Program Office (GPO) 2020.

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3 RESULTS

3.1 SURVEY OVERVIEW

WSP conducted 204 stationary surveys (319.0 hours of survey effort) and 17 driving surveys (207 driving stops; 24.1 hours of survey effort) from December 15, 2021, through April 14, 2022 (see Table 3-1). The December 15 start date meant that the first three survey periods of the season were missed (periods 1 and 2 in the second half of November and period 3 in early December); however, additional surveys at the stationary survey points backfilled for the missed period 3 and for some points also period 2. Stationary survey point locations S1, S3, and S15 were each surveyed one or two times and then were dropped from the study due to changes in the proposed project development. Raptor sightings at these three locations are presented as incidental sightings and are excluded from the analyses in this section.

Seven of the 12 final stationary points were surveyed 17 or 18 times, meeting or exceeding the number of visits specified in the study plan. Additional surveys conducted at survey points S4, S5, S7, S11 and S12 helped compensate for previous surveys at these points that had poor weather conditions (see Section 3.6). Three of the stationary points were surveyed 16 times (points S9, S10, and S14) and two points were surveyed 15 times (points S2 and S8). Some surveys were missed over the course of the season due to inclement weather; point S8 was visited twice in April to help compensate for missed surveys. However, some surveys were longer than 1.5 hours, such that survey points S9 and S14 were surveyed for either close to or exceeding the 25.5 total hours (duration of 17 1.5-hour surveys) anticipated for the study (see Table 3-2).

Across the two types of surveys, 203 sightings of 12 raptor species were recorded (see Tables 3-2 and 3-3). There were two [redacted] sightings (plus one incidental sighting), 36 [redacted] sightings (plus three incidental sightings), one sighting of a [redacted], and 37 [redacted] sightings. Since [redacted] was detected in the second half of March 2022, an additional survey period following period 18 was conducted per NYSDEC protocol. Full survey results are presented in Appendix B.

Table 3-1 Summary of Survey Dates per Stationary Point and Driving Route, Mill Point II Solar Project, December 2021 through April 2022

Survey Point	December	January	February	March	April	Total Surveys
S1	12/15	-	-	-	-	1
S2	12/15, 12/20, 12/30	1/4, 1/7, 1/10, 1/28	2/9, 2/15, 2/23	3/5, 3/14, 3/17, 3/21	4/12	15
S3	12/15, 12/20	-	-	-	-	2
S4	12/15, 12/20, 12/21, 12/28	1/6, 1/14, 1/19, 1/20	2/1, 2/9, 2/16, 2/17	3/1, 3/10, 3/14, 3/18, 3/25	4/8	18
S5	12/16, 12/22, 12/27	1/3, 1/8, 1/10, 1/18, 1/25	2/5, 2/11, 2/17, 2/28	3/13, 3/15, 3/22, 3/23, 3/30	4/11	18

Table 3-1 Summary of Survey Dates per Stationary Point and Driving Route, Mill Point II Solar Project, December 2021 through April 2022

Survey Point	December	January	February	March	April	Total Surveys
S6	12/16, 12/23, 12/27	1/3, 1/4, 1/11, 1/20, 1/27	2/6, 2/16, 2/21, 2/23	3/1, 3/16, 3/25, 3/30	4/4	17
S7	12/17, 12/22, 12/30	1/4, 1/12, 1/21, 1/28	2/7, 2/18, 2/23	3/1, 3/6, 3/15, 3/18, 3/22, 3/24, 3/29	4/13	18
S8	-	1/8, 1/13, 1/18, 1/21, 1/27	2/7, 2/21, 2/24	3/2, 3/8, 3/16, 3/17, 3/29	4/1, 4/11	15
S9	12/17, 12/21, 12/29	1/5, 1/13, 1/21, 1/28	2/8, 2/15, 2/18, 2/28	3/8, 3/15, 3/20, 3/26	4/12	16
S10	12/16, 12/20, 12/23	1/3, 1/13, 1/18, 1/24	2/3, 2/10, 2/13, 2/24	3/3, 3/16, 3/24, 3/29	4/14	16
S11	12/17, 12/22, 12/27	1/5, 1/11, 1/14, 1/21, 1/31	2/2, 2/11, 2/18, 2/26	3/2, 3/14, 3/23, 3/28, 3/29	4/13	18
S12	12/17, 12/22, 12/28	1/5, 1/11, 1/15, 1/20, 1/24, 1/25	2/7, 2/14, 2/18, 2/21	3/4, 3/10, 3/22, 3/28	4/12	18
S13	12/22, 12/27	1/6, 1/13, 1/19, 1/26	2/2, 2/8, 2/15, 2/24,	3/16, 3/18, 3/21, 3/22, 3/23, 3/27	4/14	17
S14	12/24, 12/28	1/6, 1/12, 1/16, 1/26	2/1, 2/7, 2/10, 2/16	3/1, 3/11, 3/15, 3/24, 3/26	4/11	16
S15	-	1/7, 1/12	-	-	-	2
Driving (D1 through D13)	12/31	1/8, 1/22	2/5, 2/15, 2/22	3/3, 3/10, 3/15, 3/21, 3/23, 3/24, 3/25, 3/28, 3/29	4/1, 4/11	17

Note: Stationary survey points S1, S3, and S15 were each surveyed one or two times and then were dropped from the study due to land access issues.

3.2 RAPTOR ABUNDANCE, SPECIES DIVERSITY, RELATIVE ABUNDANCE, AND FREQUENCY

3.2.1 RAPTOR DETECTIONS BY SURVEY POINT

Stationary Evening Surveys. WSP surveyors recorded 152 sightings of 12 raptor species during stationary surveys (see Table 3-2). Abundance ranged from one to 65 raptor sightings per species. The most commonly observed species during stationary surveys was Red-tailed Hawk (*Buteo jamaicensis*; 65 sightings, 43 percent of all raptor sightings). The next most commonly observed species were [redacted].

The overall sighting rate for the stationary surveys was 0.5 raptor sightings per survey hour (see Table 3-2). The highest raptor sighting rate and raptor frequency occurred at point S14 (48 sightings; 1.9 sightings per hour), followed by points S6 (19 sightings; 0.7 sightings per hour) and S7 (16 sightings; 0.6 sightings per hour). The lowest raptor sighting rate was at point S2 (5 sightings; 0.2 sightings per hour; see Table 3-2).

Driving Surveys. WSP surveyors recorded 51 sightings of six raptor species during driving surveys (see Table 3-3). Abundance ranged from one to 27 raptor sightings per species. The most commonly observed species during driving surveys was Red-tailed Hawk (27 sightings, comprising 53 percent of all raptor sightings). The next most commonly observed species were [redacted].

The overall sighting rate for the driving surveys was 2.1 raptor sightings per hour. The survey location with the highest sighting rate and raptor frequency recorded was survey point D5, with 11 sightings and 5.7 sightings per hour. The next highest raptor sighting rates were at point D8 (8 sightings; 4.0 sightings per hour) and point D3 (7 sightings; 3.4 sightings per hour) (see Table 3-3). The survey location with the lowest sighting rate was survey point D2, where no raptors were detected.

3.2.2 RAPTOR DETECTIONS BY SURVEY PERIOD

Evening stationary surveys were conducted for each of the 17 survey periods spanning mid-December 2021 through mid-April 2022. For stationary surveys, the highest raptor sighting rate occurred in period 19 (19 sightings; 0.9 sightings per hour; see Table 3-4), followed by period 11 (13 sightings; 0.8 sightings per hour) and period 12 (12 sightings; 0.8 sightings per hour). The lowest rate of 0.1 sightings per hour (3 sightings) was recorded during period 9.

Approximately one daytime driving survey was conducted for each of the 17 survey periods, although two to three driving surveys were conducted during periods 16, 17, 18, and 19 to backfill for period 3 and other periods in which a driving survey was not conducted. For driving surveys, the highest raptor sighting rate occurred in period 13 (5.2 sightings per hour), followed by period 7 (4.8 sightings per hour) and period 19 (4.0 sightings per hour) (see Table 3-5). Period 6 had the lowest rate of 0.6 sightings per hour.

Table 3-2 Total Sightings by Stationary Point during Wintering Grassland Raptor Stationary Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	S2	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	Total
Turkey Vulture	0	0	0	0	6	0	0	0	0	0	1	0	**7**
[redacted]													
[redacted]													
[redacted]													
Red-tailed Hawk	0	1	0	10	4	5	5	2	6	4	6	22	**65**
Rough-legged Hawk	0	0	1	0	1	0	0	0	0	0	0	0	**2**
Great Horned Owl	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Barred Owl	0	0	1	0	0	0	0	1	0	0	0	0	**2**
Long-eared Owl	0	0	0	0	1	0	0	0	0	0	0	0	**1**
[redacted]													
American Kestrel	0	0	0	1	1	0	0	2	1	0	0	0	**5**
[redacted]													
Unidentified Buteo	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Unidentified Raptor	0	0	1	0	0	0	0	0	1	0	0	0	**2**
Total Raptors	**5**	**6**	**6**	**19**	**16**	**6**	**15**	**6**	**9**	**8**	**8**	**48**	**152**
Species Diversity	4	4	4	3	6	2	4	4	3	5	3	4	**12**
Frequency of Raptor Occurrence (%)	33.3	27.8	22.2	58.8	44.4	33.3	52.9	31.3	38.9	33.3	29.4	93.8	**41.4**
Frequency of Focal T/E Occurrence (%)	[redacted]												
Total No. of Surveys	15	18	18	17	18	15	17	16	18	18	17	16	**203**
Total Survey Hours	23.28	27.85	28.02	27.17	28.62	23.77	27.12	24.32	28.95	28.00	26.48	25.43	**319.0**
Sighting Rate (No. per Hour)	0.2	0.2	0.2	0.7	0.6	0.3	0.6	0.2	0.3	0.3	0.3	1.9	**0.5**

Key: T/E = Threatened or endangered

Table 3-3 Total Sightings by Driving Point during Wintering Grassland Raptor Driving Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	Total
Turkey Vulture	0	0	0	0	1	0	0	0	1	0	0	0	0	**2**
[redacted]														
[redacted]														
[redacted]														
Red-tailed Hawk	2	0	4	1	6	1	0	3	1	2	2	4	1	**27**
Rough-legged Hawk	0	0	0	0	2	0	1	0	0	0	0	0	0	**3**
Unidentified Raptor	0	0	1	0	0	0	0	0	1	0	0	0	0	**2**
Total Raptors	**4**	**0**	**7**	**2**	**11**	**1**	**1**	**8**	**4**	**5**	**3**	**4**	**1**	**51**
Species Diversity	2	0	2	2	4	1	1	3	3	2	2	1	1	**6**
Frequency of Raptor Occurrence (%)	23.5	0.0	29.4	11.8	37.5	5.9	5.9	35.3	23.5	17.6	17.6	18.8	20.0	**0.0**
Frequency of Focal T/E Occurrence (%)	[redacted]													
Total No. of Surveys	17	17	17	17	16	17	17	17	17	17	17	16	5	**207**
Total Survey Hours	2.20	2.22	2.08	1.85	1.92	1.85	1.93	1.98	1.87	1.92	2.02	1.82	0.42	**24.1**
Sighting Rate (No. per Hour)	1.8	0.0	3.4	1.1	5.7	0.5	0.5	4.0	2.1	2.6	1.5	2.2	2.4	**2.1**

Key: T/E = Threatened or endangered

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Table 3-4 Total Sightings by Survey Period during Wintering Grassland Raptor Stationary Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	December			January				February				March				April	Total
	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12	Period 13	Period 14	Period 15	Period 16	Period 17	Period 18	Period 19	
Turkey Vulture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	**7**
[redacted]	0	1	0	1	0	0	1	6	8	1	1	0	7	3	0	0	**29**
[redacted]	3	9	1	4	4	0	0	1	0	0	0	2	2	1	0	1	**28**
[redacted]	0	0	2	0	0	0	0	1	0	1	0	0	0	0	0	2	**6**
Red-tailed Hawk	0	0	5	5	3	3	5	2	3	7	3	4	5	4	9	7	**65**
Rough-legged Hawk	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	**2**
Great Horned Owl	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Barred Owl	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**2**
Long-eared Owl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
[redacted]	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	**2**
American Kestrel	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	1	**5**
[redacted]	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
Unidentified Buteo	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Unidentified Raptor	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	**2**
Total	**3**	**10**	**8**	**12**	**7**	**3**	**6**	**13**	**12**	**11**	**5**	**9**	**14**	**10**	**10**	**19**	**152**
Species Diversity	1	2	3	4	2	1	2	6	3	5	2	4	3	5	2	6	**12**
Total Survey Hours	13.63	21.73	13.35	26.35	22.55	20.77	18.45	16.92	15.78	23.63	20.33	13.08	23.78	26.43	21.92	20.28	**319.0**
Sighting Rate (No. per Hour)	0.2	0.5	0.6	0.5	0.3	0.1	0.3	0.8	0.8	0.5	0.2	0.7	0.6	0.4	0.5	0.9	**0.5**

Table 3-5 Total Sightings by Survey Period during Wintering Grassland Raptor Driving Surveys, Mill Point II Solar Project, December 2021 through April 2022

	December			January				February				March				April	
Species	**Period 4**	**Period 5**	**Period 6**	**Period 7**	**Period 8**	**Period 9**	**Period 10**	**Period 11**	**Period 12**	**Period 13**	**Period 14**	**Period 15**	**Period 16**	**Period 17**	**Period 18**	**Period 19**	**Total**
Turkey Vulture	0	0	0	2	0	0	0	0	0	1	0	0	2	0	0	3	**8**
[redacted]	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
[redacted]	0	0	1	0	0	0	0	0	0	0	0	1	0	2	2	2	**8**
[redacted]	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	**3**
Red-tailed Hawk	0	0	0	1	0	4	0	2	0	7	0	0	1	3	4	5	**27**
Rough-legged Hawk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	**2**
Unidentified Raptor	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	**2**
Total	**0**	**0**	**1**	**4**	**0**	**4**	**0**	**2**	**1**	**9**	**0**	**2**	**3**	**6**	**7**	**12**	**51**
Species Diversity	0	0	1	2	0	1	0	1	1	3	0	2	2	3	3	4	**6**
Total Survey Hours	0.00	0.00	1.72	0.83	0.00	1.87	0.00	1.18	1.08	1.73	0.00	1.55	3.18	3.47	4.45	3.00	**24.1**
Sighting Rate (No. per Hour)	N/A	N/A	0.6	4.8	N/A	2.1	N/A	1.7	0.9	5.2	N/A	1.3	0.9	1.7	1.6	4.0	**2.1**

3.3 THREATENED AND ENDANGERED SPECIES

No federally listed threatened or endangered species were observed during the stationary or driving surveys. Sightings of [redacted] are detailed in this section. Although these surveys were conducted outside the breeding season for most raptor species, it should be noted that no breeding behaviors of threatened or endangered species were observed during surveys.

[redacted]

WSP recorded three [redacted] sightings; two during stationary point surveys and one as an incidental observation. On February 7, 2022, a [redacted] was detected at point [redacted] south of the observer in direct flight approximately 50 feet above ground level. It perched in a tree until no longer visible due to darkness. On March 5, 2022, a [redacted] was detected audibly at point [redacted]. The [redacted] was heard calling south of the observer but there was no visual confirmation. Following a survey at point [redacted] on March 22, 2022, the observer incidentally observed a [redacted] approximately [redacted] from the survey point while leaving the site. The [redacted] was observed [redacted]

[redacted]

WSP recorded a total of 39 [redacted] sightings at the site. There were 28 [redacted] sightings during surveys at [redacted] stationary points and eight during the driving surveys (see Tables 3-2 and 3-3). In addition, two [redacted] were observed at point [redacted], and one [redacted] was observed at point [redacted] in December 2021, prior to these points being dropped from the study (sightings from points [redacted] were not included in the analyses presented in Section 3.2).

Point [redacted] had the highest number of [redacted] sightings for stationary surveys (eight sightings), followed by [redacted] (seven sightings). Stationary survey points [redacted] each had three [redacted] sightings, and points [redacted] each had two sightings. Driving points [redacted] and [redacted] also had two [redacted] sightings each. Stationary survey points [redacted] and driving survey points [redacted] each had one [redacted] sighting. Nearly all observations were in [redacted], with some limited use of [redacted]. Table 3-6 provides details on date, location, essential behavior type (i.e., roosting/potential roosting or foraging), and sighting notes for each [redacted] sighting. [redacted] locations and flight paths are presented in Figure 3-1.

Two sightings involved potential roosting behavior, at points [redacted]. Two [redacted] (one adult male and one adult female) were observed at point [redacted] during a stationary survey on December 15, 2021. The adult male was observed north of the observer from 4:00 p.m. to 4:22 p.m. The male hunted and landed on the ground in a hayfield for three minutes, then perched in a tree until it flew south. The adult female [redacted] was observed from 4:15 p.m. to 4:16 p.m. west of the observer, flying low and landing [redacted], not leaving for the duration of the survey and potentially roosted at this location. The second occasion was at

point [redacted] on December 16, 2021. One [redacted] (unknown age/sex) was observed from 4:11 p.m. to 4:12 p.m., north of the observer. The individual flew low to the ground, calling, before descending and landing behind a [redacted]. The individual was not detected leaving the area for the duration of the survey and potentially roosted at this location.

[redacted] were observed in foraging flight during 23 of the total 39 sightings (59 percent of observations). [redacted] were observed in direct flight or soaring, without foraging flight, in 16 of the sightings (41 percent of observations). In 25 of the [redacted] sightings, the birds were observed flying less than or equal to 10 meters above ground level; in 14 sightings the individual was observed only flying above 10 meters above ground level. Three of the [redacted] sightings on December 23, 2021, were of individuals that had been observed previously during the survey (five sightings across two individuals).

Twenty-four of the total 39 [redacted] sightings (including the sightings at points [redacted]) occurred early in the season, from periods 4 through 8 (mid-December to mid-January). There were six [redacted] sightings between periods 15 and 19 (early March through mid-April).

[redacted]
One [redacted] was observed in direct flight [redacted] of point [redacted] during a stationary survey on March 22, 2022, at 6:18 p.m. The individual was observed moving quickly to the west before disappearing from view.

[redacted]
WSP recorded 29 [redacted] sightings during the stationary surveys and eight sightings during the driving surveys (see Tables 3-2 and 3-3). Twenty-four of the 37 total sightings occurred at point [redacted], including six [redacted] observed on February 1, 2022, and at least four individuals seen on February 10, 2022. [redacted] is visible to [redacted]; many of the [redacted] sightings at this point were associated with [redacted]. There were three sightings each at driving points [redacted], and two sightings at driving point [redacted]. Stationary points [redacted] each had one [redacted] sighting each. [redacted] sightings occurred between December 21, 2021, and April 11, 2022, with 16 of the sightings occurring in February (periods 11 through 14) and 10 sightings in March (specifically periods 16 and 17). Twenty-two of the 37 [redacted] sightings were adult individuals, 14 were immature individuals, and one was of unknown age.

Table 3-6 provides details on date, location, and sighting notes for each [redacted] sighting. [redacted] locations and flight paths are presented in Figure 3-1.

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
[redacted]	[redacted]	2/7/2022	1	[redacted]	None	Bird was observed in direct flight approximately 50 feet high until it perched in [redacted]. Bird was perched until it was no longer visible due to dark-ness.
[redacted]	[redacted]	3/5/2022	1	[redacted]	None	Heard calling to south; no visual.
[redacted]	[redacted]	3/22/2022	1	Incidental	None	Seen while leaving survey site ([redacted]). Individual seen flying over road and perching in tree in nearby field.
[redacted]	[redacted]	12/15/2021	1	[redacted]	Foraging	Adult male flew in from west, approximately 15 feet from ground, landed on ground, left after 3 minutes and perched in tree until 16:22, then flew south.
[redacted]	[redacted]	12/15/2021	1	[redacted]	Foraging, Potential Roosting	Adult female flew in from north, approximately 20 feet from ground, then landed behind shrub line. Did not leave while observer was present.
[redacted]	[redacted]	12/16/2021	1	[redacted]	Foraging, Potential Roosting	Unknown age/sex flew in from SW, about 30 feet from ground,[redacted] while descending behind [redacted] Did not observe it leaving the area.
[redacted]	[redacted]	12/17/2021	1	[redacted]	Foraging	Juvenile or female, low for-aging flight and departed east.
[redacted]	[redacted]	12/17/2021	1	[redacted]	None	Resighted individual from previous; flew from off-site from the E, onto site to the W, and back E off-site
[redacted]	[redacted]	12/20/2021	1	[redacted]	Foraging	Perched in tree along SW shrub line; did not see bird arrive. Took off to the west

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
						and circled around field going N out of view.
[redacted]	[redacted]	12/20/2021	1	[redacted]	Foraging	Observed from [redacted] [redacted] mile outside Facility Site, foraging until flew farther N.
[redacted]	[redacted]	12/21/2021	1	[redacted]	Foraging	Adult male foraging low then flying NW.
[redacted]	[redacted]	12/21/2021	1	[redacted]	Foraging	Resighted individual from previous observation; foraging low and departed NE.
[redacted]	[redacted]	12/21/2021	1	[redacted]	None	[redacted] flying straight NE, medium height.
[redacted]	[redacted]	12/23/2021	1	[redacted]	Foraging	Immature foraging, flew offsite to the S.
[redacted]	[redacted]	12/23/2021	1	[redacted]	Foraging	Resighted immature foraging, flew off-site to the W.
[redacted]	[redacted]	12/23/2021	1	[redacted]	Foraging	Resighted immature foraging, flew off site to SE.
[redacted]	[redacted]	12/23/2021	1	[redacted]	None	Second [redacted]. Flying quickly SE.
[redacted]	[redacted]	12/23/2021	1	[redacted]	Foraging	Resighted immature foraging, flew off-site N.
[redacted]	[redacted]	12/29/2021	1	[redacted]	Foraging	Female-type foraging low.
[redacted]	[redacted]	12/31/2021	1	[redacted]	None	Female-type fly through heading east over [redacted].
[redacted]	[redacted]	1/4/2022	1	[redacted]	Foraging	[redacted], foraging low then departed N.
[redacted]	[redacted]	1/5/2022	1	[redacted]	Foraging	[redacted], foraging low then departed N.
[redacted]	[redacted]	1/5/2022	1	[redacted]	Foraging	Potential resight of previous individual, foraging then flew W.
[redacted]	[redacted]	1/7/2022	1	[redacted]	None	Female flew into patch via wind gusts, quickly left patch. Seemed more so blown into patch than intentionally entered.
[redacted]	[redacted]	1/10/2022	1	[redacted]	None	Perched on snag, then flew off to the east
[redacted]	[redacted]	1/12/2022	1	[redacted]	Foraging	Adult female came in from NW flying less than 10 feet of the ground, landing SE at

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
						scrub-shrub SS edge. Then [redacted] flew back N uphill.
[redacted]	[redacted]	1/12/2022	1	[redacted]	Foraging	Adult female looped around the field and disappeared over a rise.
[redacted]	[redacted]	1/14/2022	1	[redacted]	Foraging	Adult male foraging low then departed west.
[redacted]	[redacted]	2/1/2022	1	[redacted]	None	Female-type in direct flight heading SE.
[redacted]	[redacted]	3/3/2022	1	[redacted]	Potential Foraging	Soared around open grass-land before turning NW out of sight in tree line
[redacted]	[redacted]	3/6/2022	1	[redacted]	None	Adult female arrives from [redacted], di-rectly over survey point fly-ing east, flew over [redacted]
[redacted]	[redacted]	3/8/2022	1	[redacted]	Foraging	Flying very low scanning ground below. Adjusted flight several times due to wind until breaking off low flight into direct flight to the Southwest beyond tree line.
[redacted]	[redacted]	3/15/2022	1	[redacted]	None	Direct flight from E [redacted]
[redacted]	[redacted]	3/16/2022	1	[redacted]	None	Flew directly through point [redacted] from south, flying out of sight into [redacted]
[redacted]	[redacted]	3/18/2022	1	[redacted]	None	Flew through across point [redacted] flying high heading NW.
[redacted]	[redacted]	3/21/2022	1	[redacted]	Foraging	Adult male flew up S tree line; approximately 5 feet off ground, flying SE up the hill.
[redacted]	[redacted]	3/21/2022	1	[redacted]	None	Adult female came in over S tree line and turned back SW out of sight behind trees.
[redacted]	[redacted]	3/25/2022	1	[redacted]	None	Flew through [redacted] parcel heading NW over tree line.
[redacted]	[redacted]	3/29/2022	1	[redacted]	Foraging	Adult male [redacted] field, picked up something

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
						from ground and landed east of the point.
[redacted]	[redacted]	4/1/2022	1	[redacted]	Foraging	Adult male came in over trees from SW, circled, took off W out of sight.
[redacted]	[redacted]	4/1/2022	1	[redacted]	None	Adult male came in low from east over trees, fly through to [redacted].
[redacted]	[redacted]	4/11/2022	1	[redacted]	None	Perched off to north, then flew west. Quick sighting.
[redacted]	[redacted]	3/22/2022	1	[redacted]	N/A	Direct flight medium height heading west.
[redacted]	[redacted]	12/21/2021	1	[redacted]	N/A	Adult flew in from WNW roughly 50 meters above ground, exited patch ENE.
[redacted]	[redacted]	1/5/2022	1	[redacted]	N/A	Adult perched in deciduous tree, flew SW into woods.
[redacted]	[redacted]	1/8/2022	2	[redacted]	N/A	Adults circling off to SE.
[redacted]	[redacted]	1/26/2022	1	[redacted]	N/A	Adult flying low far to NE. Perched on forest edge briefly, then flew off heading NW.
[redacted]	[redacted]	2/1/2022	4	[redacted]	N/A	First four (3 adults and 1 immature) flew in over [redacted]
[redacted]	[redacted]	2/1/2022	2	[redacted]	N/A	[redacted] no. 5 and no. 6 (1 adult and 1 immature) flew in over [redacted]
[redacted]	[redacted]	2/10/2022	1	[redacted]	N/A	Adult flying parallel to [redacted]. Soared over tree line to NE out of sight.

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
[redacted]	[redacted]	2/10/2022	1	[redacted]	N/A	Flew in heading W along [redacted] Possibly a resight of a previous [redacted]. Perched N of [redacted] for the majority of survey. Flew out of sight beyond tree line shortly before end of survey.
[redacted]	[redacted]	2/10/2022	1	[redacted]	N/A	Spotted 30 feet away from second [redacted] perched near the [redacted] Stayed perched for majority of survey. Flew N out of view around sunset.
[redacted]	[redacted]	2/10/2022	1	[redacted]	N/A	Immature spotted soaring next to the two adults next to [redacted]. Flew behind a large conifer out of sight.
[redacted]	[redacted]	2/10/2022	1	[redacted]	N/A	Immature flying SW from other [redacted] locations. Flew along [redacted] and out of view. Possible resight from first immature spotted in the same area.
[redacted]	[redacted]	2/10/2022	2	[redacted]	N/A	Two immatures flew from over [redacted] Fighting mid-flight, locking talons. Both [redacted] separated after fight, flying over [redacted].
[redacted]	[redacted]	2/14/2022	1	[redacted]	N/A	Immature was perched on arrival; very strong winds. Took off NW flying towards the ground before gone behind trees.
[redacted]	[redacted]	2/17/2022	1	[redacted]	N/A	Adult flew in from E approximately 75 feet out soaring over point [redacted]. Continued direct flight heading NW.
[redacted]	[redacted]	2/22/2022	1	[redacted]	N/A	Immature flying over road to the north. Out of view over tree line.

Table 3-6 New York State-Listed Species Identified during Wintering Grassland Raptor Surveys, Mill Point II Solar Project, December 2021 through April 2022

Species	Listing Status	Date Identified	No. Sightings	Survey Point	Essential Behavior Type	Sighting Notes
[redacted]	[redacted]	3/1/2022	1	[redacted]	N/A	Adult flew in from E, flap/soar flight, traveling W then turned and continued N.
[redacted]	[redacted]	3/11/2022	2	[redacted]	N/A	Two immatures flew towards [redacted]
[redacted]	[redacted]	3/11/2022	2	[redacted]	N/A	Two immatures fighting before splitting off in opposite directions.
[redacted]	[redacted]	3/11/2022	1	[redacted]	N/A	Resighted immature circled back perched on tree.
[redacted]	[redacted]	3/11/2022	1	[redacted]	N/A	Perched next to third [redacted].
[redacted]	[redacted]	3/14/2022	1	[redacted]	N/A	Adult flying over woods; SE to NW then turned SW.
[redacted]	[redacted]	3/15/2022	2	[redacted]	N/A	Two adults (male and female) flew into the sight, circled and flew back from the direction they came from.
[redacted]	[redacted]	3/24/20223	1	[redacted]	N/A	Adult soaring over NW tree line. Going SW then turned SE.
[redacted]	[redacted]	3/24/2022	1	[redacted]	N/A	Immature following closely behind adult in previous observation.
[redacted]	[redacted]	3/24/2022	1	[redacted]	N/A	Second adult flew from E to N low with something in its talons; increased altitude going N over tree line out of sight.
[redacted]	[redacted]	4/11/2022	3	[redacted]	N/A	Soaring high off to NE heading North.

Key:
* Stationary points [redacted] were dropped from the study after one or two visits due to land access issues.
[redacted]
N/A = Not Applicable
[redacted]

3.4 STATE-LISTED SPECIES OF SPECIAL CONCERN

Two species that are listed as New York State Species of Special Concern were identified during the surveys: [redacted]. There were six [redacted] sightings during stationary surveys, one each at points [redacted], and one observed during driving surveys at point [redacted] (see Tables 3-2 and 3-3). There were approximately 25 [redacted] recorded during the stationary survey at points [redacted]. [redacted] sightings occurred between February 2 and March 30, 2022. Locations of species of special concern detected during wintering grassland raptor surveys are presented in Figure 3-2.

3.5 INCIDENTAL OBSERVATIONS

A total of 46 non-raptor species were recorded incidentally during the stationary surveys and driving surveys (see Table 3-7). [redacted], a New York State Species of Special Concern, was the only non-raptor state-listed species identified during the surveys (see Section 3.4). A flock of approximately 100 Snow Buntings was observed during the stationary survey at point [redacted] on March 2, 2022. A single Snow Bunting was observed at stationary survey point [redacted] on February 9, 2022. One Northern Shrike (*Lanius excubitor)* was seen perched in brush during the stationary survey at point S11 on February 11, 2022.

Table 3-7 Incidental Bird Species Identified during Wintering Raptor Surveys, Mill Point II Solar Project

Common Name	Scientific Name
Canada Goose	*Branta canadensis*
Mallard	*Anas platyrhynchos*
Hooded Merganser	*Lophodytes cucullatus*
Common Merganser	*Mergus merganser*
Wild Turkey	*Meleagris gallopavo*
Mourning Dove	*Zenaida macroura*
American Coot	*Fulica americana*
Killdeer	*Charadrius vociferus*
American Woodcock	*Scolopax minor*
Great Blue Heron	*Ardea herodias*
Red-bellied Woodpecker	*Melanerpes carolinus*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Northern Flicker	*Colaptes auratus*
Pileated Woodpecker	*Dryocopus pileatus*
Eastern Phoebe	*Sayornis phoebe*

Table 3-7 Incidental Bird Species Identified during Wintering Raptor Surveys, Mill Point II Solar Project

Common Name	Scientific Name
Northern Shrike	*Lanius excubitor*
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
[redacted]	
Barn Swallow	*Hirundo rustica*
Black-capped Chickadee	*Poecile atricapillus*
Tufted Titmouse	*Baeolophus bicolor*
White-breasted Nuthatch	*Sitta carolinensis*
Brown Creeper	*Certhia americana*
Carolina Wren	*Thryothorus ludovicianus*
Golden-crowned Kinglet	*Regulus satrapa*
Eastern Bluebird	*Sialia sialis*
American Robin	*Turdus migratorius*
European Starling	*Sturnus vulgaris*
House Finch	*Haemorhous mexicanus*
American Goldfinch	*Spinus tristis*
Snow Bunting	*Plectrophenax nivalis*
American Tree Sparrow	*Spizella arborea*
Song Sparrow	*Melospiza melodia*
White-throated Sparrow	*Zonotrichia albicollis*
Dark-eyed Junco	*Junco hyemalis*
Eastern Meadowlark	*Sturnella magna*
Red-winged Blackbird	*Agelaius phoeniceus*
Brown-headed Cowbird	*Molothrus ater*
Rusty Blackbird	*Euphagus carolinus*
Common Grackle	*Quiscalus quiscula*
Northern Cardinal	*Cardinalis cardinalis*
House Sparrow	*Passer domesticus*

3.6 WEATHER CONDITIONS AND DISTURBANCES

Weather conditions were generally conducive to surveying. Temperatures for the stationary surveys had an average of 35 degrees Fahrenheit (°F), ranging from 2°F to 74°F. Starting

temperatures for the driving surveys had an average of 35°F, ranging from 12°F to 50°F. Thirty of the 203 stationary surveys experienced periods of maximum sustained winds exceeding 12 mph (15 percent of stationary surveys). Four of the 17 driving surveys experienced periods of maximum sustained winds exceeding 12 mph (23 percent of the driving surveys); winds were variable in direction. A total of 33 stationary surveys had periods of precipitation (16 percent of stationary surveys), typically light rain or snow. January 7, 2022, had times of heavy snowfall during the stationary survey at point [redacted] that reduced visibility to a quarter mile; on this date one [redacted] was observed. Other than January 7, 2022, visibility was not impacted during periods of precipitation, and raptors were observed during 14 of the 33 surveys that had precipitation. Additional surveys conducted at survey points S4, S5, S7, S11, and S12 helped compensate for previous surveys at these points that had poor weather conditions. Weather conditions during the wintering grassland raptor survey period are provided in Appendix C.

Distraction or disturbance events did not compromise any of the stationary or driving surveys. Potential instances during driving surveys were resolved by the surveyor waiting for the disturbance (e.g., interaction with a landowner or passer-by) to pass before starting the next 5-minute survey. Any interactions with landowners or passers-by during stationary surveys were kept brief, and the surveyor continued to scan for raptors during the interaction.

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Figure 3-1
Wintering Grassland Raptor Survey
Threatened and Endangered Species Flight Paths

Mill Point II Solar
Town of Glen
Montgomery County, New York

Source: WSP 2021; ESRI 2020; NAIP 2019; NYS Office of Information Technology Services GIS Program Office (GPO) 2020.

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[redacted]

Figure 3-2
Wintering Grassland Raptor Survey
Locations for
Species of Special Concern

Mill Point II Solar
Town of Glen
Montgomery County, New York

Source: WSP 2021; ESRI 2020; NAIP 2019; NYS Office of Information Technology Services GIS Program Office (GPO) 2020.

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4 DISCUSSION

During the field survey, [redacted] raptor species were observed at the Facility Site. [redacted] was observed once in early February and once in early March during stationary point surveys, and was observed once incidentally outside of the Facility Site following a stationary point survey. There were a total of 39 [redacted] sightings at the site during stationary and driving surveys. There was also one [redacted] sighting in late March during a stationary survey, and 37 [redacted] sightings during stationary and driving survey over the course of the study. The location and flight paths of all state-listed threatened species are presented in Figure 3-1.

During winter, short-eared owls gather in open habitats that support large numbers of voles, such as grasslands, marshes, and landfills. They may form communal roosts where food is abundant. Short-eared owls can be nomadic; deep snow reduces the local availability of prey and causes the owls to depart wintering areas occupied earlier in the season (NYSDEC 2022). Harriers have a wide-ranging foraging behavior, covering large areas but repeatedly visiting good hunting grounds (Smith 2020). Areas with short vegetation are less preferred and used less frequently compared to idle fields with thick vegetative cover (Smith 2020).

WSP conducted wintering grassland raptor surveys in accordance with NYSDEC's *Draft Survey Protocol for State-Listed Wintering Grassland Raptor Species* (NYSDEC 2021). With the mid-December start to the surveys, it was known at the time of the study plan submittal that not all 18 survey periods would be completed during the 2021-2022 season. The 15 to 18 surveys at 12 stationary survey points and 12 driving survey points between December 15, 2021, and April 14, 2022, provided thorough coverage of the Facility Site throughout the remainder of the 2021/2022 wintering season. With the [redacted] sightings documented in several portions of the Facility Site, along with the three [redacted] sightings, it does not seem that more comprehensive studies are necessary to adequately assess the potential for the Facility to affect endangered or threatened wintering grassland raptor species.

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5 REFERENCES

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APPENDIX

A Photos of Stationary Survey Points

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Photograph 1 – View looking west from stationary point S2.

Photograph 2 – View looking south from stationary point S2.

Photograph 3 – View looking northeast from stationary point S4.

Photograph 4 – View looking southeast from stationary point S4.

Photograph 5 – View looking southeast from stationary point S5.

Photograph 6 – View looking northeast from stationary point S5.

Photograph 7 – View looking west from stationary point S6.

Photograph 8 – View looking east from stationary point S6.

Photograph 9 – View looking west from stationary point S7.

Photograph 10 – View looking northeast from stationary point S8.

Photograph 11 – View looking southeast from stationary point S8.

Photograph 12 – View looking southwest from stationary point S8.

Photograph 13 – View looking northeast from stationary point S9.

Photograph 14 – View looking north from stationary point S10.

Photograph 15 – View looking northwest from stationary point S10.

Photograph 16 – View looking south from stationary point S10.

Photograph 17 – View looking west from stationary point S11.

Photograph 18 – View looking north from stationary point S11.

Photograph 19 – View looking southwest from stationary point S12.

Photograph 20 – View looking northwest from stationary point S12.

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Photograph 21 – Panoramic view looking east and southeast from stationary point S13.

Photograph 22 – View looking northwest from stationary point S14.

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APPENDIX

B Full Survey Results

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Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
2/7/2022	[redacted]	17:46	17:54	[redacted]	1	U	U	[redacted]	DF/P	M	[redacted]	N	[redacted]	[redacted]
3/5/2022		17:01	17:01		1	U	U		CALL	-		-		
12/15/2021		16:00	16:22		1	Ad	M		FF/P	M		N		
12/15/2021		16:15	16:16		1	Ad	F		S/FF/R	M		N		
12/16/2021		16:11	16:12		1	U	U		DF/FF/R	M		N		
12/17/2021		15:53	15:55		1	U	F		FF/P	L		N		
12/17/2021		16:31	16:33		1	U	F		S	H		U		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
12/20/2021	[redacted]	16:00	16:05	[redacted]	1	Ad	F	[redacted]	P/FF/DF	M	[redacted]	N	[redacted]	[redacted]
12/20/2021		15:58	16:16		1	A	M		FF	L		U		
12/21/2021		15:44	15:48		1	A	M		FF	L		N		
12/21/2021		16:00	16:08		1	A	M		FF	L		U		
12/21/2021		16:01	16:02		1	U	U		DF	M		N		
12/23/2021		15:31	15:34		1	Im	U		FF	L		N		
12/23/2021		15:36	15:38		1	Im	U		FF	L		Y		
12/23/2021		15:42	15:44		1	Im	U		FF	L		Y		
12/23/2021		16:08	16:08		1	U	U		DF	M		N		
12/23/2021		16:20	16:31		1	Im	U		FF	L		Y		
12/29/2021		15:34	15:40		1	U	U		FF	L		N		
1/4/2022		15:58	16:03		1	U	U		FF	L		N		
1/5/2022		15:47	15:50		1	U	U		FF	L		N		
1/5/2022		16:05	16:09		1	U	U		FF	L		U		
1/7/2022		16:26	16:27		1	Ad	F		DF	L		N		
1/10/2022		16:16	16:22		1	U	U		P/DF	M		N		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
1/12/2022	[redacted]	16:08	16:20	[redacted]	1	Ad	F	[redacted]	FF/DF	L	[redacted]	N	[redacted]	[redacted]
1/12/2022		16:25	16:31		1	Ad	F		FF	L	S E	N		
1/14/2022		16:37	16:40		1	Ad	M		FF	L		N		
2/1/2022		16:48	16:50		1	U	U		DF	M		N		
3/6/2022		16:44	16:45		1	Ad	F		DF	M		N		
3/8/2022		16:10	16:14		1	U	U		DF/FF	L		N		
3/15/2022		18:23	18:23		1	Ad	U		DF	M		N		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
3/16/2022		18:59	18:59		1	U	U		DF	L		N		
3/18/2022		18:21	18:23		1	U	U		DF	H		N		
4/11/2022		19:24	19:25		1	Ad	U		DF/P	L		N		
3/22/2022		18:18	18:18		1	U	U		DF	M		N		
12/21/2021		16:19	16:20		1	Ad	U		DF	M		N		
1/5/2022		15:58	16:20		1	Ad	U		P	M		N		
1/26/2022		16:34	16:35		1	Ad	U		FF/ P	L		N		
2/1/2022		16:30	16:33		1	Ad	U		FF/DF	M		N		
2/1/2022		16:30	16:32		1	Ad	U		FF/DF	M		N		
2/1/2022		16:30	16:32		1	Ad	U		FF/DF	M		N		
2/1/2022		16:30	16:32		1	Im	U		FF/DF	M		N		
2/1/2022		16:40	16:42		1	Im	U		FF/DF	M		N		
2/1/2022		16:40	16:42		1	Ad	U		FF/DF	M		N		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
2/10/2022	[redacted]	16:04	16:08	[redacted]	1	A	U	[redacted]	S	M	[redacted]	N	[redacted]	[redacted]
2/10/2022		16:22	17:30		1	A	U		DF/P	M		U		
2/10/2022		16:36	17:20		1	A	U		P	M		N		
2/10/2022		16:39	16:44		1	Im	U		S/P	M		N		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
2/10/2022	[redacted]	17:11	17:12	[redacted]	1	Im	U	[redacted]	DF	M	[redacted]	U	[redacted]	[redacted]
2/10/2022	[redacted]	17:20	17:22	[redacted]	2	Im	U	[redacted]	DF	M	[redacted]	N	[redacted]	[redacted]
2/14/2022	[redacted]	16:32	17:57	[redacted]	1	Im	U	[redacted]	P/ DF	L	[redacted]	N	[redacted]	[redacted]
2/17/2022	[redacted]	17:09	17:11	[redacted]	1	Ad	U	[redacted]	DF/ S	H	[redacted]	N	[redacted]	[redacted]
3/1/2022	[redacted]	17:28	17:30	[redacted]	1	Ad	U	[redacted]	DF	H	[redacted]	N	[redacted]	[redacted]

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
3/11/2022		16:45	16:47		2	Im	U		DF/ I	M		N		
3/11/2022		16:49	17:39		1	Im	U		DF/ P	M		Y		
3/11/2022		17:29	17:39		1	U	U		P	-		U		
3/14/2022		18:20	18:23		1	Ad	U		DF	H		N		
3/15/2022		18:14	18:14		2	Ad	M/ F		DF/S	H		N		
3/24/2022		17:20	17:21		1	Ad	U		DF	L/ M		N		
3/24/2022		18:51	18:53		1	Ad	U		S/DF	M		N		
3/24/2022		18:51	18:53		1	Im	U		S/DF	M		N		

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
12/27/2021	[redacted]	16:05	16:06	[redacted]	1	U	U	[redacted]	DF	M	[redacted]	N	[redacted]	[redacted]
12/28/2021		15:43	15:45		1	U	U		FF	M		N		
2/7/2022		-	-		1	-	-		-	-		-		
2/18/2022		17:07	17:09		1	Ad	U		DF/P/S	M		N		
4/8/2022		18:48	18:48		1	U	U		-	-		-		
4/15/2022		18:35	18:35		1	U	U		N/A	N/A		N		
4/13/2022		18:31	18:32	Turkey Vulture	2	U	U	E	DF	M	W	N	WO	-
4/13/2022		18:51	18:52	Turkey Vulture	1	Ad	U	E	DF	M	W	N	WO	-
4/13/2022		18:59	18:59	Turkey Vulture	1	U	U	E	DF	M	W	N	WO	-
4/13/2022		19:16	19:16	Turkey Vulture	1	U	U	E	DF	M	W	N	WO	-
4/13/2022		19:33	19:33	Turkey Vulture	1	U	U	E	DF	M	W	N	WO	-
4/15/2022		18:40	18:41	Turkey Vulture	1	U	U	NE	S	M	NW	N	PA/WO	-
12/24/2021		15:37	16:00	Red-tailed Hawk	1	Ad	U	SE	P/DF/P	M	NE	N	WO	Perched, flew NE to next perch, then back SW to new perch.
12/24/2021		15:50	16:00	Red-tailed Hawk	1	Ad	U	SE	DF/ P	M	N	N	WO	Flew from ground (NW) to perch with other RTHA (N)
12/27/2021		15:35	14:41	Red-tailed Hawk	1	Ad	U	SW	FF	M	NE	N	AG	Circling

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
12/28/2021	[redacted]	16:20	16:24	Red-tailed Hawk	2	U	U	E	P/DF	M	NE	N	WO	[redacted]
1/3/2022		-	-	Red-tailed Hawk	1	-	-	-	-	-	-	-	-	-
1/4/2022		16:10	16:18	Red-tailed Hawk	1	Ad	U	NE	P/DF	M	S	N	PA/WO	[redacted]
1/5/2022		16:40	16:54	Red-tailed Hawk	1	U	U	W	P	M	W	N	AG	Flew in from E, perched on pole
1/6/2022		15:43	15:44	Red-tailed Hawk	2	-	-	-	-	-	-	-	-	-
1/11/2022		-	-	Red-tailed Hawk	1	-	-	-	DF	-	-	-	-	flyover
1/12/2022		-	-	Red-tailed Hawk	1	-	-	-	P	-	-	-	-	-
1/15/2022		-	-	Red-tailed Hawk	1	-	-	-	FF	-	-	-	-	Foraging flight from ground
1/16/2022		15:46	15:46	Red-tailed Hawk	1	U	U	SE	DF	-	-	-	-	-
1/16/2022		16:50	16:52	Red-tailed Hawk	1	U	U	NW	P	-	-	-	-	-
1/21/2022		16:33	16:33	Red-tailed Hawk	1	U	U	NE	DF/I	-	-	-	-	-
1/24/2022		-	-	Red-tailed Hawk	1	-	-	-	P	-	-	-	-	-
1/26/2022		16:04	16:56	Red-tailed Hawk	1	Ad	U	NW	P	-	-	-	-	-
1/27/2022		15:53	16:40	Red-tailed Hawk	1	U	U	E	P/DF	L	NE	N	AG	-
1/27/2022		16:00	16:01	Red-tailed Hawk	1	U	U	W	P/DF	M	W	N	AG	-
1/28/2022		16:20	16:25	Red-tailed Hawk	1	Ad	M	NW	P/S	M	N	N	PA	-
2/2/2022		16:06	16:07	Red-tailed Hawk	1	U	U	SW	DF	L	N	N	PA	-
2/7/2022		-	-	Red-tailed Hawk	1	-	-	-	-	-	-	-	-	-

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
2/8/2022	[redacted]	15:50	16:07	Red-tailed Hawk	2	Ad	U	SW	S/I	M	ALL	N	PA	2 Ad RTHA soaring above field, into nearby plots, perching in W. Pine together. Will soar in separate directions but then meet again later. Departed in Southern direction.
2/10/2022	[redacted]	-	-	Red-tailed Hawk	1	-	-	-	-	-	-	-	-	-
2/16/2022	[redacted]	-	-	Red-tailed Hawk	2	Ad	U	-	-	-	-	-	-	-
2/16/2022	[redacted]	-	-	Red-tailed Hawk	1	U	U	-	-	-	-	-	-	-
2/16/2022	[redacted]	16:28	16:34	Red-tailed Hawk	1	Ad	U	W	P/ DF	M	W	N	AG/ WO	Powerline at beginning of survey, left to perch on adjacent powerline, continued west
2/21/2022	[redacted]	16:30	-	Red-tailed Hawk	1	Ad	U	W	P/ I/FF	M	NW	N	PA	[redacted]
2/21/2022	[redacted]	16:30	-	Red-tailed Hawk	1	U	U	W	P/I/FF	M	NW	N	PA	(Smaller RTHA)
2/21/2022	[redacted]	16:19	16:21	Red-tailed Hawk	1	Ad	M	E	DF/P	L	E	N	PA	[redacted]

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
3/1/2022	[redacted]	17:36	17:37	Red-tailed Hawk	1	Ad	U	W	P/DF/R	L	N	N	WO/ AG	[redacted]
3/1/2022		-	-	Red-tailed Hawk	1	U	U	W	DF/P	L	N	N	WO/AG	flew in behind previous RTHA, perched, called 2 times then took off N and landed under nest in conifer tree.
3/1/2022		16:47	16:56	Red-tailed Hawk	1	Ad	U	W	P	-	-	-	-	-
3/2/2022		-	-	Red-tailed Hawk	1	Im	U	NW	DF	L	E	N	PA/ WO	-
3/6/2022		-	-	Red-tailed Hawk	1	Ad	U	W	FF/DF	M	SE	N	PA/WO	-
3/8/2022		16:01	16:01	Red-tailed Hawk	1	Ad	U	NE	P/DF	M	S	N	Ag	Individual perched on tree on edge of field, flew off in S direction and quickly out of sight.
3/8/2022		17:20	17:24	Red-tailed Hawk	1	Im	U	E	DF/S	M	W	N	AG	-
3/14/2022		17:52	17:53	Red-tailed Hawk	1	Ad	U	NW	DF/P	M	W	N	WO	-
3/15/2022		17:58	18:59	Red-tailed Hawk	1	Im	U	NE	P	M	E	N	AG/PA	[redacted]
3/15/2022		18:15	18:16	Red-tailed Hawk	1	AD	U	SE	DF/P/DF	M	S	N	PA	-
3/16/2022		18:06	19:09	Red-tailed Hawk	1	U	F	E	P/I	-	-	N	PA	-
3/16/2022		18:24	18:30	Red-tailed Hawk	1	Ad	M	E	DF/P/I	L	E	N	PA	Mounted first RTHA
3/21/2022		16:54	16:55	Red-tailed Hawk	1	Ad	U	SE	FF/S	M	NE	N	PA/ WO	-
3/24/2022		18:30	18:31	Red-tailed Hawk	1	Ad	U	N	DF	M	NE	N	PA/WO	-
3/24/2022		18:04	18:28	Red-tailed Hawk	1	Ad	U	NW	P/S	M	W	N	WO/ AG	-
3/24/2022		18:26	-	Red-tailed Hawk	1	Ad	U	W	DF/R	M	N	N	WO/AG	DF to nest in conifer

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
3/24/2022	[redacted]	18:30	18:40	Red-tailed Hawk	1	Ad	U	N	P	M	SE	N	WM	Individual perched on tree on edge of field, flew off in SE direction and quickly out of sight.
3/25/2022		18:38	18:50	Red-tailed Hawk	2	Ad	U	E	P/I/DF	L	E/N	N	PA	-
3/26/2022		18:06	18:10	Red-tailed Hawk	1	Ad	U	W	P/DF	L	NW	N	WO	-
3/26/2022		19:02	19:42	Red-tailed Hawk	1	Ad	U	W	DF/P	M	-	N	WO	-
3/27/2022		19:11	19:12	Red-tailed Hawk	2	Ad	U	E	DF/S	-	NE	N	WO/PA	-
3/29/2022		6:20	7:50	Red-tailed Hawk	1	Ad	U	-	DF/S	L	W	N	PA/SS	-
3/29/2022		18:32	18:33	Red-tailed Hawk	1	Im	U	E	DF	M	NW	N	AG/PA	-
4/1/2022		-	-	Red-tailed Hawk	1	Ad	U	S	P/DF	L	N	N	PA	-
4/8/2022		18:44	18:46	Red-tailed Hawk	1	U	U	S	FF/P	L	S	N	PA	-
4/11/2022		18:54	19:13	Red-tailed Hawk	1	Ad	U	W	DF/P	H	-	N	WO	-
4/11/2022		18:34	18:34	Red-tailed Hawk	1	Ad	U	NE	I	L	SW	N	AG/H	[redacted]
4/12/2022		19:05	19:05	Red-tailed Hawk	1	Ad	U	SW	DF/ S	L	NE	N	PA	Appeared next to me while scanning the field, flew low above the road, rounded the corner and continued out of sight
4/12/2022		18:56	18:56	Red-tailed Hawk	1	Ad	U	W	FF	L	W/ N	N	PA	-
4/13/2022		19:14	19:16	Red-tailed Hawk	1	Ad	M	S	DF/P	L	N	N	PA/H	-
2/17/2022		16:28	16:30	Rough-legged Hawk	1	Im	U	NE	S	M	S	N	SS	-
3/18/2022		18:32	18:37	Rough-legged Hawk	1	U	U	W	P/S	L	NE	N	H	[redacted]
2/9/2022		-	-	Great horned Owl	1	-	-	-	-	-	-	-	-	Call; back conifer tree line
4/13/2022		19:55	20:00	Long-eared Owl	1	U	U	N	P	M	-	N	WO	Hooted a few times from the woods N of the point.
2/3/2022		-	-	Barred Owl	1	-	-	-	-	-	-	-	-	Call

Table B-1 Stationary Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
2/17/2022	[redacted]	17:07	17:07	Barred Owl	1	U	U	S	-	-	-	-	-	Heard Barred owl call
1/3/2022		-	-	American Kestrel	1	-	-	-	-	-	-	-	-	-
1/3/2022		15:32	17:05	American Kestrel	1	Ad	F	N	FF	L	NE	N	AG	Calling while in flight, landed briefly, then took off NE
3/6/2022		-	-	American Kestrel	1	Ad	U	E	DF	M	W	N	WO/PA	-
3/28/2022		18:26	18:31	American Kestrel	1	U	U	SW	DF/P	M	-	N	PA	-
4/14/2022		18:56	20:08	American Kestrel	1	Ad	M	SW	FF/P	L/M	ALL	N	AG	Male resident
2/6/2022		-	-	[redacted]	1	-	-	-	-	-	-	-	-	W -> E; M flight height, flew into WO
2/28/2022		17:28	17:28		1	U	U	SE	DF	L	SW	N	WO	[redacted]
3/2/2022		-	-		1	U	U	W	DF	L	E	N	PA	

Notes:

Detections of focal grassland raptor species are listed first in the table, then other state-listed endangered and threatened species, then species of special concern, then non-listed raptor species.

[1] Age: Ad: adult, Im: immature, U: unknown

[2] Sex: M: male, F: female, U: unknown

[3] Behavior: FF: foraging flight, DF: direct flight/fly-through, P: perched, S: soaring, I: interacting, R: roosting evidence

[4] Flight Height: L: <10 m AGL, M: 10-50 m AGL, H:>50 m AGL

[5] Resight: Y: observed earlier, U: poss. observed earlier, N: new individual

[6] Habitat: AG: agricultural, H: hedgerow, PA: pasture/hayfield, SS: scrub-shrub, WM: wet meadow/marsh, WO: woods/forest

Table B-2 Driving Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
12/31/2021	[redacted]	13:22	13:23	[redacted]	1	U	U	[redacted]	FO	M	[redacted]	N	[redacted]	-
3/3/2022		14:18	14:26		1	U	U		S/ DF	L		N		[redacted]
3/21/2022		16:55	17:00		1	Ad	M		DF/ FF	L		N		
3/21/2022		17:28	17:33		1	Ad	F		S/ DF	M		N		
3/25/2022		15:54	16:04		1	U	U		DF	L		N		
3/29/2022		17:16	17:21		1	Ad	M		FF	L		N		
4/1/2022		16:24	16:29		1	Ad	M		FF/ DF	L/ M		N		
4/1/2022		16:48	16:53		1	Ad	M		DF	L/ M		N		

Table B-2 Driving Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
1/8/2022	[redacted]	14:40	14:45	[redacted]	2	Ad	U	[redacted]	S	H	[redacted]	N	[redacted]	[redacted]
2/22/2022		-	-		1	Im	U		DF	M		N		
3/11/2022		-	-		2	Im	U		P/ DF	M		N		
4/11/2022		17:45	17:53		3	Ad	U		S	H		N		
3/24/2022		-	-		1	U	U		DF/ P	L		N		
4/1/2022	D5	-	-	Turkey Vulture	1	U	U	E	FF	M	E	N		
4/1/2022	D9	-	-	Turkey Vulture	1	U	U	SE	DF/ FF	M	NE	N		-
1/8/2022	D13	14:02	14:02	Red-tailed Hawk	1	U	U	NE	DF/ P	M	NE	N	PA	[redacted]
1/22/2022	D12	15:03	15:04	Red-tailed Hawk	1	U	U	NW	FD/ P	-	-	-	-	-
1/22/2022	D5	15:30	15:36	Red-tailed Hawk	2	U	U	SE	P	-	-	-	-	-
1/22/2022	D8	14:32	14:42	Red-tailed Hawk	1	U	U	E	-	-	-	-	-	-
2/5/2022	D3	13:47	13:53	Red-tailed Hawk	1	U	U	NE	P/ S	M	S	N	AG	-
2/5/2022	D8	12:40	12:46	Red-tailed Hawk	1	U	U	E	S	M	W	N	SS	-
2/22/2022	D10	-	-	Red-tailed Hawk	1	U	U	-	-	-	-	-	-	-
2/22/2022	D11	-	-	Red-tailed Hawk	1	U	U	-	-	-	-	-	-	-
2/22/2022	D5	-	-	Red-tailed Hawk	2	U	U	-	-	-	-	-	-	-
2/22/2022	D5	-	-	Red-tailed Hawk	2	U	U	-	-	-	-	-	-	-
2/22/2022	D9	-	-	Red-tailed Hawk	1	U	U	-	-	-	-	-	-	-
3/15/2022	D1	16:47	16:57	Red-tailed Hawk	1	U	U	NE	P	-	-	N	AG	-
3/21/2022	D3	-	-	Red-tailed Hawk	1	Ad	U	NW	S/ DF	M	S	N	AG/ WO	-

Table B-2 Driving Survey Point Data, Mill Point II Solar Project, December 2021 through April 2022

Date	Point #	Sighting Start Time	Sighting End Time	Species	Number	Age[1]	Sex[2]	Direction from Observer	Behavior[3]	Flight Height[4]	Flight Direction	Resight?[5]	Habitat[6]	Sighting Notes
3/23/2022	[redacted]	-	-	Red-tailed Hawk	2	Ad	U	SE	P/ I	L	E	N	AG/ PA	Calling in flight
3/25/2022		-	-	Red-tailed Hawk	1	U	U	W	P	-	-	N	PA/ WO	-
3/28/2022		-	-	Red-tailed Hawk	1	Ad	U	NW	DF/ P/ DF	L	N	N	PA	-
3/28/2022		-	-	Red-tailed Hawk	2	Ad	U	E	S	H	S	N	AG/ PA	-
4/11/2022		-	-	Red-tailed Hawk	1	Im	U	E	P/ DF/ P	L	S	N	PA/ WO	-
4/11/2022		-	-	Red-tailed Hawk	1	Ad	U	W	P/ DF/ P	M	NW	N	WO	-
4/11/2022		-	-	Red-tailed Hawk	1	U	U	E	S	H	SE	N	WO	-
4/11/2022		-	-	Red-tailed Hawk	1	Ad	U	E	DF	M	N	N	PA	-
4/11/2022		-	-	Red-tailed Hawk	1	Ad	U	N	S	H	N	N	PA	-
2/22/2022		-	-	Rough-legged Hawk	1	U	U	N	DF	L	NW	N	AG	-
3/3/2022		-	-	Rough-legged Hawk	1	Ad	U	S	DF	M	E	N	AG	-
3/29/2022		-	-	Rough-legged Hawk	1	Ad	U	E	DF	M	W	N	PA/WO	-
1/8/2022		15:38	15:38	[redacted]	1	U	U	W	DF	L	E	N	H	[redacted]
2/15/2022		15:43	15:48		1	U	U	SE	S/ DF	H	W	N	AG/ WO	

Notes:

Detections of focal grassland raptor species are listed first in the table, then other state-listed endangered and threatened species, then species of special concern, then non-listed raptor species.

[1] Age: Ad: adult, Im: immature, U: unknown

[2] Sex: M: male, F: female, U: unknown

[3] Behavior: FF: foraging flight, DF: direct flight/fly-through, P: perched, S: soaring, I: interacting, R: roosting evidence

[4] Flight Height: L: <10 m AGL, M: 10-50 m AGL, H:>50 m AGL

[5] Resight: Y: observed earlier, U: poss. observed earlier, N: new individual

[6] Habitat: AG: agricultural, H: hedgerow, PA: pasture/hayfield, SS: scrub-shrub, WM: wet meadow/marsh, WO: woods/forest

APPENDIX

C Weather Conditions

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Table C-1 Weather Data for Survey Dates and Dates Prior to Surveys, Mill Point II Solar Project

Survey Period	Date	Temp. F°	Wind Direction	Minimum Wind Speed (mph)	Maximum Wind Speed (mph)	Cloud Cover (%)	Precipitation (Y/N)
Day Prior	12/14/2021	43	WNW	N/A	6	0-20	N
4	12/15/2021	36	SE	5	10	100	Y
4	12/16/2021	55	ESE	4	10	76	N
4	12/17/2021	46	W	10	25	22	N
Day Prior	12/19/2021	23	W	N/A	12	80-100	N
5	12/20/2021	29	WNW	4	10	80	N
5	12/21/2021	42	ESE	2	5	20	N
5	12/22/2021	32	WNW	10	25	50%	N
5	12/23/2021	25	WNW	5	12	20	N
5	12/24/2021	27	WNW	2	3	100	N
Day Prior	12/26/2021	34	W	N/A	9	80-100	N
6	12/27/2021	29	N	0	6	100	N
6	12/28/2021	38	W	6	9	80	N
6	12/29/2021	35	E	0	4	100	N
Day Prior	12/30/2021	41	E	N/A	5	80-100	N
6	12/31/2021	41	W	0	3	100	N
Day Prior	1/2/2022	23	W	N/A	9	80-100	N
7	1/3/2022	19	SW	2	7	90	N
7	1/4/2022	28	SE	2	7	30	N
7	1/5/2022	36	SW	4	10	76	N
7	1/6/2022	29	W	4	12	80	N
7	1/7/2022	26	WNW	18	26	90	Y
7	1/8/2022	21	SW	3	6	5	N
Day Prior	1/9/2022	36	W	N/A	6	100	Y
8	1/10/2022	19	WNW	12	20	90	N
8	1/11/2022	5	W	4	12	0	N
8	1/12/2022	28	SW	2	8	100	N
8	1/13/2022	34	SW	3	7	50	N
8	1/14/2022	27	S	3	10	75	N
8	1/15/2022	2	WNW	13	14	10	N
9	1/16/2022	19	E	0	8	65	N
Day Prior	1/17/2022	25	W	N/A	16	100	Y
9	1/18/2022	20	NW	13	28	30	N
9	1/19/2022	38	SW	0	5	50	N
9	1/20/2022	20	W	15	22	0	N
9	1/21/2022	12	W	3	6	0	N
Day Prior	1/23/2022	23	WNW	N/A	12	80-100	N
10	1/24/2022	21	SE	4	6	100	N
10	1/25/2022	30	W	0	13	100	N
10	1/26/2022	15	NE	6	11	0	N

Table C-1 Weather Data for Survey Dates and Dates Prior to Surveys, Mill Point II Solar Project

Survey Period	Date	Temp. F°	Wind Direction	Minimum Wind Speed (mph)	Maximum Wind Speed (mph)	Cloud Cover (%)	Precipitation (Y/N)
10	1/27/2022	25	SE	0	5	0	N
10	1/28/2022	29	W	3	8	100	Y
Day Prior	1/30/2022	17	W	N/A	7	0-20	N
10	1/31/2022	29	E	0	3	0%	N
11	2/1/2022	34	SSE	4	13	2	N
11	2/2/2022	34	S	1	9	80	N
11	2/3/2022	34	SW	2	5	100	Y
Day Prior	2/4/2022	18	WNW	N/A	7	100	Y
11	2/5/2022	14	NW	12	23	0	N
11	2/6/2022	23	SE	4	8	11	N
11	2/7/2022	35	SE	0	6	100	Y
12	2/8/2022	33	W	4	18	100	Y
12	2/9/2022	37	E	3	10	60	N
12	2/10/2022	39	WSW	0	6	90	Y
12	2/11/2022	48	S	5	17	100	N
Day Prior	2/12/2022	29	WNW	N/A	12	80-100	N
12	2/13/2022	19	WNW	5	9	76	N
12	2/14/2022	14	WNW	17	28	0	N
13	2/15/2022	24	W	5	18	8	N
13	2/16/2022	39	S	0	8	100	N
13	2/17/2022	52	SW	8	12	100	Y
13	2/18/2022	21	WNW	12	23	90	Y
Day Prior	2/20/2022	36	SE	N/A	10	0-20	N
13	2/21/2022	50	ENE	3	6	10	N
Day Prior	2/22/2022	49	E	N/A	19	100	Y
14	2/23/2022	30	W	18	45	80	Y
14	2/24/2022	27	N	0	0	0	N
Day Prior	2/25/2022	16	W	N/A	14	80-100	N
14	2/26/2022	28	E	0	9	5	N
Day Prior	2/27/2022	30	W	N/A	18	100	Y
14	2/28/2022	20	W	9	15	76	N
14	3/1/2022	36	SE	4	9	100	Y
15	3/2/2022	32	W	5	10	100	N
15	3/3/2022	19	NW	15	20	30	N
15	3/4/2022	29	NW	5	9	0	N
15	3/5/2022	36	SE	6	10	76	N
15	3/6/2022	69	W	17	22	50	N
Day Prior	3/7/2022	47	ENE	N/A	7	80-100	N
15	3/8/2022	35	W	2	14	10	N
16	3/10/2022	40	WNW	0	6	75	N

Table C-1 Weather Data for Survey Dates and Dates Prior to Surveys, Mill Point II Solar Project

Survey Period	Date	Temp. F°	Wind Direction	Minimum Wind Speed (mph)	Maximum Wind Speed (mph)	Cloud Cover (%)	Precipitation (Y/N)
16	3/11/2022	37	SW	1	7	70	N
Day Prior	3/12/2022	22	WNW	22	29	100	Y
16	3/13/2022	29	SW	9	17	90	N
16	3/14/2022	45	SW	5	12	85	N
16	3/15/2022	47	ENE	3	8	100	Y
16	3/16/2022	52	E	3	5	0	N
17	3/17/2022	52	SE	3	5	90	Y
17	3/18/2022	63	N	1	7	50	N
Day Prior	3/19/2022	57	ESE	N/A	5	50-80	N
17	3/20/2022	39	WNW	17	30	100	Y
17	3/21/2022	54	WNW	15	28	10	N
17	3/22/2022	45	NW	10	18	10	N
17	3/23/2022	42	ESE	2	8	100	Y
18	3/24/2022	40	SE	3	7	100	Y
18	3/25/2022	46	WNW	5	9	100	Y
18	3/26/2022	45	W	7	16	90	Y
18	3/27/2022	27	WNW	10	22	100	Y
18	3/28/2022	22	NW	10	35	95	Y
18	3/29/2022	30	W	8	29	20	N
18	3/30/2022	43	SE	5	10	100	Y
Day Prior	3/31/2022	38	E	N/A	10	100	Y
19	4/1/2022	39	WNW	18	32	100	Y
Day Prior	4/3/2022	36	W	N/A	8	100	Y
19	4/4/2022	43	NW	0	7	60	N
Day Prior	4/7/2022	47	CALM	N/A	0	100	Y
19	4/8/2022	52	N	0	0	20	N
Day Prior	4/10/2022	39	WNW	N/A	16	80-100	N
19	4/11/2022	58	S	3	8	75	N
19	4/12/2022	59	W	10	26	20	N
19	4/13/2022	74	Calm	0	0	90	N
19	4/14/2022	57	W	8	20	100	N

Source: Wunderground.com

Notes: Weather data for Day Priors represents weather data from Rome, New York, for the hour prior to sunset.

Weather data for survey days representative of survey hours collected in the field or using the Wunderground weather application

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