EXHIBIT 12-A

Wildlife Site Characterization Report

Wildlife Characterization Report
Somerset Solar Project
Town of Somerset, Niagara County, New York

PRESENTED TO		PRESENTED BY	
AES Clean Energy Development LLC **195 Montague Street** **Suite 1461** **Brooklyn, NY 11201**		**Tetra Tech, Inc.** **3136 South Winton Rd** **Rochester, NY 14623**	

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1.0 INTRODUCTION

AES Clean Energy Development, LLC (AES) is proposing to redevelop portions of the inactive Somerset coal-fired power plant and adjoining properties into a 140 - 200-megawatt (MW) alternating current (AC) solar energy generation facility (the Project). AES is also considering developing the Project to support a battery energy storage system (BESS). The proposed Project is located at 7725 Lake Road within the Town of Somerset, Niagara County, New York (Figure 1).

Tetra Tech prepared this wildlife site characterization in accordance with the Final Chapter XVIII, Title 19 of the New York Codes of Rules and Regulations (NYCRR) 900-1.3(g) regulations (Section 94-C) under the New York State Office of Renewable Energy Siting (ORES) program. This requires the submittal of a wildlife site characterization during the early stages of planning and development process for the Project to determine the need for wildlife surveys.

Tetra Tech initiated a wintering grassland raptor survey on January 8, 2021, to collect applicable data during the 2020 – 2021 wintering season. The *Winter Grassland Raptor Survey Site-Specific Work Plan for the Proposed Somerset Solar Facility* (Wintering Grassland Raptor Work Plan) was submitted via email to ORES (Houtan Moaveni) and the New York State Department of Environmental Conservation (NYSDEC) (Daniel Rosenblatt) on January 5, 2021. The Wintering Grassland Raptor Work Plan describes the protocols which were followed to specifically target occurrence and use of the Project Area by the short-eared owl (*Asio flammeus*) and northern harrier (*Circus hudsonius*) that are listed as state endangered and state threatened, respectively. The Wintering Grassland Raptor Work Plan has been included as Appendix A.

1.1 Project Description

The Project would be located on the inactive Somerset coal-fired power plant and adjoining properties owned by Somerset Operating Co., LLC and would be leased to AES for the purposes of operating the renewable energy facility. The Project is located at 7725 Lake Road, Town of Somerset, Niagara County, New York, just south of Lake Ontario and approximately 13 miles northeast of the City of Lockport (Figure 1). The Project Area is comprised of several tax parcels making up approximately 1,410 acres. The actual solar array area will be smaller than the total Project Area. The Project Area and surrounding parcels are comprised of developed and disturbed industrial land, two coal combustion residue solid waste landfills, agricultural land, forestland, and wetlands. For the purposes of this report, the Study Area, is defined as the Project Area and a 5-mile radius around this Project Area, consistent with Section 94-C regulations. Figures 1 and 2 depict the location of the Project.

2.0 METHODS

This wildlife site characterization report was developed to assess the potential for federally and state listed species and the species of greatest conservation concern to occur within and in the vicinity of the Project Area. The methodology used was consistent with the ORES Final Regulations, as well as general United States Fish and Wildlife Service (UFWS) and NYSDEC guidelines.

The characterization was completed by examining publicly available sources and submitting Project-specific agency regulatory information requests. In addition, Tetra Tech on behalf of AES provided the Wintering Grassland Raptor Work Plan to ORES and the NYSDEC in January 2021. The summary of the Wintering Raptor Study observations are included detailing use of the Project Area by listed species. Within this report, federally listed species are defined as those that are federally endangered (FE), threatened (FT) or listed as a Bird of Conservation Concern (BCC) by the USFWS. State listed species include those that are State Endangered (SE), State Threatened (ST), or listed as Species of Special Concern (SSC).

2.1 Publicly Available Data Sources

The data sources used for this report include:

- Bat Conservation International (BCI 2021)
- Cornell Lab of Ornithology eBird (eBird 2021)
- Hawk Migration Association of North America (HMANA 2021)
- National Audubon Christmas Bird Count (CBC) (Audubon 2018a)
- National Audubon Important Bird Areas (Audubon 2018b)
- National Hydrography Dataset (NHD)
- National Land Cover Data (NLCD)
- National Wetland Inventory (NWI)
- NYSDEC Bird Conservation Areas (NYSDEC 2005)
- NYSDEC Breeding Bird Atlas (BBA) (NYSDEC 2007)
- NYSDEC Environmental Assessment Form Mapper (NYSDEC EAF Mapper; NYSDEC 2021b)
- NYSDEC Environmental Resource Mapper (NYSDEC ERM; NYSDEC 2021a)
- NYSDEC Freshwater Wetlands (NYSDEC)
- NYSDEC Lands and Campgrounds (NYSDEC 2018a)
- NYSDEC Nature Explorer (NYSDEC 2021c)
- NYSDEC New York Natural Heritage Program (NYNHP) Information Services (NYNHP 2021a, 2021b)
- NYSDEC Northern long-eared bat occurrences by Town (NYSDEC 2018b)
- New York State Ornithological Society (NYSOA
- United States Geological Service (USGS) Breeding Bird Survey (BBS) (USGS BBS; USGS 2020)
- USFWS Critical Wildlife Habitats (USFWS 2021a; USFWS BBC 2008)
- USFWS Environmental Conservation Online System (ECOS) (USFWS 2021b)
- USFWS Information, Planning, and Consultation (IPaC) (USFWS 2021c)

2.2 Agency Information Requests

The NYNHP maintains a list of rare, threatened, and endangered species occurrence maps throughout the state. Tetra Tech submitted an initial NYNHP request for the Project Area on February 18, 2021. A response was received March 26, 2021 and is included in Appendix B.

The USFWS IPaC is a database that contains a list of FE, FT, and candidate species throughout the country. The IpaC database was reviewed for the Project Area and Study Area. These IPaC database searches are provided in Appendix C.

2.3 Initial Observations from the Wintering Grassland Raptor Survey

Tetra Tech initiated a wintering grassland raptor survey on January 8th, to collect applicable data during the 2020 – 2021 wintering season. The survey followed protocols described in the NYSDEC's *Draft Survey Protocol for State-Listed Wintering Grassland Raptor Species* (NYSDEC 2015). The surveys specifically targeted the SE short-eared owl and the ST northern harrier but observations of all raptors were recorded. The Wintering Grassland Raptor Work Plan is included as Appendix A.

3.0 RESULTS

The results section of this report is separated by data regarding wildlife observations and those related to the presence of wildlife habitat, which could be indicative of use of the Project Area by listed wildlife species.

3.1 Publicly Available Data Sources – Wildlife Observations

3.1.1 NYSDEC ERM and NYSDEC EAF Mapper

The NYSDEC ERM and NYSDEC EAF Mapper were reviewed to determine the presence of state-listed threatened and endangered species within the Study Area. These databases indicated the potential presence of the bald eagle (*Haliaeetus leucocephalus*), Blanding's turtle (*Emydoidea blandingii*), upland sandpiper (*Bartramia longicauda*), deepwater sculpin (*Myoxocephalus thompsoni*), and pawpaw (*Asimina triloba)* (NYSDEC 2021a, NYSDEC 2021b). Table 1 provides a summary of these species, listing status, habitat requirements, and whether suitable habitat exists within the Project Area.

Table 1
NYSDEC ERM and NYSDEC EAF Mapper Review Results for the Study Area, Niagara County, New York

Common Name (Species Name)	Status[1]	Source	Habitat Requirements	Potential Suitable Habitat Identified within the Project Area
Bald eagle (*Haliaeetus leucocephalus*)	ST	ERM/EAF	Undisturbed areas along large bodies of water	Yes
Blanding's turtle (*Emydoidea blandingii)*	ST	ERM/EAF	Shrubby wetlands (buttonbush and willow), vernal pools, emergent wetlands with adjacent uplands with sandy soils	Yes
Deepwater sculpin (*Myoxocephalus thompsoni*)	SE	ERM	Deep, cool waters.	No
Pawpaw (*Asimina triloba)*	ST	ERM/EAF	Rich, moist, deep soil, shaded forests	Yes

1 – Status

- ST – State-listed Threatened species
- SE – State-listed Endangered species

3.1.2 USFWS ECOS and IPaC

Tetra Tech submitted an IPaC database search for the Project Area and the Study Area (USFWS 2021b and USFWS 2021c). These inquiries identified no FT, FE, or candidate species for the Project Area or the Study Area. Three migratory bird species were identified within the Project Area as USFWS BCCs through this search and are listed in Table 2 (USFWS 2021b). The IPaC results are included in Appendix C. BCC listed species are not afforded any current federal protections but are nongame species that are either Endangered Species Act (ESA) candidate, proposed, or recently delisted species (USFWS, BBC 2008).

Tetra Tech also reviewed the USFWS ECOS database to determine the listed species believed to or known to occur in Niagara County. The ECOS database indicated the potential presence of the northern long-eared bat, a FT species and the monarch butterfly (*Danaus plexippus*), a candidate species in Niagara County, New York.

Table 2
USFWS IPaC List of BCC Species

Common Name (Species Name)	Status[1]	Location	Habitat Requirements	Potential Suitable Habitat Identified within Project Area
Bald eagle (*Haliaeetus leucocephalus*)	ST, Non-BCC in Great Lakes Region	Project Area / Study Area	Undisturbed areas along large bodies of water	Yes
Black-billed cuckoo (*Coccyzus erythropthalmus*)	BCC	Study Area	Breeds in thickets and scrub-shrub habitats, often on edges of woodlands and marshes; uses dense cover (shrubs and young trees) during migration.	Yes
Bobolink (*Dolichonyx oryzivorus*)	BCC	Study Area	Breeds in grasslands and occupies grasslands and marshes during migration.	Yes
Canada warbler (*Cardellina canadensis*)	BCC	Study Area	Breeds in mature hardwood forests and dense shrub-scrub riparian habitats, prefers moist habitats, streams and wetlands; similar during migration	Yes
Cerulean warbler (Dendroica cerulea)	BCC, SSC	Study Area	Deciduous forests, particularly in river valleys, breeding habitat consists of tall trees and clear understory; similar during migration.	Yes
Dunlin (*Calidris alpine arcticola)*	Non-BCC in Great Lakes Region	Project Area / Study Area	Breeds on arctic tundra; found on mudflats and shoreline; found in coastal habitats during migration and winter.	Yes
Eastern whip-poor-will (*Antrostomus vociferus*)	BCC, SSC	Study Area	Breeds in deciduous, rich moist woodlands; similar during migration.	Yes
Golden-winged warbler (*Vermivora chrysoptera*)	BCC, SSC	Study Area	Open woodlands, brushy clearings, marshes and bogs	Yes
Lesser yellowlegs (*Tringa flavipes*)	BCC	Study Area	Marshes, mudflats, coastal habitats, and ponds; breeds in large clearings, near ponds.	Yes
Red-headed woodpecker (*Melanerpes erthrocephalus*)	BCC, SSC	Study Area	Large scattered forests, orchards, shade trees in towns, avoids unbroken forests, except during winter and migration when location is influenced by food, such as acorns.	Yes
Semipalmated sandpiper (*Calidris pusilla*)	BCC	Study Area	Beaches, mudflats during winter and migration; breeds in low arctic tundra, near water.	Yes
Snowy owl (*Bubo scandiacus*)	BCC	Project Area / Study Area	Breeds on arctic tundra; found on lakeshores with fields and marshes in winter and migration.	Yes
Wood thrush (*Hylocichla mustelina*)	BCC	Study Area	Deciduous woodlands, breeds in understory of woodlands, in areas with tall trees; in migration found in various woodlands.	Yes

1 – Status

- BCC – Birds of Conservation Concern
- ST – State-listed Threatened species
- SCC – State-listed Species of Conservation Concern

3.1.3 New York Natural Heritage Program

The NYNHP is a combined effort of the State University of New York – College of Environmental Science and Forestry and the NYSDEC, which maintains a long-term comprehensive database of rare plants, animals, and natural communities in the state. The NYNHP also promotes conservation guidelines to facilitate the conservation of the state's biodiversity.

Tetra Tech submitted a NYNHP request on February 18, 2021 (NYNHP 2021a). NYNHP responded on March 26, 2021. The NYNHP identified the bald eagle (*Haliaeetus leucocephalus*), a state threatened species to have been documented nesting within one-quarter mile of the Project Area (NYNHP 2021b). NYNHP correspondence can be found in Appendix B.

3.1.4 Listed Bat Information – BCI and NYSDEC

Tetra Tech reviewed the BCI and NYSDEC websites to determine the potential presence of the listed bat species in the Project Area and/or Study Area. The BCI website indicated the potential presence of the Northern long-eared bat, a FT and SE species, and throughout Niagara County and the absence of the Indiana bat, which is a FE and a SE species, within Niagara County (BCI 2021).

Tetra Tech also reviewed the NYSDEC website to determine the availability of data regarding the potential presence of the Northern long-eared bat within the Project Area/Study Area or the Town of Somerset. The NYSDEC maintains a list of the known summer and winter bat occurrence by Towns within the State (NYSDEC 2018b). This summary indicated that no known maternity roost trees occur within 150-feet of the Project nor do any hibernacula occur within 0.25-mile of the Project Area. The nearest known hibernacula is found more than eight miles away in the Royalton Township to the south of the Project Area (NYSDEC 2018b).

3.1.5 NYSDEC - Nature Explorer

The NYSDEC Nature Explorer website contains information on rare wildlife observations and significant natural communities throughout the State. Tetra Tech performed a data search of the Project and within the Study Area and no rare species or significant natural communities were identified.

The NYSDEC Nature Explorer identified 12 listed species that have historical or current occurrence within Niagara County. The species identified for historic occurrence in the County include:

- Eastern spiny softshell turtle (*Apalone spinifera*) (SSC) - historical observation, no observations from the Project Area/Study Area in the past 5 years;
- Spotted turtle (*Clemmys guttata*) (SSC) - no observations from the Project Area/Study Area in the past 5 years;
- Timber rattlesnake (*Crotalus horridus*) (ST) – considered extirpated from Niagara County, no observations from the Project Area/Study Area in the past 5 years;
- Blue-spotted salamander (*Ambystoma laterale*) (SSC) - no observations from the Project Area/Study Area in the past 5 years;
- Black redhorse (*Moxostoma duquesnei*) (SSC) - no observations from the Project Area/Study Area in the past 5 years, believed to be extirpated from Lake Ontario;
- Lake sturgeon (*Acipenser fulvescens*) (ST) – no observations from the Project Area/Study Area in the past 5 years, not anticipated to utilize waterbodies within the Project Area;
- Northern sunfish (*Lepomis peltastes*) (ST) - no observations from the Project Area/Study Area in the past 5 years, not anticipated to utilize waterbodies within the Project Area;
- Redfin shiner(*Lythrurus umbratilis*) (SSC) - no observations from the Project Area/Study Area in the past 5 years, not anticipated to utilize waterbodies within the Project Area;
- Spoonhead sculpin (*Cottus ricei*) (SE) - no observations from the Project Area/Study Area in the past

5 years, believed to be extirpated from Lake Ontario;

- Karner blue butterfly (*Lycaeides melissa*) (SE) - no observations from the Project Area/Study Area in the past 5 years, believed to be extirpated from Niagara County;
- Persius duskywing (*Erynnis persius*) (SE) - no observations from the Project Area/Study Area in the past 5 years; and
- Wavy-rayed lampmussel (*Lampsilis fasciola*) (ST) no observations from the Project Area/Study Area in the past 5 years, not anticipated to utilize waterbodies within the Project Area;

The eastern spiny softshell is an aquatic turtle that occurs within wetlands along large lakes and rivers and its last known occurrence in Niagara County was within the Niagara River. The spotted turtle was last recorded in 1999 in Niagara County and requires marshy meadows and bogs that are not expected to occur within the Project Area. The timber rattlesnake is extirpated from Niagara County. Blue-spotted salamanders require moist forest floors near ephemeral bodies of water. This habitat is expected to occur within the Project Area, but the last known occurrence of this species in Niagara County was in 1999. The black redhorse and spoonhead sculpin are two fish species that were located within Lake Ontario that are now believed to be extirpated. Lake sturgeon live in large bodies of water such as Lake Ontario and the Niagara River, and therefore are not expected to occur within the Project Area. The northern sunfish and redfin shiner are known to occur in large rivers and streams and were last recorded in Tonawanda Creek and the Niagara River; they are not expected to occur within the Project. The karner blue butterfly (KBB) is believed to be extirpated from Niagara County. It is likely that the persius duskywing likely does not occur within the Project Area as they also require lupine like the KBB, and the last recorded occurrence of the duskywing in the County was in 1970. The wavy-rayed lampmussel is a mussel species that requires large rivers and stream systems as suitable habitat and therefore is not anticipated to occur within the Project Area.

3.1.6 Cornell University eBird

Tetra Tech performed a review of the Cornell University eBird database, a comprehensive record of bird species identified by qualified birders throughout the world. Tetra Tech evaluated the data from 2016-2020. Within the Study Area, 243 species of birds were identified. This list of species can be found in Table 3.

Table 3
Cornell University eBird Data from 2016-2020 for the Study Area Niagara County, New York

Species			
Acadian Flycatcher	Cooper's Hawk - SSC	Nashville Warbler	Surf scoter
Alder Flycatcher	Dark-eyed Junco	Northern Cardinal	Swainson's Thrush
American Bittern - SSC, BCC	Dickcissel	Northern Flicker	Swamp Sparrow
American black duck	Double-crested Cormorant	Northern Harrier - ST	Tennessee Warbler
American Crow	Downy Woodpecker	Northern Mockingbird	Tree Swallow
American golden-plover	Dunlin, BCC	Northern Parula	Tufted Titmouse
American Goldfinch	Eastern Bluebird	Northern pintail	Tundra swan
American Kestrel	Eastern Kingbird	Northern Rough-winged Swallow	Turkey Vulture
American Pipit	Eastern Meadowlark	Northern shoveler	Upland sandpiper - ST, BCC
American Redstart	Eastern Phoebe	Northern Shrike	Veery
American Robin	Eastern Screech-Owl	Northern Waterthrush	Vesper Sparrow - SSC
American Tree Sparrow	Eastern Towhee	Olive-sided Flycatcher	Warbling Vireo
American wigeon	Eastern whip-poor-will - SSC	Orange-crowned Warbler	Whimbrel - BCC
American Woodcock	Eastern Wood-Pewee	Orchard Oriole	White-breasted Nuthatch
Baird's sandpiper	European Starling	Osprey, SSC	White-crowned Sparrow

Species			
Bald Eagle - ST	Evening Grosbeak	Ovenbird	White-rumped sandpiper
Baltimore Oriole	Field Sparrow	Palm Warbler	White-throated Sparrow
Bank Swallow	Forster's Tern	Parasitic Jaeger	White-winged scoter
Barn Owl	Fox Sparrow	Pectoral sandpiper	Wild turkey
Barn Swallow	Franklin's Gull	Peregrine Falcon – SE, BCC	Willet
Barred Owl	Gadwall	Philadelphia Vireo	Willow Flycatcher
Bay-breasted Warbler	Glaucous Gull	Pied-billed grebe - ST, BCC	Wilson's Phalarope
Belted Kingfisher	Golden Eagle - SE	Pileated Woodpecker	Wilson's Snipe
Black scoter	Golden-crowned Kinglet	Pine Siskin	Wilson's Warbler
Black Vulture	Golden-winged Warbler – SSC, BCC	Pine Warbler	Winter Wren
Black-and-white Warbler	Grasshopper Sparrow	Piping plover – SE, FE	Wood duck
Black-bellied plover	Gray Catbird	Prairie Warbler	Wood Thrush - BCC
Blackburnian Warbler	Gray-cheeked Thrush	Purple Finch	Yellow Warbler
Black-capped Chickadee	Great Black-backed Gull	Purple Martin	Yellow-bellied Flycatcher
Black-crowned Night-Heron - BCC	Great Blue Heron	Red Crossbill	Yellow-bellied Sapsucker
Blackpoll Warbler	Great Crested Flycatcher	Red-bellied Woodpecker	Yellow-headed Blackbird
Black-throated Blue Warbler	Great Egret	Red-breasted merganser	Yellow-rumped Warbler
Black-throated Green Warbler	Great Horned Owl	Red-breasted Nuthatch	Yellow-throated Vireo
Blue Jay	Greater scaup	Red-eyed Vireo	
Blue-gray Gnatcatcher	Greater white-fronted goose	Redhead	
Blue-headed Vireo	Greater Yellowlegs	Red-headed Woodpecker - SSC, BCC	
Blue-winged teal	Green Heron	Red-necked grebe	
Blue-winged Warbler - BCC	Green-winged teal	Red-shouldered Hawk - SSC	
Bobolink	Hairy Woodpecker	Red-tailed Hawk	
Bonaparte's Gull	Hermit Thrush	Red-throated Loon	
Brant	Herring Gull	Red-winged Blackbird	
Broad-winged Hawk	Hooded merganser	Ring-billed Gull	
Brown Creeper	Hooded Warbler	Ring-necked pheasant	
Brown Pelican	Horned grebe - BCC	Rock pigeon	
Brown Thrasher	Horned Lark - SSC	Rose-breasted Grosbeak	
Brown-headed Cowbird	House Finch	Ross's goose	
Buff-breasted sandpiper - BCC	House Sparrow	Rough-legged Hawk	
Bufflehead	House Wren	Ruby-crowned Kinglet	
Canada goose	Iceland Gull	Ruby-throated hummingbird	
Canada Warbler, BCC	Indigo Bunting	Ruddy duck	
Cape May Warbler	Killdeer	Ruddy turnstone	
Carolina Wren	King eider	Ruff	
Caspian Tern	Lapland Longspur	Rusty Blackbird	
Cattle Egret	Least Bittern, ST, BCC	Sanderling	
Cedar Waxwing	Least Flycatcher	Sandhill crane	
Cerulean Warbler, SSC, BCC	Least sandpiper	Savannah Sparrow	
Chestnut-sided Warbler	Lesser Black-backed Gull	Scarlet Tanager	
Chimney swift	Lesser scaup	Semipalmated plover	
Chipping Sparrow	Lesser Yellowlegs - BCC	Semipalmated Sandpiper - BCC	

Species			
Clay-colored Sparrow	Lincoln's Sparrow	Sharp-shinned Hawk - SSC	
Cliff Swallow	Little Gull	Short-billed Dowitcher	
Common goldeneye	Long-eared Owl	Short-eared Owl - SE, BCC	
Common Grackle	Long-tailed duck	Snow Bunting	
Common Loon	Magnolia Warbler	Snow goose	
Common merganser	Mallard	Snowy Owl - BCC	
Common nighthawk, SSC	Marsh Wren	Solitary Sandpiper - BCC	
Common Raven	Merlin	Song Sparrow	
Common Redpoll	Mourning dove	Spotted Sandpiper	
Common Tern, ST - BCC	Mourning Warbler	Stilt sandpiper	
Common Yellowthroat	Mute swan	Summer Tanager	

Legend: FE – Federally Endangered, SE – State Endangered, ST – State Threatened, SSC- State Species of Concern, Bird of Conservation Concern (BCC)

3.1.7 USGS Breeding Bird Survey (BBS)

The USGS BBS database is a long-term cooperative effort between the USGS Patuxent Wildlife Research Center and Environment Canada's Canadian Wildlife Service to monitor the status and trends of North American bird populations (USGS 2021a). This effort is conducted by qualified birders and is timed to occur during the peak of the breeding bird season, typically the mid-June timeframe.

A review of the five most recent survey years, 2015-2019, found 80 species of birds to be present along the Byron (61066) survey route (USGS 2020), which is approximately 25 miles southeast of the Project (see Figure 3). Given the location of this route and similar habitats within and surrounding the Project, it is assumed that any of these species could be breeding within the vicinity of the Project Area.

A total of 80 species were observed (see Table 4). The only listed species observed was the state threatened Bald Eagle. The Bald Eagle was observed in one year of the past five years of data, in 2016.

Table 4
USGS BBS Data from 2015-2019 (61066 - Byron), Genesee County, New York

Species List	2015	2016	2017	2018	2019
Alder Flycatcher (*Empidonax alnorum*)	0	0	0	0	1
American Crow (*Corvus brachyrhynchos*)	31	42	28	20	18
American Goldfinch (*Spinus tristis*)	33	33	18	31	25
American Kestrel (*Falco sparverius*)	0	1	1	0	0
American Redstart (*Setophaga ruticilla*)	1	4	2	3	3
American Robin (*Turdus migratorius*)	49	51	49	44	46
Bald Eagle (*Haliaeetus leucocephalus*) – ST	0	1	0	0	0
Baltimore Oriole (*Sturnella magna*)	5	4	1	4	2
Bank Swallow (*Riparia riparia*)	3	4	0	0	8
Barn Swallow (*Hirundo rustica*)	11	30	12	18	18
Black-billed Cuckoo (*Coccyzus erythropthalmus*), BCC	1	0	0	0	1
Black-capped Chickadee (*Poecile atricapilus*)	3	4	5	2	2
Blue Jay (*Cyanocitta cristata*)	1	6	6	10	4
Blue-winged Warbler (*Vermivora cyanoptera*), BCC	0	1	0	1	0

Species List	2015	2016	2017	2018	2019
Bobolink (*Dolichonyx oryzivorus*)	1	1	2	2	1
Brown Thrasher (*Toxostoma rufum*)	0	1	0	0	0
Brown-headed Cowbird (*Molothrus ater*)	13	14	9	7	8
Canada Goose (*Branta canadensis)*	10	1	0	0	0
Cedar Waxwing (*Bombycilla cedrorum*)	5	4	1	1	2
Chimney Swift (*Chaetura pelagica*)	0	0	1	1	0
Chipping Sparrow (*Spizella passerina*)	33	42	37	44	40
Common Grackle (*Quiscalus quiscula*)	14	26	16	46	16
Common Yellowthroat (*Geothlypis trichas*)	14	13	12	12	18
Downy Woodpecker (*Picoides pubescens*)	2	6	4	3	3
Eastern Bluebird (*Sialia sialis*)	1	1	6	9	7
Eastern Kingbird (*Tyrannus tyrannus*)	8	1	2	7	0
Eastern Phoebe (*Sayornis phoebe*)	0	5	2	5	4
Eastern Wood-Pewee (*Contopus virens*)	3	1	1	7	2
European Starling (*Sturnus vulgaris*)	36	165	78	102	39
Field Sparrow (*Spizella pusilla*)	5	6	6	5	11
Gray Catbird (*Dumetella carolinensis*)	22	25	20	15	22
Great Crested Flycatcher (*Myiarchus crinitus*)	2	1	1	2	4
Green Heron (*Butorides virescens*)	2	0	1	0	0
Hairy Woodpecker (*Picoides villosus*)	2	0	1	1	2
Hooded Warbler (*Wilsonia citrina*)	0	2	0	0	0
Horned Lark (*Eremophila alpestris*)	15	14	12	11	12
House Finch (*Carpodacus mexicanus*)	4	3	0	2	5
House Sparrow (*Passer domesticus*)	21	35	22	27	32
House Wren (*Troglodytes aedon*)	17	14	13	9	13
Indigo Bunting (*Passerina cyanea*)	13	18	9	15	20
Killdeer (*Charadrius vociferus*)	4	7	13	13	7
Least Flycatcher (*Empidonax minimus*)	0	2	0	0	0
Mallard (*Anas platyrhynchos*)	0	0	2	0	0
Mourning Dove (*Zenaida macroura*)	39	27	33	31	31
Mourning Warbler (*Geothlypis philadelphia*)	0	1	1	0	1
Northern Cardinal (*Cardinalis cardinalis*)	21	27	13	22	20
Northern Flicker (*Colaptes auratus*)	1	5	4	4	5
Northern Mockingbird (*Mimus polyglottos*)	6	6	2	11	5
Ovenbird (*Seiurus aurocapilla*)	0	0	0	0	1
Pileated Woodpecker (*Dryocopus pileatus*)	0	0	0	2	1
Purple Finch (*Haemorhous purpureus*)	0	0	3	0	2
Red-bellied Woodpecker (*Melanerpes carolinus*)	11	10	6	3	4
Red-eyed Vireo (*Vireo olivaceus*)	7	4	5	4	7
Red-tailed Hawk (*Buteo jamaicensis*)	1	0	1	1	1
Red-winged Blackbird (*Agelaius phoeniceus*)	69	72	64	68	83
Ring-billed Gull (*Larus delawarensis*)	1	0	0	0	1

Species List	2015	2016	2017	2018	2019
Ring-necked Pheasant (*Phasianus colchicus*)	1	0	0	0	0
Rock Pigeon (*Columba livia*)	17	7	7	54	2
Rose-breasted Grosbeak (*Pheucticus ludovicianus*)	4	2	3	1	3
Ruby-throated Hummingbird (*Archilochus colubris*)	0	0	0	0	1
Savannah Sparrow (*Passerculus sandwichensis*)	17	15	13	16	9
Scarlet Tanager (*Piranga olivacea*)	0	2	0	1	0
Song Sparrow (*Melospiza melodia*)	49	51	57	50	57
Spotted Sandpiper (*Actitis mascularius*)	0	0	1	0	0
Swamp Sparrow (*Melospiza georgiana*)	2	5	4	4	4
Tree Swallow (*Tachycineta bicolor*)	11	1	9	11	8
Tufted Titmouse (*Baeolophus bicolor*)	0	4	0	1	0
Turkey Vulture (*Cathartes aura*)	0	3	2	1	0
unid. *Empidonax* flycatcher	0	0	0	0	1
Veery (*Catharus fuscescens*)	1	0	0	0	1
Vesper Sparrow (*Pooecetes gramineus*)	7	7	5	6	3
Warbling Vireo (*Vireo gilvus*)	6	9	11	12	9
White-breasted Nuthatch (*Sitta carolinensis*)	1	2	0	1	2
Wild Turkey (*Meleagris gallopayo*)	0	0	0	2	0
Willow Flycatcher (*Empidonax traillii*)	3	0	1	3	2
Wood Duck *(Aix sponsa)*	0	0	0	0	1
Wood Thrush (*Hylocichla mustelina*), BCC	12	9	5	5	6
Yellow Warbler (*Setophaga petechia*)	23	17	17	7	20
Yellow-billed Cuckoo (*Coccyzus americanus*)	2	0	1	0	0
Yellow-throated Vireo (*Vireo flavifrons*)	0	2	0	0	0

Legend: ST – State Threatened, BCC – Bird of Conservation Concern

3.1.8 Audubon Important Bird Areas and Christmas Bird Counts (CBC)

The Audubon Important Bird Areas (IBA) are places that have significant importance to a multitude of bird species. The IBA Mapper identified the nearest location to be approximately 10 miles southeast from the Project Area. This IBA is the Iroquois National Wildlife Refuge and Oak Orchard and Tonawanda Wildlife Management Areas (WMAs) complex. This approximately 20,000-acre area, also known colloquially as the Alabama Swamp, is mostly comprised of wetlands and undisturbed habitats, with grasslands and forests making up the majority of the areas outside the wetlands. The majority of the surrounding area adjacent to this IBA is agricultural land (Audubon 2018b).

The Audubon Christmas Bird Count is conducted each year between December 14th and January 5th to monitor the population of birds in North America. The counts occur within a 15-mile diameter of a predetermined center point. The nearest CBC location is in the Wilson-Lake Plains location, along Ridge Road (CR-104), Wright Corners, New York. This location is approximately eight miles from the Project to the southwest and is represented in Figure 3. While this location does not encompass the Study Area, it likely to represent a similar wintering bird population that would be expected to be found on the Project (Audubon 2018a). A comprehensive list of species can be found in Table 5.

Table 5
Audubon CBC Data for the Wilson-Lake Plains Location from 2015-2019, Niagara County, New York

Species	2015 [116] Count Date: 12/19/2015	2016 [117] Count Date: 12/17/2016	2017 [118] Count Date: 12/16/2017	2018 [119] Count Date: 12/15/2018	2019 [120] Count Date: 12/21/2019
Cackling Goose (*Branta hutchinsii*)	0	0	7	0	0
Canada Goose (*Branta canadensis*)	1231	1999	1774	1168	2467
Mute Swan (*Cygnus olor*)	5	8	3	2	0
Trumpeter Swan (*Cygnus buccinator*)	0	1	0	0	0
Tundra Swan (*Cygnus columbianus*)	0	0	0	20	0
Wood Duck (*Aix sponsa*)	1	1	0	0	0
Gadwall (*Anas strepera*)	2	1	0	0	0
American Black Duck (*Anas rubripes*)	23	10	9	1	1
Mallard (*Anas platyrhynchos*)	236	326	191	43	90
Northern Shoveler (*Anas clypeata*)	0	1	0	0	0
Canvasback (*Aythya valisineria*)	0	0	0	1	0
Redhead (*Aythya americana*)	136	2	0	0	0
Ring-necked Duck (*Aythya collaris*)	7	1	0	0	0
Greater Scaup (*Aythya marila*)	24	6	1	1	0
Lesser Scaup (*Aythya affinis*)	0	1	0	0	0
Surf Scoter (*Melanitta perspicillata*)	1	0	0	0	0
White-winged Scoter (*Melanitta fusca*)	48	35	7	11	13
Black Scoter (*Melanitta americana*)	2	0	0	0	0
Long-tailed Duck (*Clangula hyemalis*)	187	104	27	12	49
Bufflehead (*Bucephala albeola*)	29	50	22	11	3
Common Goldeneye (*Bucephala clangula*)	376	336	244	172	126
Hooded Merganser (*Lophodytes cucullatus*)	8	5	0	0	0
Common Merganser (*Mergus merganser*)	0	2	27	0	49
Red-breasted Merganser (*Mergus serrator)*	267	203	273	50	248
Ring-necked Pheasant (*Phasianus colchicus*)	0	1	1	3	4
Wild Turkey (*Meleagris gallopavo*)	0	42	34	6	1
Red-throated Loon (*Gavia stellata*)	42	16	1	1	3
Common Loon (*Gavia immer*)	2	1	3	0	1
Horned Grebe (*Podiceps auritus*)	7	9	5	2	2
Red-necked Grebe (*Podiceps grisegena*)	2	6	0	24	0
Double-crested Cormorant (*Phalacrocorax auritus*)	1	1	0	7	0
Great Blue Heron (*Ardea herodias*)	1	0	3	3	2
Black Vulture (*Coragyps atratus*)	0	0	1	1	0
Turkey Vulture (*Cathartes aura*)	0	0	5	8	1

Species	2015 [116] Count Date: 12/19/2015	2016 [117] Count Date: 12/17/2016	2017 [118] Count Date: 12/16/2017	2018 [119] Count Date: 12/15/2018	2019 [120] Count Date: 12/21/2019
Northern Harrier (*Circus cyaneus*), ST	0	1	5	1	3
Sharp-shinned Hawk (*Accipiter striatus*), SSC	1	1	2	1	3
Cooper's Hawk (*Accipiter cooperii*), SSC	2	3	6	2	6
Northern Goshawk (*Accipiter gentilis*), SSC	0	0	0	0	1
Bald Eagle (*Haliaeetus leucocephalus*), ST	3	1	1	1	0
Red-shouldered Hawk (*Buteo lineatus*)	0	0	0	1	0
Red-tailed Hawk (*Buteo jamaicensis*)	28	25	26	30	31
Rough-legged Hawk (*Buteo lagopus*)	0	1	0	0	0
Bonaparte's Gull (*Chroicocephalus philadelphia*)	153	2	0	0	0
Ring-billed Gull (*Larus delawarensis*)	3384	323	459	46	17
Herring Gull (*Larus argentatus*)	291	101	89	18	20
Iceland Gull (*Larus glaucoides*)	1	0	0	1	0
Lesser Black-backed Gull (*Larus fuscus*)	0	1	0	0	0
Glaucous Gull (*Larus hyperboreus*)	0	0	0	1	0
Great Black-backed Gull (*Larus marinus*)	9	10	10	9	0
Rock Pigeon (*Columba livia*)	96	51	294	365	63
Mourning Dove (*Zenaida macroura*)	30	395	137	310	442
Eastern Screech-Owl (*Megascops asio*)	1	5	3	7	9
Great Horned Owl (*Bubo virginianus*)	0	2	3	6	5
Snowy Owl (*Bubo scandiacus*), BCC	0	0	0	1	0
Long-eared Owl (*Asio otus*)	0	0	0	1	0
Northern Saw-whet Owl (*Aegolius acadicus*)	0	0	0	2	0
Belted Kingfisher (*Megaceryle alcyon*)	0	2	3	1	0
Red-bellied Woodpecker (*Melanerpes carolinus*)	15	32	37	49	52
Yellow-bellied Sapsucker (*Sphyrapicus varius*)	0	4	1	0	0
Downy Woodpecker (*Picoides pubescens*)	29	50	35	40	53
Hairy Woodpecker (*Picoides villosus*)	5	8	12	10	7
Northern Flicker (*Colaptes auratus*)	4	10	15	27	24
Pileated Woodpecker (*Dryocopus pileatus*)	0	1	1	4	2
American Kestrel (*Falco sparverius*)	4	2	2	1	3
Merlin (*Falco columbarius*)	1	1	1	3	1
Northern Shrike (*Lanius excubitor*)	1	2	3	1	0
Blue Jay (*Cyanocitta cristata*)	47	95	113	363	271

Species	2015 [116] Count Date: 12/19/2015	2016 [117] Count Date: 12/17/2016	2017 [118] Count Date: 12/16/2017	2018 [119] Count Date: 12/15/2018	2019 [120] Count Date: 12/21/2019
American Crow (*Corvus brachyrhynchos*)	133	71	57	73	122
Common Raven (*Corvus corax*)	0	0	2	1	1
Horned Lark (*Eremophila alpestris*)	0	215	481	0	0
Black-capped Chickadee (*Poecile atricapillus*)	127	149	74	78	77
Tufted Titmouse (*Baeolophus bicolor*)	10	12	0	6	8
Red-breasted Nuthatch (*Sitta canadensis*)	2	19	15	22	3
White-breasted Nuthatch (*Sitta carolinensis*)	22	47	25	34	29
Brown Creeper (*Certhia americana*)	1	0	1	4	3
Winter Wren (*Troglodytes hiemalis*)	0	1	0	0	3
Carolina Wren (*Thryothorus ludovicianus*)	1	1	2	4	7
Golden-crowned Kinglet (*Regulus satrapa*)	0	0	0	9	2
Ruby-crowned Kinglet (*Regulus calendula*)	0	0	0	1	1
Eastern Bluebird (*Sialia sialis*)	12	14	16	70	25
Hermit Thrush (*Catharus guttatus*)	1	0	0	1	0
American Robin (*Turdus migratorius*)	7	416	1	34	135
Gray Catbird (*Dumetella carolinensis*)	1	0	0	0	0
Northern Mockingbird (*Mimus polyglottos*)	3	9	5	12	6
European Starling (*Sturnus vulgaris*)	2,154	506	624	1,218	1,884
Cedar Waxwing (*Bombycilla cedrorum*)	18	96	83	54	3
Lapland Longspur (*Calcarius lapponicus*)	0	3	102	0	0
Snow Bunting (*Plectrophenax nivalis*)	0	141	521	13	0
Yellow-rumped Warbler (*Setophaga coronata*)	0	0	4	0	0
American Tree Sparrow (*Spizelloides arborea*)	59	117	118	25	32
Chipping Sparrow (*Spizella passerine*)	0	4	0	0	0
Field Sparrow (*Spizella pusilla*)	0	1	0	0	1
Dark-eyed Junco (*Junco hyemalis*)	217	602	351	81	149
White-crowned Sparrow (*Zonotrichia leucophrys*)	2	7	4	1	4
White-throated Sparrow (*Zonotrichia albicollis*)	7	11	58	21	35
Song Sparrow (*Melospiza melodia*)	5	6	4	1	9
Swamp Sparrow (*Melospiza georgiana*)	0	2	0	0	0
Northern Cardinal (*Cardinalis cardinalis*)	59	143	98	95	131
Red-winged Blackbird (*Agelaius phoeniceus*)	26	0	21	0	0

Species	2015 [116] Count Date: 12/19/2015	2016 [117] Count Date: 12/17/2016	2017 [118] Count Date: 12/16/2017	2018 [119] Count Date: 12/15/2018	2019 [120] Count Date: 12/21/2019
Common Grackle (*Quiscalus quiscula*)	11	0	0	0	0
Brown-headed Cowbird (*Molothrus ater*)	26	1	1	0	0
House Finch (*Haemorhous mexicanus*)	96	55	80	59	108
Purple Finch (*Haemorhous purpureus*)	3	2	6	8	3
Common Redpoll (*Acanthis flammea*)	0	0	0	42	0
Pine Siskin (*Spinus pinus*)	0	13	1	0	0
American Goldfinch (*Spinus tristis*)	144	143	125	61	60
House Sparrow (*Passer domesticus*)	373	372	435	557	688

Legend: FE – Federally Endangered, SE – State Endangered, ST – State Threatened, SSC- State Species of Concern, Bird of Conservation Concern (BCC)

3.1.9 NYSDEC Bird Conservation Areas and Breeding Bird Atlas (BBA)

The NYSDEC Bird Conservation Area Mapper identified the Oak Orchard/Tonawanda WMAs as the nearest area, approximately 20 miles southeast of the Project. The WMAs purpose are to provide wildlife habitat and wildlife-dependent recreation. These areas are mostly comprised of wetland complexes (NYSDEC 2005).

The New York Breeding Bird Atlas (BBA) is a statewide inventory of the birds breeding in the state. It has been conducted twice in the past, 1980-1985 and 2000-2005. Currently a third effort is underway and expected to be finished in 2024. The Study Area falls within the Barker-NW (2080A) Atlas Block. Table 6 presents the data collected during the most recent 2000-2005 survey (NYS BBA 2007).

Table 6
NYSDEC BBA Data for the Barker-NW Block from 2000-2005 in the vicinity of the Study Area Niagara County, New York

Species	Status[1]	Date
Canada Goose (*Branta canadensis*)	Game species	6/16/2001
Wood Duck (*Aix sponsa*)	Game species	6/16/2001
Mallard (*Anas platyrhynchos*)	Game species	6/16/2001
Ring-necked Pheasant (*Phasianus colchicus*)	Game species	6/16/2001
Wild Turkey (*Meleagris gallopavo*)	Game species	7/12/2001
Great Blue Heron (*Ardea herodias*)	MBTA	6/16/2001
Green Heron (*Butorides virescens*)	MBTA	7/23/2001
Turkey Vulture (*Cathartes aura*)	MBTA	6/24/2001
Northern Harrier (*Circus cyaneus*)	ST	6/16/2001
Cooper's Hawk (*Accipiter cooperii*)	SSC	7/24/2001
Red-tailed Hawk (*Buteo jamaicensis*)	MBTA	4/26/2001
American Kestrel *(Falco sparverius)*	MBTA	7/12/2001
Killdeer (*Charadrius vociferus*)	MBTA	7/15/2001
Spotted Sandpiper (*Actitis macularius*)	MBTA	7/15/2001
Rock Pigeon (*Columba livia*)	None	6/16/2001
Mourning Dove (*Zenaida macroura*)	MBTA	7/20/2001

Species	Status[1]	Date
Downy Woodpecker (*Picoides pubescens*)	MBTA	7/12/2001
Hairy Woodpecker (*Picoides villosus*)	MBTA	6/16/2001
Northern Flicker (*Colaptes auratus*)	MBTA	6/16/2001
Eastern Wood-Pewee (*Contopus virens*)	MBTA	7/1/2001
Willow Flycatcher (*Empidonax traillii*)	MBTA	7/12/2001
Eastern Phoebe (*Sayornis phoebe*)	MBTA	6/16/2001
Eastern Kingbird (*Tyrannus tyrannus*)	MBTA	7/12/2001
Red-eyed Vireo (*Vireo olivaceus*)	MBTA	7/12/2001
Blue Jay (*Cyanocitta cristata*)	MBTA	7/1/2001
American Crow (*Corvus brachyrhynchos*)	Game species	7/1/2001
Tree Swallow (*Tachycineta bicolor*)	MBTA	6/16/2001
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)	MBTA	6/16/2001
Bank Swallow (*Riparia riparia*)	MBTA	6/16/2001
Barn Swallow (*Hirundo rustica*)	MBTA	7/12/2001
Black-capped Chickadee (*Poecile atricapillus*)	MBTA	6/16/2001
White-breasted Nuthatch (*Sitta carolinensis*)	MBTA	7/12/2001
House Wren (*Troglodytes aedon*)	MBTA	6/24/2001
Eastern Bluebird (*Sialia sialis*)	MBTA	7/12/2001
Wood Thrush (*Hylocichla mustelina*)	MBTA, BCC	7/12/2001
American Robin (*Turdus migratorius*)	MBTA	7/12/2001
Gray Catbird (*Dumetella carolinensis*)	MBTA	6/16/2001
Northern Mockingbird (*Mimus polyglottos*)	MBTA	6/16/2001
European Starling (*Sturnus vulgaris*)	None	6/16/2001
Cedar Waxwing (*Bombycilla cedrorum*)	MBTA	6/16/2001
Yellow Warbler (*Dendroica petechia*)	MBTA	7/1/2001
American Redstart (*Setophaga ruticilla*)	MBTA	6/24/2001
Common Yellowthroat (*Geothlypis trichas*)	MBTA	7/24/2001
Hooded Warbler (*Wilsonia citrina*)	MBTA	7/24/2001
Chipping Sparrow (*Spizella passerina*)	MBTA	7/1/2001
Field Sparrow (*Spizella pusilla*)	MBTA	7/1/2001
Savannah Sparrow (*Passerculus sandwichensis*)	MBTA	7/12/2001
Song Sparrow (*Melospiza melodia*)	MBTA	6/24/2001
Scarlet Tanager (*Piranga olivacea*)	MBTA	7/12/2001
Northern Cardinal (*Cardinalis cardinalis*)	MBTA	6/24/2001
Dickcissel (*Spiza americana*)	MBTA	6/20/2005
Red-winged Blackbird (*Agelaius phoeniceus*)	MBTA	6/24/2001
Eastern Meadowlark (*Sturnella magna*)	MBTA	7/12/2001
Common Grackle (*Quiscalus quiscula*)	MBTA	6/24/2001
Baltimore Oriole (*Icterus galbula*)	MBTA	6/24/2001
House Finch (*Carpodacus mexicanus*)	MBTA	7/9/2001
American Goldfinch (*Spinus tristis*)	MBTA	6/24/2001
House Sparrow (*Passer domesticus*)	None	6/24/2001

1 – Status:

- Game species – species afforded protection as a game species
- MBTA – species afforded protection under the Migratory Bird Treaty Act of 1918
- ST – state-listed threatened species
- SSC – state-listed species of concern
- BCC – Bird of Conservation Concern
- None – species that is non-native and not afforded protection under any federal/state protection

3.1.10 Hawk Migration Association of North America

The Hawk Migration Association of North America was founded in 1974 as a nonprofit organization to advance scientific knowledge and promote conservation of raptor populations in North America (HMANA 2021). The closest Hawkwatch location is the Golden Hill/County Line Road site in Barker, New York, approximately 5.5 miles east of the Project (Crewe et al 2016). The Golden Hill/County Line Road Hawkwatch location has one year of data from 2016, where three northern harriers and one Cooper's Hawk were observed in the mid-April timeframe. Just south of the Golden Hill/County Line Road Hawkwatch location is the County Line Road/N of Route 18 location, where one Bald Eagle was observed in the mid-April timeframe in 2016.

3.1.11 New York State Ornithological Association

The NYSOA maintains a database of New York state ornithological records through the compilation of field reports from dedicated birders throughout the state. The NYSOA website (NYSOA 2021) provides a searchable archive of the quarterly publication of *The Kingbird*, which provides field reports from birders regarding migration and breeding data in the state. The most recent 5 years of data within *The Kingbird* archive, 2018 through 2016, were searched for records of listed species reports within the Town of Somerset. The exact locations of these sightings is not reported so it is unknown if they occurred within the Project Area or the Study Area, except as noted below.

During 2018, a common loon (SSC) was observed in March (Morgante 2018a) and a Vesper sparrow (SSC) in July in the Town of Somerset, (Morgante 2018b). In 2017, a flock of up to 38 common loon (SSC) were observed on April 15, an individual piping plover (FE, SE) was observed on May 22 (Morgante 2017a), an upland sandpiper (ST) was observed on August 23 in the Town of Somerset (Morgante 2017b). In 2016, a peregrine falcon (ST) was observed on March 14 (Morgante 2016a) and two cerulean warblers were observed on June 7 (Morgante 2016b) in the Town of Somerset. An attempt was made to verify the locations of each of these observations in eBird. All sightings appeared to be within the Study Area, except for the horned lark which was observed in 2015, 2017 and 2018 in the northeastern field adjacent to Hartland Road.

3.1.12 Review of Climate Change Modeling for Birds

The Section 94-C regulations require a review of the National Audubon Society's climate change modeling for listed bird species documented in the wildlife characterization report. The National Audubon's Survival by Degrees Study indicates that 389 out of 604 North American bird species are at risk of significant impacts from increasing temperatures due to climate change. Data from eBird, USGS, North American BBS, and Global Biodiversity Information Facility was used to predict changes in species' ranges due to increasing temperatures.

The Survival by Degrees Study has categories for high vulnerability species into three temperature increase groups: 1.5^{o} Celsius, 2.0^{o} Celsius and 3.0^{o} Celsius. The website was searched by the 14012 zip code which includes the Project Area and the eastern portion of the Study Area. Within the 14012 zip code, no species meet the 1.5^{o} increase group. As the temperature increases by 2^{o} Celsius, the red-headed woodpecker, brown thrasher, and eastern towhee are identified. Once at the 3^{o} Celsius increase, wood thrush, field sparrow, savannah sparrow, bobolink, golden-winged warbler, mourning warbler, cerulean warbler, pine warbler, and scarlet tanager are added to the list. Seven species of birds: blue-winged teal, herring gull, Caspian tern, common tern, American bittern, northern harrier, and marsh wren are listed as low vulnerability species, but could experience catastrophic habitat loss in the event of a rise in sea level (Audubon, 2019).

In addition, New York State has declared an urgent need for deployment of thousands of megawatts in additional renewable generation capacity across New York in order to meet its 70% by 2030 goal—and it has done so fully aware of the attendant environmental impacts of that deployment effort. However, as the New York State Public Service Commission ("PSC) acknowledged in its adoption of the 2016 Clean Energy Standard Order, the impacts from construction and operation of renewable generation must be balanced against the considerable environmental benefits of clean energy, and the environmental harms which would result from inaction in addressing climate change (*Order Adopting a Clean Energy Standard* in Case 15-5-0302 [August 1, 2016] pp. 7, 71 [noting that "inaction on air pollution and climate change is unacceptable"], 153-54 and Appx G). As the PSC warns, "climate change will cause not only sea level rise, heat waves, and extreme weather

events, but also ***threatens massive economic and lifestyle disruption*** from damage to agriculture, water resources, public health, energy and communication systems, ***and the natural ecosystems that define and support communities***". As indicated in the Final Environmental Impact Statement for the Clean Energy Standard, the impact of renewable energy development on wildlife across all life stages is still likely to be significantly less than impacts of traditional fossil fuel energy (Industrial Economics, Inc and Optimal Energy Inc. 2016).

3.2 Publicly Available Data Sources - Habitat

3.2.1 National Land Cover Data

A review of the NLCD found that cultivated crops represented 715 acres, approximately half of the available land cover within the Project Area (Table 7, Figure 4). The second two dominant cover types were deciduous forest and hay/pasture (Table 7). Agricultural lands (cultivated crops and hay/pasture) cover types occupy approximately 930 acres (60%) of the Project Area. Within the Study Area, open water was the dominant cover type (44%) as the Project Area is located along the Lake Ontario shoreline (Table 7 and Figure 4). The second two dominant cover types within the Study Area were deciduous forests and woody wetlands.

Table 7
National Land Cover Data within the Project Area and Study Area, Niagara County, New York

	Project Area		Study Area	
NLCD Land Cover	**Acres**	**Percent**	**Acres**	**Percent**
Cultivated Crops	715.0	50.6%	17,199.9	22.6%
Deciduous Forest	232.6	16.5%	8,858.3	11.6%
Hay/Pasture	205.7	14.6%	4,861.0	6.4%
Woody Wetlands	91.3	6.5%	8,194.7	10.8%
Barren Land	37.9	2.7%	17.6	0.0%
Developed, Medium Intensity	33.1	2.3%	73.8	0.1%
Developed, High Intensity	34.9	2.5%	29.0	0.0%
Open Water	26.5	1.8%	33,593.0	44.1%
Developed, Low Intensity	15.4	1.0%	605.8	0.8%
Developed, Open Space	11.0	0.7%	1,367.0	1.8%
Mixed Forest	7.6	0.4%	1,075.6	1.4%
Shrub/Scrub	6.2	0.4%	35.6	0.0%
Herbaceous	2.2	0.2%	39.2	0.1%
Emergent Herbaceous Wetlands	0.5	0.0%	104.7	0.1%
Evergreen Forest	0.0	0.0%	74.7	0.1%
Total Area	1,410	100.0%	76,130.0	100.0%

3.2.2 NWI, NHD, and NYSDEC

USFWS NWI mapping indicated 24 mapped wetlands are found within the Project Area. Of these 24 mapped features, the majority were palustrine forested (PFO) (Table 8). Palustrine emergent (PEM) and palustrine unconsolidated bottom (PUB) were the other features identified. NYSDEC Freshwater Wetland mapping found that no state-protected wetlands were identified within the Project Area. The closest NYSDEC Freshwater Wetland BA-21 was identified to be approximately 1.4 miles southeast of the Project. BA-21 is classified as a Class III Freshwater Wetland and does not appear to be connected to any of the wetlands or waterways located within the Project. NYSDEC mapping indicates five state-classified Class C streams within the Project boundary. NWI, NHD, and NYSDEC mapped features can be found in Figure 5.

Table 8
National Wetland Inventory Data within the Project Area, Niagara County, New York

NWI Wetlands	Acres	Percent of Project Area
Freshwater Forested/Shrub Wetland	62.7	4.27%
Riverine	22.7	1.54%
Freshwater Pond	8.7	0.60%
Freshwater Emergent Wetland	2.2	0.15%
Lake	1.3	0.09%
Total Wetlands	97.6	6.65%

Within the Study Area, there are approximately 40,645 acres of wetlands/waterbodies (over 50 % of the 76,130 acre 5-mile buffer) (Table 9). This number is dominated by the presence of the lake classification with the northern portion of the buffer area, as the Project is located on the southern shore Lake Ontario (see Figure 5). Excluding Lake Ontario, the land portion of the 5-mile buffer contains approximately 7,000 acres of NWI wetlands, predominately freshwater forested/shrub wetlands.

Table 9
National Wetland Inventory Data within the Study Area, Niagara County, New York

NWI Wetlands	Acres	Percent
Lake	33,471.2	44.0%
Freshwater Forested/Shrub Wetland	6,175.1	8.1%
Riverine	452.2	0.6%
Freshwater Emergent Wetland	342.1	0.4%
Freshwater Pond	198.1	0.3%
Other	6.7	0.0%
Total Wetlands	**40,645.4**	**53.4%**

There are 33 NYSDEC Freshwater Wetlands within the Study Area which represent approximately 3,100 acres of land (see Figure 5). One of these wetlands, NW-1, a Class 3 wetland approximately 42 acres in size appears to be located within the headwaters of Fish Creek, which drains through portions of the Project Area. This wetland is approximately two miles from the Project Area boundary and is separated by several roadways prior to entering the Project Area. Therefore, any wetlands within the Project Area are not anticipated to be a part of the NW-1 NYSDEC Freshwater Wetland.

3.2.3 Critical Wildlife Habitats

A review of the of the USFWS Environmental Conservation Online System (ECOS) identified that no Critical Wildlife Habitat (CWH) is found within or in the vicinity of the Project. The nearest CWH locations are greater than 100 miles from the Project, one to the southwest along Lake Erie in Erie, Pennsylvania and the other northeast along eastern shore of Lake Ontario near Pulaski, New York. Both areas identified are identified as CWH for piping plover (*Charadrius melodus*) (USFWS 2021a).

3.2.4 NYSDEC and Municipal Lands

Tetra Tech reviewed the Western New York – Region 9 website to identify New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) Lands and NYSDEC Lands. During this search, it was found that one state managed land occurs within the Study Area. Hartland Swamp Wildlife Management Area is found approximately 4.5 miles to the south of the Project. This 401-acre property is primarily shrub swamp, emergent marsh, and open water wetlands. Two New York State Parks were identified, Golden Hill State Park,

approximately 5 miles to the east of the Project Area, and Wilson-Tuscarora State Park, approximately 10 miles to the west of the Project Area (NYSDEC 2018a). Krull County Park a 325-acre park is also located within the Study Area. This park contains a maintained lawn landscape with scattered trees and include a number of recreational landuse type activities. Another small municipal park within the Study Area is Somerset Town Park, an approximate 17-acre park consisting of maintained lawn landscape with a recreational landuses. A map of NYSDEC, OPRHP, and municipal properties is provided in Figure 6.

3.2.5 Landscape Features and Resources of Potential Concern within the Study Area

The 94-C regulations require an identification of unique natural areas or landscape features which may function to concentrate or funnel listed species to the Project and the surrounding Study Area. The prominent landscape feature adjacent to the Project and within the Study Area is Lake Ontario, as the Project's northern boundary is primarily the Lake Ontario shoreline or the remaining portions of the inactive Somerset Coal-Fired Power plant property. In addition to the Ontario Lake shoreline, there are more than 7,000 acres of wetlands within the Study Area. The Lake Ontario shoreline and the wetlands within the coastal plain function to concentrate water-dependent avian species (e.g. waterfowl and waterbirds) during various times of year both during migration and for breeding populations.

In addition, the Lake Ontario shoreline serves as an important stopover point for neotropical migrant avian species which migrate to and from as far north as the subarctic part of Canada to Central America and the northern part of South America. In addition, the shoreline could be utilized by migrating bats, seasonally as they migrate to or from hibernacula. A portion of the inactive Somerset Coal-Fired Power Plant and buffer areas are not included as part of the Project. One of these areas is a closed and capped Solid Waste Disposal Area 1 Landfill. This closed landfill is approximately 100-acres in size and it can serve as important grassland habitat on the Lake Ontario shoreline that will not be impacted by the proposed renewable energy project.

3.3 Project-Specific – Wildlife Observations

Tetra Tech conducted a wintering grassland raptor survey following the NYSDEC's *Draft Survey Protocol for State-Listed Wintering Grassland Raptor Species* (NYSDEC 2015) and the submitted Wintering Grassland Raptor Work Plan. The survey was conducted between January 8 through April 5, 2021. Four stationary point surveys were surveyed twice per month from January through March and a driving survey consisting of 15 survey locations was sampled prior to the majority of the stationary surveys. The Wintering Grassland Raptor Work Plan is included as Appendix A.

[redacted] All of these observations occurred outside of the Project Area.

Table 10
Wintering Grassland Raptor Survey Listed Species Observations Adjacent to the Project Area, Niagara County, New York

Date (2021)	Species	Individuals	Location
January 20	[redacted]	3	[redacted]
January 20	[redacted]	1	[redacted]
January 30	[redacted]	1	[redacted]
January 30	[redacted]	1	[redacted]
January 31	[redacted]	1	[redacted]
February 4	[redacted]	1	[redacted]
February 4	[redacted]	2	[redacted]
February 10	[redacted]	1	[redacted]
February 17	[redacted]	1	[redacted]
February 17	[redacted]	2	[redacted]
February 25	[redacted]	1	[redacted]
February 25	[redacted]	2	[redacted]
March 3	[redacted]	1	[redacted]
March 3	[redacted]	1	[redacted]
March 10	[redacted]	3	[redacted]
March 17	[redacted]	1	[redacted]
March 25	[redacted]	3	[redacted]

3.4 Evaluation of Current Habitat Suitability for Listed Species

As discussed in Section 3.2, the Project Area contains approximately 930 acres of agricultural lands (cultivated crops and hay/pasture) cover types. There are several locations where these cover types occupy areas larger than 25 contiguous acres in size. A review of historic aerial imagery indicates that all of these areas were planted as row crops within at least 1 of the past 5 years. Depending upon the time of year and vegetative conditions of these areas, suitable grassland habitat for listed species may occur within the Project Area. In addition to grassland type habitats, there are approximately 240 acres of forestlands and 91 acres of woody wetlands, which may provide suitable habitat for forest-dependent species. Table 11 provides an overview summary of the listed species that have been observed within the Study Area and/or Project Area and the potential suitability of habitat within the Project Area.

While there is potentially suitable habitat for a number of listed species (see Table 11), it is important to note that there are very few documented occurrences of these listed species utilizing the Project Area. Based on the desktop review and observations from the 2021 wintering grassland raptor survey, there [redacted]

[redacted] during the 2021 wintering grassland raptor surveys, which suggests use may be limited during the wintering period. [redacted] Although potentially suitable wintering habitat exists for both of these species within the Project Area, no documented use occurred during the 2021 surveys. This suggests that the Project Area does not provide suitable wintering habitat for these species. AES is planning to conduct a grassland breeding bird survey during the 2021 field season to further document use of the Project Area by listed species.

Table 11
List of Endangered, Threatened and Species of Special Concern Within or near the Somerset Solar Facility Project Area.

Common Name (Scientific Name)	Status[1]	Habitat Requirements	Presence and Suitability of Habitat in Project Area	Data within Five Years in the Project Area
Birds				
American bittern (*Botaurus lentiginosus*)	SSC	Freshwater wetlands with tall vegetation for breeding; migrates south for winter	eBird sightings from Study Area in spring; limited suitable habitat within Project Area, based on lack of emergent, herbaceous wetlands	No
Bald eagle (*Haliaeetus leucocephalus*)	ST	Undisturbed areas along large bodies of water for breeding; year-round resident	[redacted]	Yes
Cerulean warbler (*Dendroica cerulea*)	SSC	Large tracts of older deciduous forests, particularly in river valleys, breeding habitat consists of tall trees and clear understory; migrates south for winter	Forest stands within Project Area are not likely preferred habitat; could be used during migration; eBird and NYSOA sightings in spring within Study Area	No
Common Nighthawk (*Chordeiles minor*)	SSC	Breed and forage in both rural and urban habitats; open areas, including coastal areas, woodland clearings, open forests, and grasslands, migrates south for winter	eBird sightings from 2020 in Project Area in northeastern field along Hartland Road; suitable habitat present, potential for use of Project Area during breeding or migration	Yes
Common Tern (*Sterna hirundo)*	ST	Shorelines and coastal areas used for breeding and migration; migrates south for winter	eBird sightings from 2016 - 2020 in Study Area during spring and fall; suitable habitat present, potential for use of Project Area during migration	No
Coopers Hawk (*Accipiter cooperii)*	SSC	Forests and woodlands, year-round resident	[redacted]	Yes
Eastern whip-poor-will (*Antrostomus vociferus*)	SSC	Breeds in deciduous or mixed, rich moist woodlands with little or no understory; migrates south for winter.	eBird sightings from 2019, 2020 in Study Area during spring; forested stands within Project Area are not likely suitable habitat; potential for use of Project Area during migration	No
Golden eagle (*Aquila chrysaetos*)	SE	Breeds in open country, avoids urban areas and large contiguous forest stands; migrates south for winter	eBird sighting from 2017 in Project Area during spring; suitable habitat limited within Project Area; potential for use during migration	No
Golden-winged warbler (*Vermivora chrysoptera*)	SSC	Breeds in open woodlands, brushy clearings, marshes and bogs; migrates south for winter	eBird sightings from 2020 in Study Area; suitable habitat likely limited in Project Area during breeding or migration	No
Horned lark (*Eremophila alpestris)*	SSC	Grasslands with short, sparse vegetation; year-round resident	eBird and NYSOA sightings from Project Area and Study Area in spring; observed in northeastern field along Hartland Road; suitable habitat present, depending upon agricultural activities	Yes
Northern harrier	ST	Breeds and winters in large open	[redacted]	[redacted]

Common Name (Scientific Name)	Status[1]	Habitat Requirements	Presence and Suitability of Habitat in Project Area	Data within Five Years in the Project Area
Northern harrier (*Circus hudsonius*)		grasslands or wetlands; year-round resident	[redacted]	
Osprey (*Pandion haliaetus*)	SSC	Breeds in coastal areas, shorelines; migrates south for winter	eBird sightings from Study Area; potential for use of Project Area during migration; suitable breeding habitat not likely present with long-term presence of bald eagle nest adjacent to Project Area.	No
Peregrine falcon (*Falco peregrinus)*	SE	Open country, breeds on cliffs or tall buildings; migrates south for winter	eBird sightings from Study Area; potential for use of Project Area during migration; suitable habitat limited	No
Piping plover (*Charadrius melodus*)	SE, FE	Breeds in coastal areas, shorelines; migrates south for winter	eBird sightings from Study Area; potential for use of Project Area during migration; suitable habitat limited	No
Red-headed woodpecker (*Melanerpes erthrocephalus*)	SSC	Large scattered forests, orchards, shade trees in towns, avoids unbroken forests; migrates south for winter.	eBird sightings from Study Area spring, summer, and fall potential for use of Project Area, during migration or breeding; suitable habitat limited	No
Red-shouldered hawk (*Buteo lineatus*)	SSC	Breeds in bottomland hardwood forests with open understory, flooded deciduous swamps; migrates south for winter	eBird sightings from Study Area spring, and fall potential for use of Project Area, during migration; suitable habitat limited.	No
Sharp-shinned hawk (*Accipiter striatus*)	SSC	Year-round resident, breeds in dense forestlands; often winters in forest edges.	eBird sightings from Study Area spring, summer, and fall; suitable habitat limited, potential for use of Project Area, during migration	No
Short-eared owl (*Asio flammeus)*	SE	Potential winter resident only, breeds in Canada; prefers large open grasslands and scattered shrub habitats	[redacted]	No
Upland sandpiper (*Bartramia longicauda*)	ST	Breeds in grasslands, pastures, or hayfields, migrates south for winter.	eBird sightings from Study Area during fall; suitable habitat present, potential for use of Project Area, during breeding or migration.	No
Vesper Sparrow (*Pooecetes gramineus*)	SSC	Breeds in open areas with short grass or scattered shrubs, old fields, pastures, migrates south for winter	eBird and NYSOA sightings from Study Area spring and fall; suitable habitat present, depending upon agricultural activities potential for use of Project Area, during migration.	No
Mammals				
Northern long-eared bat (*Myotis septentrionalis*)	FT, ST	Forestlands, wetlands, and riparian corridors for breeding and foraging	No known maternity roosts or hibernaculum within 0.25 miles of Project Area or Study Area; suitable habitat present.	No

1 – Status

- FE – Federal Endangered
- Federal Threatened
- SE – State Endangered
- ST – State-listed Threatened species
- SSC – State-listed Species of Conservation Concern

4.0 CONCLUSIONS

This report provide a summary of publicly available information, including agency data requests, online databases, reports, published literature, geospatial data, and site-specific observations regarding wildlife and wildlife habitats within the Project Area, the Study Area, and surrounding lands, per Section 94-C regulations.

Based on this review, the only SE or ST listed species which has been documented utilizing the Project Area in the last five years is the bald eagle[redacted]

[redacted] In addition, this buffer consists of forestland which will ensure a visual buffer is maintained throughout construction and operation of the Project. Based on results of the 2021 wintering grassland raptor survey, the bald eagle was not documented utilizing the Project Area for roosting or feeding activities, which suggests any use of the Project Area during the wintering period may occur on an infrequent basis.

[redacted] This suggests that the Project Area does not provide suitable wintering habitat for these species. AES is planning to conduct a grassland breeding bird survey during the 2021 field season to further document use of the Project Area by listed species.

The analysis also determined that there are no known NLEB maternity roost trees within 150-feet of the Project nor any known NLEB hibernacula within 0.25-mile of the Project. The nearest known NLEB hibernacula is found more than 8 miles away from the Project. Therefore, the Project is not anticipated to have any effects on the NLEB.

The predominant landscape feature within the Study Area and adjacent to the Project is the southern Lake Ontario shoreline, which borders portions of the Project. The Lake Ontario shoreline and surrounding wetlands and undeveloped habitats within the coastal plain function as important migration and breeding habitat for water-dependent avian species. In addition, the Lake Ontario shoreline serves as an important stopover point for neotropical migrant avian species which migrate to and from northern Canada to the northern parts of South America. The shoreline could also be utilized by migrating bats, seasonally as they migrate to or from hibernacula. A portion of the inactive Somerset coal-fired power plant located along the Lake Ontario shoreline is not included as part of this Project. This area includes the approximately 100-acre closed Solid Waste Disposal Area 1 Landfill. The closed landfill appears to serve as important grassland habitat along the Lake Ontario shoreline within the Study Area and this area will not be impacted by the Project.

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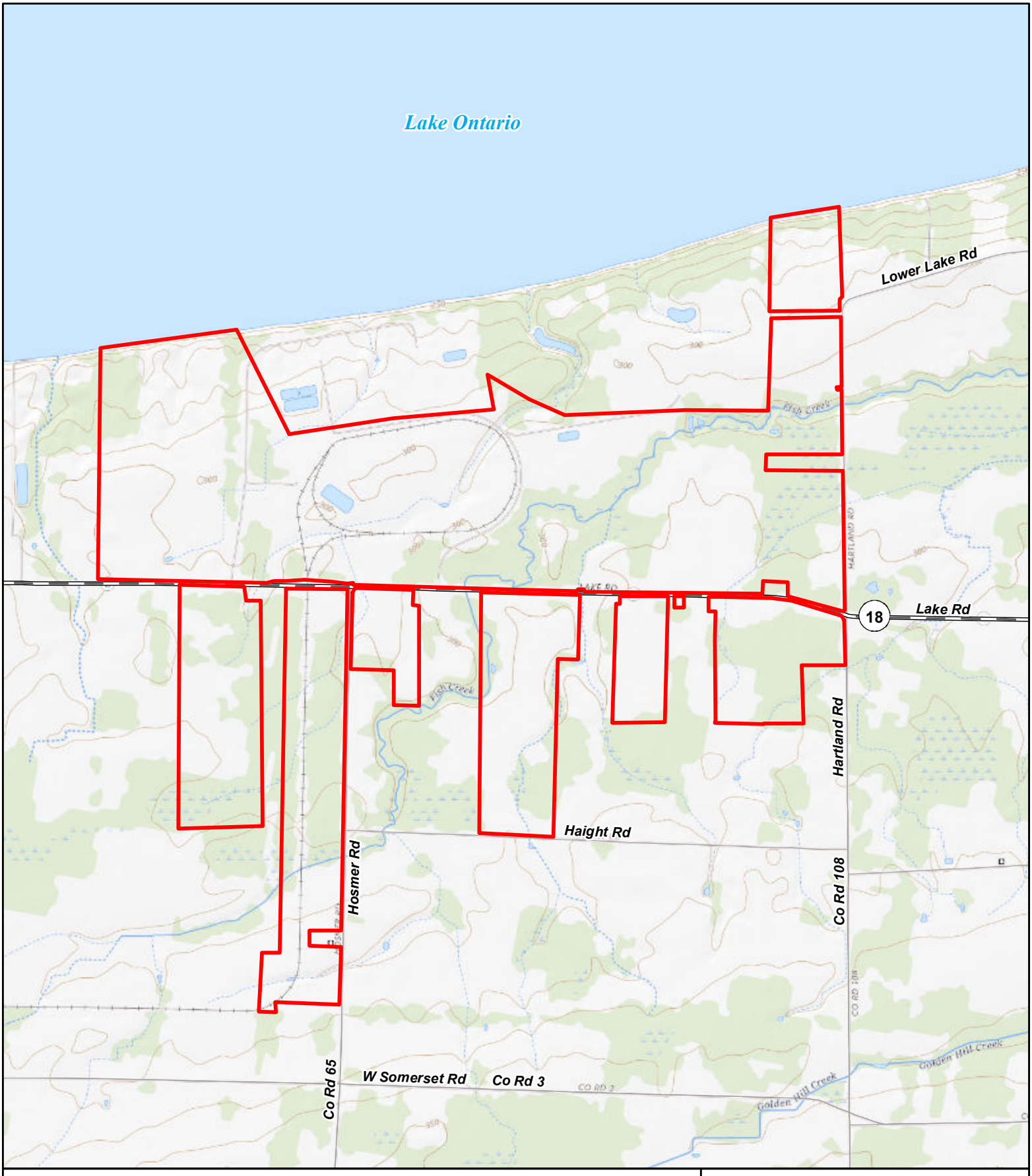
FIGURES

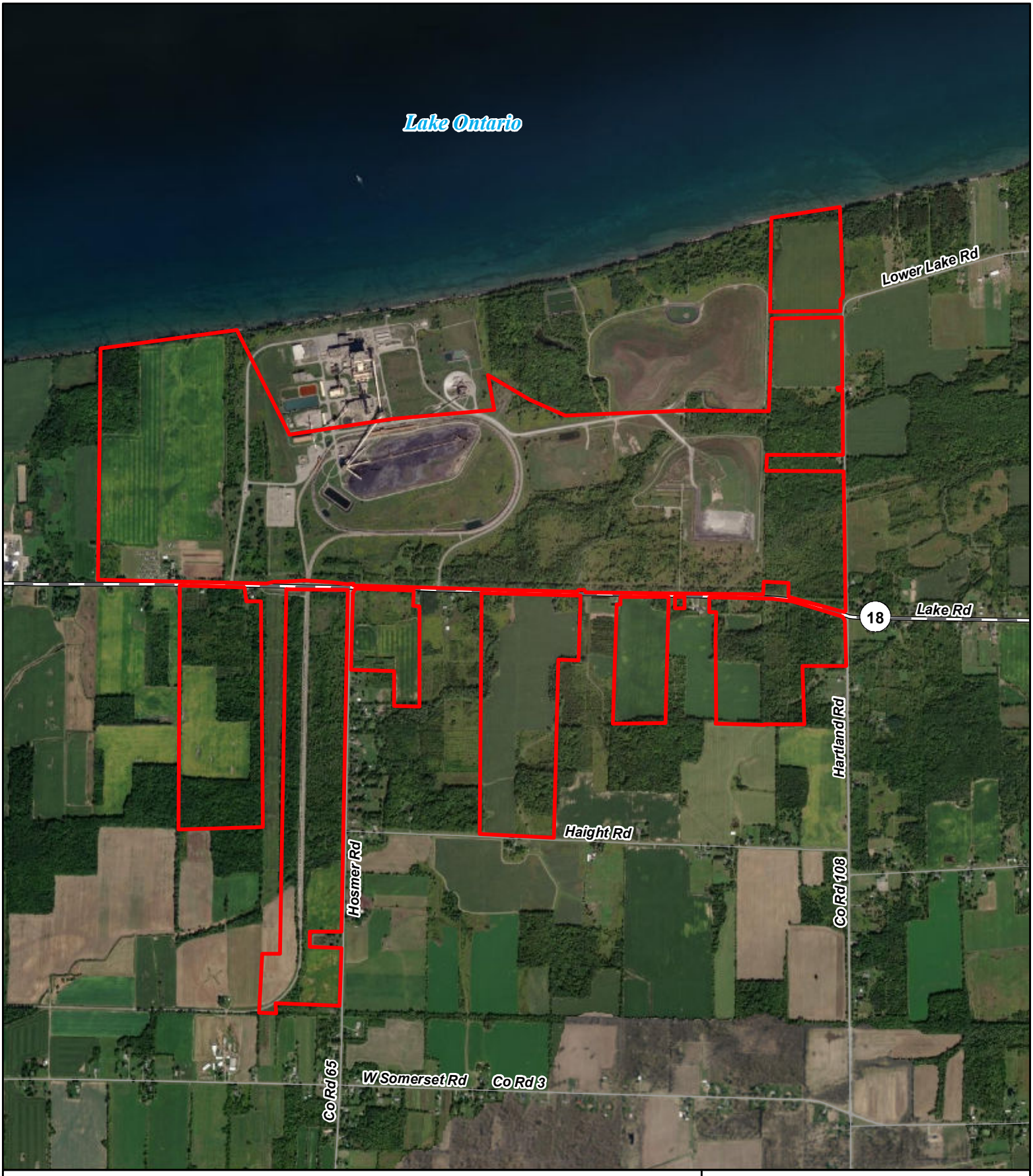


Project Area

PROPOSED SOMERSET SOLAR PROJECT

Figure 1
Site Location of the AES Somerset Solar Site – Topographic

Approximate Scale: 0 0.25 0.5 Miles 1:24,000

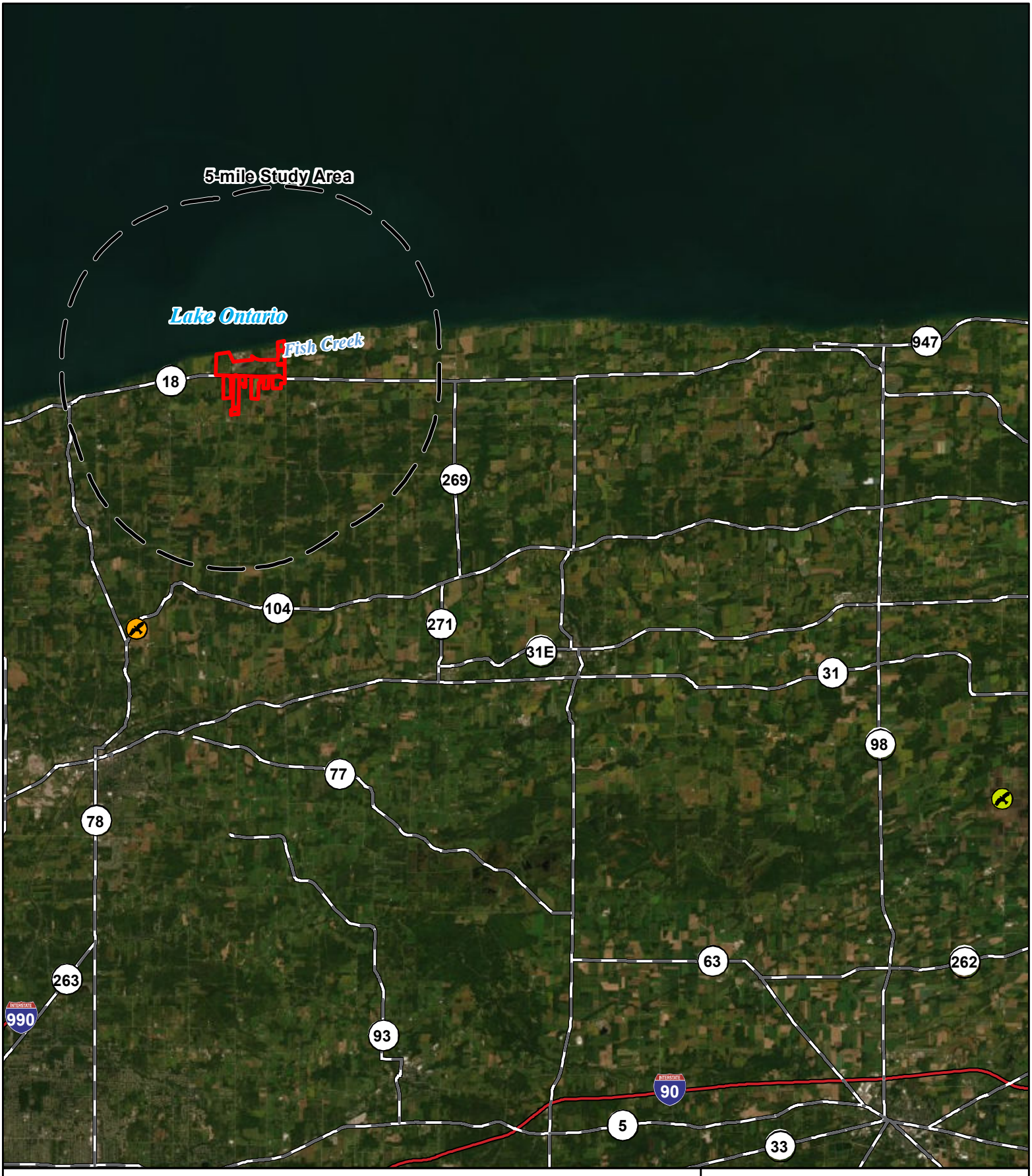


Project Area

PROPOSED SOMERSET SOLAR PROJECT

Figure 2
Site Location of the AES Somerset Solar Site – Aerial

Approximate Scale: 0 0.25 0.5 Miles 1:24,000



Project Area 5-mile Study Area

Avian Count and Survey Locations

- Audubon Christmas Bird - Wilson-Lake Plains
- USGS Breeding Bird Survey - Byron 61066

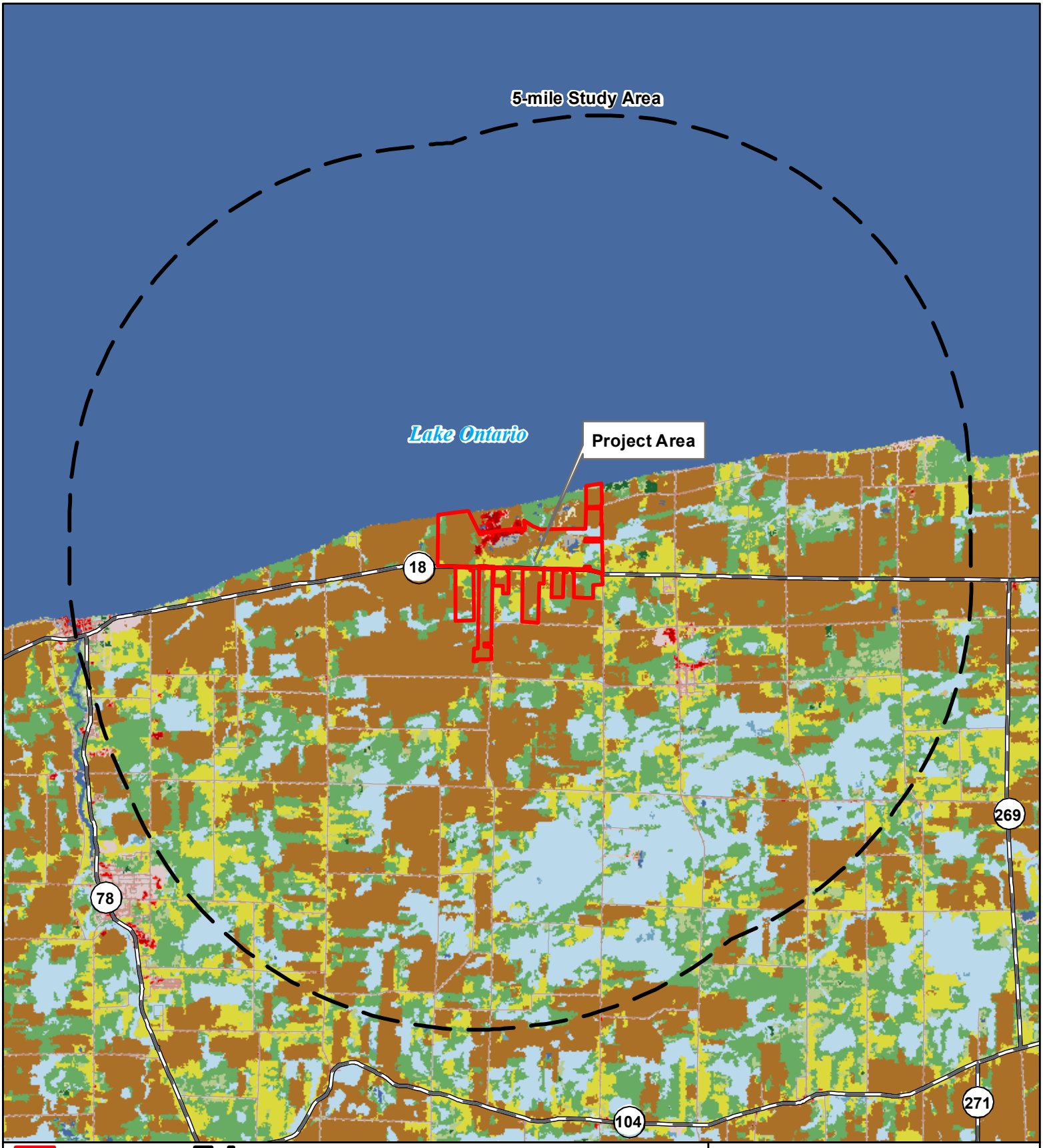
*Study area not centered due to highlight the nearest Audubon Christmas Bird survey location.

Approximate Scale: 0 2 4 Miles 1:260,000

PROPOSED SOMERSET SOLAR PROJECT

Figure 3

USGS Breeding Bird Survey and Audubon Christmas Bird Count Locations in the Vicinity of the AES Somerset Solar Site



Project Area
5-mile Study Area

NLCD Land Cover

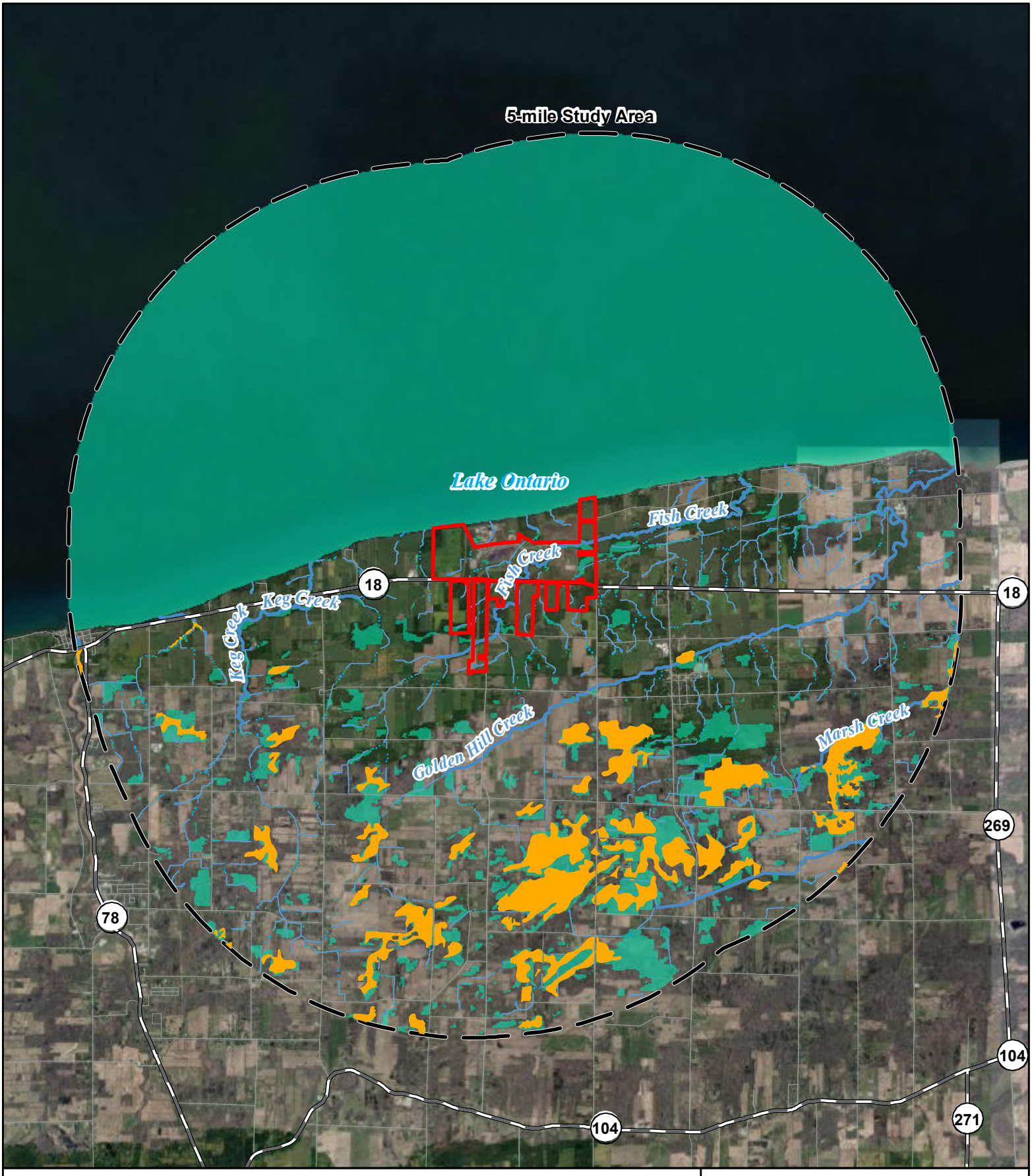
- Open Water
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Mixed Forest
- Shrub/Scrub
- Deciduous Forest
- Evergreen Forest
- Grassland/Herbaceous
- Barren Land (Rock/Sand/Clay)
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Emergent Herbaceous Wetlands

Approximate Scale: 0 1 2 Miles 1:110,000

N

PROPOSED SOMERSET SOLAR PROJECT

Figure 4
National Land Cover Databasefor the AES Somerset Solar Site



Project Area
5-mile Study Area

Water Resources

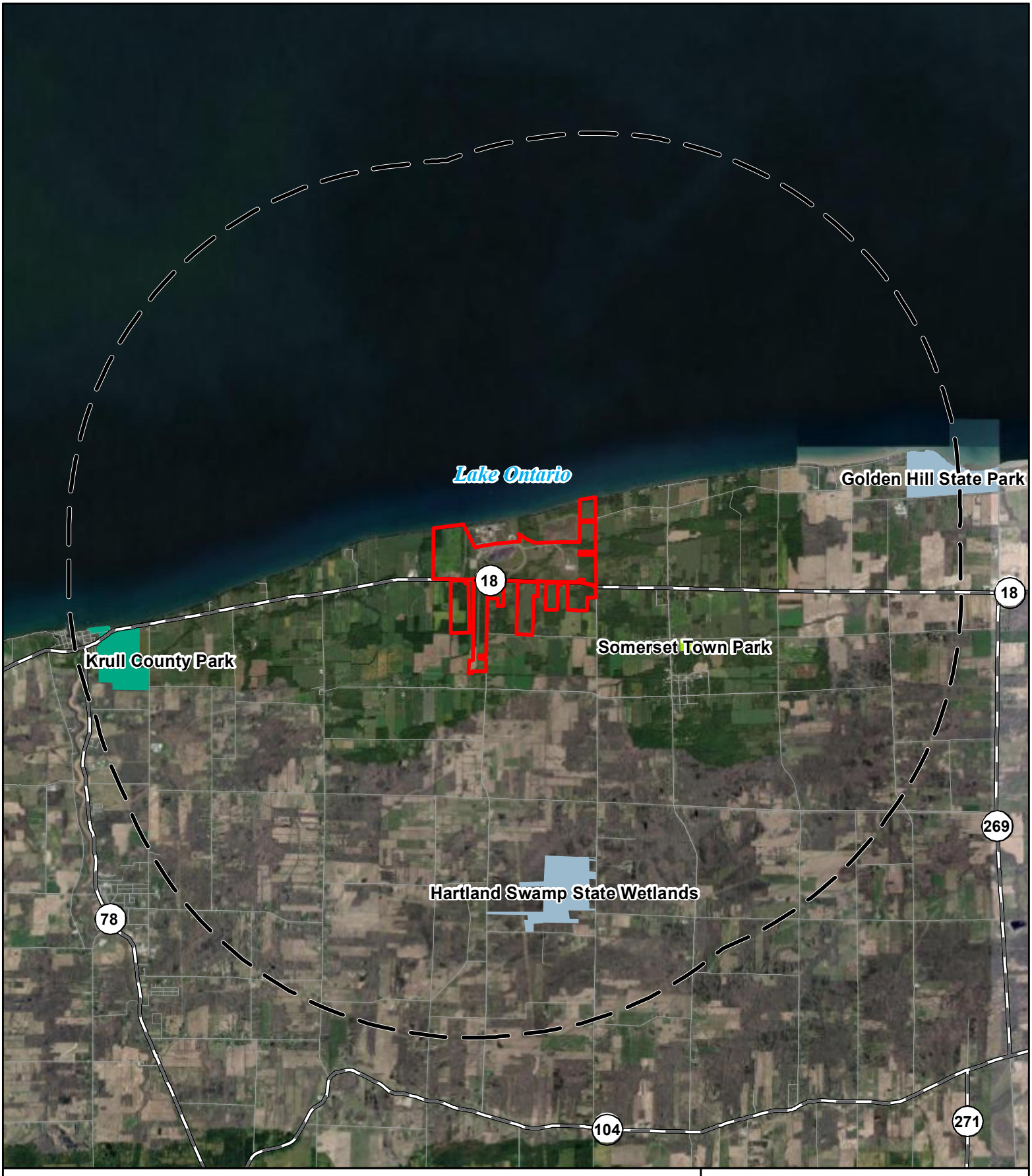
NHD Perennial Stream
NHD Intermittent Stream
NWI Wetland
NYS Freshwater Wetland

Approximate Scale: 0 1 2 Miles

1:110,000

PROPOSED SOMERSET SOLAR PROJECT

Figure 5
Federal and State Waterbodies in the Vicinity of the AES Somerset Solar Site



Project Area
5-mile Study Area

Municipal/Government Lands
Municipal Park
CountyPark
State Park

Approximate Scale: 0 1 2 Miles 1:110,000

PROPOSED SOMERSET SOLAR PROJECT

Figure 6
Federal, State, and Locally Owned Lands in the Vicinity of the AES Somerset Solar Site

Appendix A. Wintering Grassland Raptor Survey Work Plan

WINTERING GRASSLAND RAPTOR SURVEY SITE-SPECIFIC WORK PLAN

For the

PROPOSED SOMERSET SOLAR FACILITY

Proposed in

NIAGARA COUNTY, NEW YORK

January 4, 2021

PREPARED FOR

sPower
2180 South 1300 East
Suite 600
Salt Lake City, Utah
84109-2749

PREPARED BY

Tetra Tech, Inc.
3136 South Winton Ave, Suite 303
Rochester, New York 14623

1.0 INTRODUCTION

sPower is proposing to redevelop portions of the discontinued Somerset coal power plant site into a 140-megawatt (MW) photovoltaic (PV) solar energy generation facility, potentially with battery storage, in the Town of Somerset, Niagara County, New York (Project) (Figure 1). The Project would be authorized under 94c of the New York State Executive Law. For the purposes of this work plan, the Study Area is considered the parcels identified on Figure 1.

The Project would be located in the Town of Somerset, which is situated just south of Lake Ontario, approximately 13 miles northeast of the City of Lockport. The Town of Somerset and the surrounding area includes a mix of agricultural, rural residential, industrial and institutional land use, along with sparsely forested areas. The Study Area is comprised of several tax parcels making up approximately 1,486 acres. The Study Area is comprised of developed and disturbed industrial land, a capped landfill with a vegetative cover, agricultural land, successional shrubland and undeveloped forest with pockets of wetlands. The agricultural and successional portions of the Facility area provide habitat for wildlife species associated with open fields and grasslands.

The following work plan describes the approach for determining the presence and site use by state-listed threatened/endangered and rare grassland raptor and other bird species during the wintering season. The methodology proposed here follows the protocols described in the New York State Department of Environmental Conservation (NYSDEC) Draft Survey Protocol for State-listed Wintering Grassland Raptor Species (2015). This protocol specifically targets the state endangered short-eared owl (*Asio flammeus*) and the state threatened northern harrier (*Circus hudsonius*).

2.0 METHODOLOGY

The methodology for this survey will follow NYSDEC guidance which includes a combination of stationary surveys and driving surveys. Actual survey dates will be dependent upon suitable weather conditions, such as no to light winds or heavy precipitation and good visibility (e.g. no fog); ideal conditions for viewing or hearing birds.

Stationary Surveys

Stationary surveys will involve an avian biologist observing suitable habitat (or the most suitable habitat for short-eared owls within the study area) during the period of one hour before sunset to a half hour after sunset. If visibility is adequate, the survey may be extended up to an additional half-hour to maximize the potential for viewing short-eared owls, as they are a crepuscular and hunt at night. Throughout the survey, the biologist will scan the surrounding open areas and potential perches for these species, while ensuring their silhouette is obstructed (e.g. standing/sitting near a vehicle or hedgerow). The biologist will also listen for calls of the short-eared owl and northern harrier. For any raptors observed,

data regarding behavior and flight patterns will be recorded.

Based on our initial review of suitable habitat for short-eared owls, Tetra Tech has identified four locations for stationary surveys (see Figure 1). Tetra Tech will select at least three of these locations to conduct the surveys. As these surveys will be initiated during the wintering season, Tetra Tech will continue to follow the proposed frequency, once every two weeks for the duration of the wintering season (January through March). If short-eared owls or northern harriers are detected during the second round of surveys in March, then Tetra Tech will contact NYSDEC to determine the need to continue surveys during the month of April, based on individual behavior and frequency of observations. Tetra Tech may conduct additional surveys or modify locations, depending upon observed activity and the need to conduct additional observations to document activity.

Driving Surveys

Driving surveys will involve a Tetra Tech biologist conducting short-duration (5 minute) observation surveys at approximately 16 roadside locations throughout the Study Area. The driving surveys will be conducted in the afternoon, prior to conducting the stationary surveys. The driving survey points were identified based on locations with good visibility of suitable foraging habitat (e.g. open fields). At the driving point locations, the biologist will scan the surrounding area and record activity of raptors, including behavior and flight patterns. If any raptors are observed while driving between survey points, these sightings will also be documented as incidental occurrences. The driving surveys will be conducted once every two weeks, in conjunction with the stationary surveys.

Data Collection and Reporting

Tetra Tech will record data as described in the NYSDEC survey protocols. Data will include: weather conditions (including snow depth), raptor species observed and numbers of individuals, individual behavior (roosting, foraging, migration, breeding), flight direction, and probability of repeat observations. Additional details will be recorded for individual behaviors documented to fully characterize any foraging, roosting, or breeding habitats within the study area.

Tetra Tech will prepare a draft report which summarizes the data recorded for the short-eared owls and northern harriers. Additional observations of raptors or any state-listed grassland bird species will be included in the report. The report will include map(s) on aerial photography documenting any observations of short-eared owl or northern harrier. The report will include a discussion of the need for more comprehensive surveys are required to adequately assess potential effects of the Project on these species. The draft report will be submitted to NYSDEC within 30 days of completion of the final surveys in March or April depending on the winter season observations.

DR-15
Stationary-3
DR-2
DR-7
Stationary-4
DR-8
DR-16
DR-6
Stationary-2
DR-9
DR-1
DR-5
DR-10
DR-11
DR-12
DR-13
DR-14
DR-4
Stationary-1
DR-3

LEGEND

- Site/Parcel Boundary
- Driving Route (DR) Survey Point
- Stationary Survey Point

N

APPROXIMATE SCALE IN FEET

0 1,000 2,000 4,000 Feet

SPOWER PROPOSED SOMERSET SOLAR PROJECT

FIGURE 1
PROPOSED WINTER RAPTOR SURVEY LOCATIONS 2020-2021

PREPARED BY:

TETRA TECH

PROJECT NUMBER	APPROVED BY	DRAWN BY	DATE	FIGURE
		BKW	01/04/21	1

Appendix B. NYNHP Data Request Response

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

March 26, 2021

Sean Meegan
Tetra Tech
3136 South Winton Road, Suite 303
Rochester, NY 14623

Re: Somerset Solar
County: Niagara Town/City: Somerset

Dear Sean Meegan:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site.

Bald Eagle (*Haliaeetus leucocephalus*, state listed as Threatened) has been documented nesting within 1/4 mile of the project site. For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 9 Office, Division of Environmental Permits, at dep.r9@dec.ny.gov.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

For information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the Permits staff at the NYSDEC Region 9 Office as described above.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program

Appendix C. USFWS IPaC Results

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Niagara County, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE.

"BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Dunlin Calidris alpina arcticola This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1E
- PEM1A
- PEM1Ad

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1E
- PFO1B
- PFO1A
- PFO1C
- PSS1E
- PSS1A

FRESHWATER POND

- PUBHx
- PUBHh
- PUBFx

LAKE

- L2UBH

RIVERINE

- R4SBC
- R2UBH
- R4SBCx
- R4SBAx
- R4SBA
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

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1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE.

"BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Dec 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black-billed Cuckoo Coccyzus erythropthalmus — Breeds May 15 to Oct 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9399

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cerulean Warbler Dendroica cerulea — Breeds Apr 20 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Dunlin Calidris alpina arcticola — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

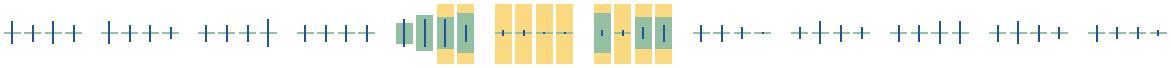
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

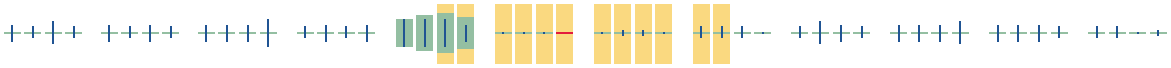
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

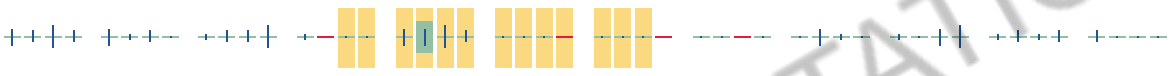
Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



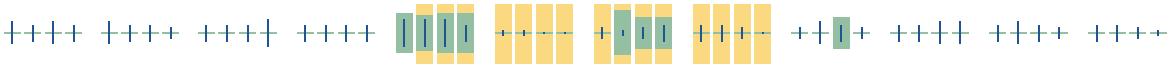
Cerulean Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Eastern Whip-poor-will
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish and Wildlife Service office or visit the NWI map for a full list.

FRESHWATER EMERGENT WETLAND

- PEM1/SS1Bd
- PEM1E
- PEM1Bd
- PEM1Ed
- PEM1Ad
- PEM1C
- PEM1B
- PEM1Cx

- PEM1A
- PEM1Ax
- PEM1Ch
- PEM1Ex
- PEM1Eh
- PEM1Fh
- PEM1/UBFx
- PEM1Fx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1B
- PFO1E
- PFO1Bd
- PSS1B
- PSS1Bd
- PFO1A
- PFO1Ed
- PSS1E
- PFO1/SS1B
- PSS1/FO1E
- PSS1/EM1Bd
- PFO1/SS1E
- PFO1C
- PSS1/EM1E
- PSS1/EM1B
- PSS1/FO1Bd
- PSS1/FO1B
- PFO1/EM1E
- PFO1/SS1A
- PFO1Ad
- PFO1/4B
- PSS1F
- PSS1A
- PFO4E
- PFO1/SS1C
- PFO1/EM1A
- PSS1C
- PSS1Ed
- PFO5Fh
- PSS1/EM1C

FRESHWATER POND

- PUBHx
- PUBHh
- PUBFx
- PUB/SS1F
- PUB/EM1F
- PUBH

PUBF

LAKE

L2UBH
L1UBHh

OTHER

Pf

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.