

**Project Site:** Johnson Farm (SunEdison Project Number NY-15-0073)

**Address:** 124 Johnson Road, Chester, New York 10918

**County:** Orange

**Total Parcel Acreage:** Approximately 166 acres

**Proposed Project Site (1) Acreage:** Approximately 11 acres

**Proposed Project Site (2) Acreage:** Approximately 7 acres

**Proposed System Size (AC):** 5 MW

**Date:** July 7, 2015

**Tetra Tech Project Number:** 194-5364 Task 18.01

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## 1.0 Introduction

Tetra Tech has prepared this Site Suitability Assessment (SSA) for the 5 megawatt (MW) alternating current (AC) solar array project proposed by SunEdison LLC (SunEdison) located at 124 Johnson Road, Chester, New York (Project). The proposed Project (SunEdison project number NY-15-0073) would be constructed on one of two potential sites, (Project Site) located on the approximately 166-acre parcel (Parcel) of private land within Orange County, New York (See Site Location Figure). The approximately 11-acre Project Site (1) is located in the southern portion of the Parcel and the approximately 7-acre Project Site (2) is located in the northeastern corner of the Parcel. According to land cover data, the property associated with the Parcel is used primarily for agriculture, specifically cultivated cropland. The purpose of this SSA is to provide SunEdison with a desktop evaluation of those potential existing biological and land resources on and/or in the vicinity of the Project that may preclude, constrain, or otherwise affect development of the Project as well as providing a summary of potential federal, state and local regulatory requirements for development of a solar project.

## 2.0 Methodology

A desktop constraints analysis was performed using publicly available data and literature to investigate the potential presence of biological and land use resource constraints on or proximal to the Project. A regulatory review involved making general queries to federal, State and local agencies. Site-specific information was not requested. The constraints data evaluated in this assessment also consists of Geographic Information System (GIS) spatial data obtained primarily from the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Agriculture and Markets (Ag & Markets), the U.S. Fish and Wildlife Service (USFWS), the National Park Service (NPS), and the U.S. Geological Survey (USGS). A complete list of data sources consulted is provided in the reference section. ArcGIS software was used to analyze data that were collected. A preliminary screening of approximately 94 acres encompassing both Project Sites (1 and 2) was also conducted using the NYSDEC State

Environmental Quality Review (SEQR) online Environmental Assessment Form (EAF) Mapper tool.

Land cover data within and adjacent to the proposed Project were analyzed using spatial data provided by the USGS National GAP Analysis Program (GAP) to evaluate the potential for the Project area to support sensitive wildlife species or provide critical wildlife habitat. Preliminary wetland identification for the Project and proximal areas was accomplished using spatial data for state-mapped jurisdictional wetlands and USFWS National Wetlands Inventory (NWI) data. Streams were categorized according to the NYSDEC class system based on the actual or potential usage of each stream or a particular stream segment. Evaluation of constraints on groundwater was limited to a review of available spatial data and agency literature regarding the presence of Environmental Protection Agency (EPA)-regulated Sole Source Aquifers, and NYSDEC Primary and Principal Aquifers. To determine if the Project Sites were located within a flood hazard area, existing spatial data from the Federal Emergency Management Agency (FEMA) was reviewed.

Potential state- and federally-protected wildlife species likely to be present on or in the vicinity of the Project were determined by first compiling a list of species known to occur within the county using NYSDEC data, and USFWS data using the Information for Planning and Conservation (IPaC) project planning tool. For species known to occur in the county, the likelihood of occurrence within the Project Sites was then assessed by evaluating the presence or absence of suitable habitat on and adjacent to the Project Sites through desktop analysis of land cover. Extirpated species were not included. Potential state- and federally-protected plant species were treated as a group, and their potential occurrence was based on the presence or absence of undisturbed natural habitats on the Project Sites. New York State (NYS) law allows for the disturbance of rare plant habitat with the consent of the property owner (New York State Environmental Conservation Law 9-1503).

Resources of documented historic or aesthetic importance were mapped using available spatial data from applicable agency databases. Those resources that were found to be on or within 1 mile of the Project were mapped. Online data sources for the presence of state Indian Reservations on or within the vicinity of the Project were also queried.

Soils within and proximal to the Project were evaluated using available United States Department of Agriculture (USDA) spatial data. Soil types within the Project boundaries were also compared to those listed by the USDA as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Spatial data available from the New York State Department of Planning and Development were used to determine if the Project was located within a Coastal Resource Zone.

### 3.0 Results

The following sections describe the results of the desktop screening for potential regulatory constraints associated with biological resources and protected lands identified within or adjacent

to the Project. Summary results of the preliminary screening using the NYSDEC online EAF Mapper tool are provided in Appendix A.

### 3.1 Biological Resources

Analysis using data provided by GAP identified that the proposed 11-acre Project Site (1) consists of 100 percent cultivated cropland. The proposed 7-acre Project Site (2) consists of 62.75 percent harvested forest (grass/forb regeneration), 30.02 percent cultivated cropland, 5.82 percent developed open space, 0.72 percent central Appalachian pine-oak rocky woodland and 0.70 percent northeastern interior dry-mesic oak forest; making it the less preferred Project Site based on land cover (See Land Cover Figure). Johnson Road is located northeast of Project Site (1) which is surrounded by undeveloped agricultural fields intermittent with hedgerows. Project Site (2) is located along Johnson Road with Craigville road to the north. It is surrounded by residential properties and undeveloped agricultural fields to the east, south and west. Forests about the northern edge of Project Site (2). Approximately 1.5 percent (0.1 acres) of Project Site (2) mapped as cultivated cropland and harvested forest appears to be forest cover. Based on analysis of the land cover data, the Project area consists primarily of undeveloped agricultural land that could provide potential foraging habitat for common wildlife species.

#### 3.1.1 Wetlands, Surface Waters, Groundwater and Flood Hazard Areas

A desktop analysis was conducted to identify the potential wetlands and surface waters on or adjacent to the Project Sites (See Wetlands and Surface Waters Figure). No mapped NYSDEC wetlands were identified on either Project Site (1 or 2) or the approximately 166-acre Parcel. Mapped NWI wetlands were also not identified within either of the Project Sites. The closest mapped feature is a NWI-mapped wetland located approximately 25 feet west of Project Site (2), which may constrain development of the Project; therefore, making it the less preferred Project Site based on wetlands. This wetland is classified as a palustrine emergent wetland with persistent vegetation that is saturated (PEM1B). There are two other NWI-mapped wetlands that are approximately 200 to 250 feet east of Project Site (2) but are outside of the 166-acre Parcel. A second NWI-mapped PEM1B wetland is located approximately 125 feet southwest of Project Site (1), which is less likely to constrain development of the Project. There is another NWI-mapped wetland located approximately 500 feet east of Project Site (1) and is classified as a palustrine wetland with an unconsolidated bottom that lies within an excavated basin and is permanently flooded (PUBHx). This feature will unlikely cause any constraint unless Project Site (1) is modified within the Parcel. There is a wetland in-between Project Site (1) and (2). It is located approximately 300 feet northwest of Project Site (1) and 800 feet south of Project Site (2). This wetland is classified as a palustrine wetland with an unconsolidated bottom that has been diked or impounded and is permanently flooded (PUBHh). As discussed with the previous wetland, this feature will also unlikely cause any constraint unless the Project Sites (1 and 2) are modified.

There are no NYSDEC-regulated streams within Project Site (1) or (2). There is one NYSDEC stream that crosses into the southeastern portion of the Parcel. It is located approximately 250 feet southeast of Project Site (1). This stream is designated as a Class C tributary to Moodna Creek. It is listed as a Priority Waterbody by the NYSDEC (ID# 1303-0011) with drainage into the

lower Hudson River. There is a second stream that confluences into the first stream and enters the northwest corner of the Parcel. It is located approximately 225 feet west of Project Site (2) and is also designated as a Class C stream with the same Priority Waterbody information as the previous stream. These features are less likely to constrain development of the Project unless the Sites (1 and 2) are modified within the Parcel.

Under the Environmental Conservation Law (Article 15), New York regulates surface freshwater resources by their best uses (fishing, source of drinking water, etc.) (6 NYCRR Part 701) or as Wild, Scenic and Recreation Rivers (6 NYCRR Part 666). Letter classes such as A, B, C, and D, are used to designate the freshwater surface waterbodies in New York. The lowest classification and standard is D. The best usage of Class C waters is fishing, and fish, shellfish, and wildlife propagation and survival.

Project Site (1) and (2) are located within one mile of a NYSDEC Principal aquifer. The aquifer is located approximately 0.72 miles southeast of the Project Sites (1 and 2) (See Groundwater Figure). Principal aquifers are defined as groundwaters that are highly productive or have a geology that suggests the presence of an abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time. No EPA-regulated Sole Source Aquifers or NYSDEC designated Primary Aquifers are located on or within one mile of the Project Sites.

A FEMA National Flood Hazard Area overlaps into the approximately 166-acre Parcel; however, it is not located within either Project Site (1 or 2). This Flood Hazard Area has been classified as Flood Zone A (100 year flood zone). It bisects between Project site (1 and 2) and lies adjacent to Project Site (2) to the west. Project Site (1) is surrounded by the Flood Zone to the east and south (See Flood Hazard Area Figure).

### **3.1.2 Listed Threatened and Endangered Species**

There are 24 listed wildlife species known to occur in Orange County. Desktop analysis of land cover data and aerial imagery suggest that the Project Sites and their immediate vicinity may support habitat for five of the 24 listed species. Northern Harrier, Henslow's sparrow, Upland Sandpiper, Northern Long-Eared Bat, and Indiana Bat could potentially utilize portions of the Project Sites as foraging or migrating habitat (Table 1).

There are 96 state-listed threatened or endangered plants and 1 federal-listed threatened plant known to occur in Orange County (Appendix B). The probability of these species occurring within the Project Sites is low considering that the Project Sites are currently managed as farmland and no undisturbed natural habitat remains.

**Table 1. Potential Federal & State Listed Wildlife Species within in the Project Area<sup>1</sup>**

| English Name   | Scientific Name               | Federal State Status <sup>2</sup> | Species-Habitat Associations   | Habitat Present in Project Vicinity  | Likelihood of Occurrence <sup>3</sup> |
|--|-------------------------------|-----------------------------------|--|--|---------------------------------------|
| <b>Birds</b>   |                               |                                   |  |  |                                       |
| Northern Harrier   | <i>Circus cyaneus</i>         | ST                                | Nest on the ground in thick cover. Found in open grasslands, shrubland, and marshes.   | Low to Moderate potential for foraging habitat                               | Low to Moderate                       |
| Henslow's sparrow  | <i>Ammodramus henslowii</i>   | ST                                | Found in grasslands with tall, dense grasses without woody vegetation. Use large fields that are ungrazed either in wet or dry conditions.   | Low to Moderate potential for breeding/foraging habitat                      | Low to Moderate                       |
| Upland Sandpiper   | <i>Bartramia longicauda</i>   | ST                                | Found in large areas with tall vegetated edges surrounding agricultural crops that mimic prairie grasslands. Prefer short grass for feeding and courtship and taller grasses for nesting and cover. Use pastures and grassy fields as habitat. | Low to Moderate potential for breeding/foraging habitat                      | Low to Moderate                       |
| <b>Mammals</b>   |                               |                                   |  |  |                                       |
| Northern Long-Eared Bat  | <i>Myotis septentrionalis</i> | ST, FT                            | Found in the interior of mature forests avoiding edge habitat. May also use open areas or canopy gaps. Use dead or live trees with loose bark to roost. May also use window shutters of buildings to roost. Will hibernate in caves and mines. | Low-Moderate (Approximately 0.2 acres of forested habitat on Project Site 2) | Low-Moderate                          |
| Indiana Bat  | <i>Myotis sodalis</i>         | SE, FE                            | Hibernate in caves and mines during the winter. Will roost in living or dead trees with loose bark in rural and suburban areas.  | Low-Moderate (Approximately 0.2 acres of forested habitat on Project Site 2) | Low-Moderate                          |
| <p>1. Animal species including Short-eared Owl (<i>Asio flammeus</i>), Golden Eagle (<i>Aquila chrysaetos</i>), Sedge Wren (<i>Cistothorus platensis</i>), Bald Eagle (<i>Haliaeetus leucocephalus</i>), Pied-billed Grebe (<i>Podilymbus podiceps</i>), Least Bittern (<i>Ixobrychus exilis</i>), Peregrine Falcon (<i>Falco peregrinus</i>), Timber Rattlesnake (<i>Crotalus horridus</i>), Bog Turtle (<i>Glyptemys muhlenbergii</i>), Fence Lizard (<i>Sceloporus undulatus</i>), Northern Cricket Frog (<i>Acris crepitans</i>), Alleghany Woodrat (<i>Neotoma magister</i>), Shortnose Sturgeon (<i>Acipenser brevirostrum</i>), Banded Sunfish (<i>Enneacanthus obesus</i>), Lake Chubsucker (<i>Erimyzon sucetta</i>), Longear Sunfish (<i>Lepomis megalotis</i>), Dwarf Wedgemussel (<i>Alasmidonta heterodon</i>), Brook Floater (<i>Alasmidonta varicose</i>), and Hessel's Hairstreak (<i>Callophrys hesseli</i>) are also documented in the County of Orange but are not likely to occur on Project Sites due to lack of suitable habitat.</p> <p>2. SE = State Endangered, ST = State Threatened, FE = Federal Endangered, FT = Federal Threatened</p> <p>3. Likelihood of Occurrence: Low– species range overlaps with Project Sites and marginally suitable habitat in Project vicinity; Moderate– species range overlaps with Project Sites and suitable habitat present in Project Sites, or species known to occur in habitat similar to Project Sites; High– highly suitable habitat present in Project Sites, or known populations exist in Project vicinity.</p> |                               |                                   |  |  |                                       |

## 3.2 Protected Lands

### 3.2.1 State, Federal, or Tribal Land

Review of the NPS database was conducted to identify properties listed on the National Register of Historic Places (NRHP) on or in the vicinity of the Project Sites (1 and 2). This review did not identify any sites that overlap within one mile the Project Sites (1 and 2) that is listed under NRHP. (See Protected Lands Figure).



The NYSDEC online EAF Mapper (Appendix A) revealed that neither Project Site (1 or 2) are located in an area designated as sensitive for archaeological sites; however, an online review of the New York State Cultural Resource information System (CRIS) was conducted to determine if NRHP eligible properties have been documented within one mile of the Project Sites (1 and 2). Results of the query indicated that there is one (1) NRHP eligible property documented within one mile of both Project Sites (1 and 2). It is designated as an eligible building located at 240 Meadow Ave., Chester, New York (USN Number: 07102.000147). In addition, three (3) archeological survey were conducted within one mile of the Project Sites, all located south of Project Site (1) (See Protected Lands Figure). None of the areas associated with these surveys were designated as eligible for listing on the NRHP. CRIS identifies the archeological survey areas as:

1. Survey Number 09SR59407: located approximately 0.34 miles southeast of Project Site (1) along Route 94.
  - Phase IA and IB Survey for the Orange County gas main project from Chester to Washingtonville, New York.
2. Survey Number 01SR51789: located approximately 0.45 miles south of Project Site (1) surrounding the suburban area of Surrey Road.
  - Phase I Cultural Resource Survey for the proposed valley view phase II subdivision.
3. Survey Number 06SR56698: located approximately 0.85 miles south of Project Site (1) on the southeast side of High Street and to the northwest of Meadow Avenue.
  - Phase 2 Archeological Investigation at the Meadow Hill Subdivision site.

A review of available mapping from the USGS National Map revealed that there are no Reservations in the vicinity of the Project Sites (1 and 2).

### **3.2.2 Agricultural Resources**

The Project Sites are located within an Agricultural District (ORAN001) certified by the New York State Department of Agriculture and Markets. A review of the USDA soil survey data indicates that 2 of the 4 soil units within Project Site (1) are designated as Farmland of Statewide Importance. The remaining 2 soil units within Project Site (1) did not fall within a USDA soil type classification. All 3 of the soil units within Project Site (2) are designated as Farmland of Statewide Importance, making Project Site (1) the preferred Site based on the soil survey. Prime Farmland and Unique Farmland were not identified within either Project site (1 or 2) (See Agricultural Districts Figure). Prime Farmland is defined by the USDA as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.” Unique Farmland is defined by the USDA as “land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables.” Farmland of Statewide Importance does not meet either the Prime or Unique Farmland definition but is used for the production of food, feed, fiber, forage, and oilseed crops.

- Farmland of Statewide Importance soil units identified within Project Site (1) include the following (See Soils Figure):
  - Mardin gravelly silt loam, 8 to 15 percent slopes (MdC): approximately 59.87 percent of the Project Site consists of this soil. See above for classification.
  - Erie gravelly silt loam, 3 to 8 percent slopes (ErB): approximately 15.26 percent of the Project Site consists of this soil. See above for classification.
- Other soil units identified within Project Site (1) include the following (See Soils Figure):
  - Mardin gravelly silt loam, 15 to 25 percent slopes (MdD): approximately 17.69 percent of the Project Site consists of this soil. This soil is characterized as moderately well drained with a parent material that consists of loamy till.
  - Rock outcrop-Nassau complex, undulating (RSB): approximately 7.18 percent of the Project Site consists of this soil. This soil is characterized as a mix of rock outcrop and Nassau complex. Nassau complex makes up 35 percent of the soil unit and is somewhat excessively drained with a parent material that consists of channery loamy till derived from slate or shale.
- Farmland of Statewide Importance soil units identified within Project Site (2) include the following (See Soils Figure):
  - Mardin gravelly silt loam, 3 to 8 percent slopes (MdB): approximately 56.93 percent of the Project Site consists of this soil. This soil is characterized as moderately well drained with a parent material that consists of loamy till.
  - Mardin gravelly silt loam, 8 to 15 percent slopes (MdC): approximately 40.44 percent of the Project Site consists of this soil. This soil is characterized as moderately well drained with a parent material that consists of loamy till.
  - Erie gravelly silt loam, 3 to 8 percent slopes (ErB): approximately 2.63 percent of the Project Site consists of this soil. This soil is characterized as somewhat poorly drained with a parent material that consists of loamy till derived from siltstone, sandstone, shale and limestone.

### 3.3 Coastal Resource Zone

A desktop analysis was conducted to determine if the Project Sites (1 and 2) were located within a coastal boundary or local waterfront revitalization community (See Coastal Zone Resources Figure). Online data readily available on the New York Department of State website were used as part of this desktop analysis. Neither Project Site (1 or 2) is located within a coastal zone resource area or within a local waterfront revitalization community.

## 4.0 Zoning and Land Use Constraints

Based on the information presented in this SSA and summarized in Table 2, Tetra Tech has identified environmental local and state approvals, permits, and consultations required to develop this Project. These approvals, permits, and consultations are listed in Appendix B. No federal permits, approvals, or consultations were identified.

An assessment of the environmental significance of the Project would be conducted pursuant to the New York's State Environmental Quality Review (SEQR) Act. A state or local agency would be designated as the lead agency for the SEQR process. The lead agency would conduct a coordinated review with the involved agencies to determine the significance of the action on the environment.

**Table 2. Land Use Constraints Identified Through Desktop Assessment**

| Constraint   | Description   | Applicability to the Project Area   |
|--|---|---|
| <b>Wetlands, Surface Waters, and Groundwater</b>         |   |   |
| Wetlands and Adjacent Area                               | The closest mapped feature is a NWI-mapped wetland located approximately 25 feet west of Project Site 2. This wetland is classified as a Palustrine emergent wetland with persistent vegetation that is saturated (PEM1B). A second NWI-mapped PEM1B wetland is located approximately 125 feet southwest of Project site 1.   | <b>Adjacent to Project Sites (1 and 2)</b><br>Unlikely a constraint unless the location of Project Sites are modified within the Parcel. However, Site 2 has potentially greater constraints to development based on proximity of wetlands.   |
| Surface Water  | One NYSDEC-mapped Class C tributary is located 250 feet southeast of Project Site 1, within the Johnson Farm parcel boundary. This stream is designated as a Class C tributary to Moodna Creek and is listed as a Priority Waterbody by the NYSDEC (ID# 1303-0011) with drainage into the lower Hudson River.   | <b>Adjacent to Project Sites (1 and 2)</b><br>Unlikely a constraint unless the location of Project Sites are modified within the Parcel.  |
| NYS Principal Aquifer                                    | Highly productive aquifer or an aquifer having a geology that suggests the presence of an abundant potential water supply. Principal aquifers are not intensively used as sources of water supply by major municipal systems at the present time  | <b>Adjacent to Project Sites</b>  |
| FEMA National Flood Hazard Area                          | <u>Zone A (100-YR Flood Zone)</u><br>Chance of flooding equals one percent. Mapped boundary limited to the extreme western portion of the Site.   | <b>Adjacent to Project Sites</b><br>Zone A (100-YR Flood Zone)<br>Portions of Parcel are within the 100-YR Flood Zone; however, Project Sites 1 and 2 are not within and are merely adjacent to Flood Zone.<br>Unlikely a constraint unless the location of the Project Sites are modified within the Parcel. |
| <b>Biological Resources</b>                              |   |   |
| Threatened/Endangered Plant and Wildlife Species Habitat | Agricultural area could potentially be used by avian species associated with open grasslands: <ul style="list-style-type: none"> <li>Northern Harrier</li> <li>Henslow's Sparrow</li> <li>Upland Sandpiper</li> </ul> Forested habitat on or adjacent to Project Sites could potentially provide suitable habitat for: <ul style="list-style-type: none"> <li>Northern Long-eared Bat</li> <li>Indiana Bat</li> </ul> | <b>Habitat potentially present on Project Sites<sup>a</sup></b>   |
| <b>Agricultural Resources</b>                            |   |   |



## Site Suitability Assessment

| Constraint   | Description  | Applicability to the Project Area   |
|--|--|---|
| Farmland of Statewide Importance   | <p><b>Present on Project Site 1</b><br/>Mardin gravelly silt loam, 8 to 15 percent slopes (MdC)<br/>Erie gravelly silt loam, 3 to 8 percent slopes (ErB)</p> <p><b>Present on Project Site 2</b><br/>Mardin gravelly silt loam, 3 to 8 percent slopes (MdB)<br/>Mardin gravelly silt loam, 8 to 15 percent slopes (MdC)<br/>Erie gravelly silt loam, 3 to 8 percent slopes (ErB)</p> | <p><b>Present on Project Site 1</b><br/>MdC percent cover of Project site: 59.87<br/>ErB percent cover of Project site: 15.26</p> <p><b>Present on Project Site 2</b><br/>MdB percent cover of Project site: 56.93<br/>MdC percent cover of Project site: 40.44<br/>ErB percent cover of Project site: 2.63</p> |
| Other Soils Present  | <p><b>Present on Project Site 1</b><br/>Mardin gravelly silt loam, 15 to 25 percent slopes (MdD)<br/>Rock outcrop-Nassau complex, undulating (RSB)</p>   | <p><b>Present on Project Site 1</b><br/>MdD percent cover of Project site: 17.69<br/>RSB percent cover of Project site: 7.18</p>  |
| <b>Protected Lands</b>   |  |   |
| Archeological Sites  | Three survey sites and one eligible property within the vicinity of the Project have been previously investigated for potential archeological sites.   | <p><b>Vicinity of Project Site</b><br/>Located within approximately 0.34 miles to 0.85 miles of Project site.</p>   |
| a. Although habitat has been identified as potentially being present on the Project Sites, a site assessment would be required to determine if existing local conditions meet the specific requirements for those species identified as occurring within the county. |  |   |

## 5.0 Conclusion & Recommendations

The table below provides a summary of recommended actions for resources identified either within or adjacent to the Project. Based on the results of this query, it is recommended that Project Site (1) be utilized for the proposed Project. Results for potential constraints associated with stream features, aquifers, protected wildlife and plant species, protected lands, and proximity to a coastal resource zone were negligible for both Project Site (1) and (2). However, Project Site (2) had some forested cover within the Site boundary which may provide roosting habitat for the listed Northern Long-eared Bat. Additionally, Project Site (2) was adjacent to a federally mapped wetland and had all soil components categorized under Farmland of Statewide Importance. Therefore, Project Site (1) will likely cause less constraint to the Project.

| Recommended Action       |                        |                     |           |          |              |  |
|--------------------------|------------------------|---------------------|-----------|----------|--------------|--|
| Constraint               | Present within Project | Adjacent to Project | Avoidance | Planning | Consultation | Recommendations  |
| Surface Waters           |                        | X                   | X         | X        |              | Site inspections are recommended to verify the location of state regulated streams. The results of site inspections may require the implementation of avoidance measures or mitigation strategies during Project planning and development. Potential impacts to proximal surface waters will need to be avoided or minimized through the development and implementation of an approved site-specific Erosion and Sediment Control Plan.  |
| Wetlands                 |                        | X                   | X         | X        |              | Site inspections are recommended to corroborate the presence or absence of federally regulated wetlands. The results of site inspections may require the implementation of avoidance measures or mitigation strategies during Project planning and development.  |
| Protected Groundwater    |                        | X                   |           |          |              | No recommendations required based on the current Project site configuration.   |
| Protected Animal Species | X <sup>a</sup>         |                     |           |          | X            | <p>Submit data request to the NY Natural Heritage Program to identify protected species documented on or in the vicinity of the Project. A subsequent site assessment would be required to determine if existing local conditions meet the specific requirements for those species identified as occurring on or in the vicinity of the Project. If suitable habitat is identified during site assessments, visual surveys may be required to determine the presence of protected avian species within the vicinity of the Project.</p> <p>For bat species forested habitat on or adjacent to Project Sites could potentially provide suitable habitat. Cutting restrictions could apply with no tree removal between April 1 and October 31, and if only Northern Long-eared Bat habitat is present, minimal tree cutting (less than one acre) must NOT take place when pups are present between June 1 and July 31</p> |

|  |   |   |   |  |   |   |
|--|---|---|---|--|---|---|
| Protected Plant Species  |   |   |   |  |   | Low probability of occurrence due to current land use within the Project. No recommendations required.  |
| Sensitive Biological Habitat   |   |   |   |  |   | Not identified in the vicinity of the Project. No recommendations required.   |
| Protected Farm Land  | X |   | X |  | X | Consultation with New York State Ag & Markets and/or landowner may be required to determine if the Project is located within property currently or recently under an agricultural assessment. If farmland that has received an agricultural assessment is converted to a nonagricultural use (within five years of last receiving an agricultural assessment if located in an agricultural district and within eight years if located outside an agricultural district), a payment to recapture the taxes forgone for converting such land will be imposed. |
| Other Protected Land <sup>b</sup>  |   | X |   |  | X | <u>Archeological Sites</u><br>Consultation with the State Historic Preservation Office (SHPO) may be required to identify the need/approach for any additional cultural resources within the Project Site.  |
| a: Potential habitat only<br>b: Surveys may be required to identify archaeological sites of importance and to identify standing structures that may qualify as eligible to the NRHP. |   |   |   |  |   |   |

## 5.1 Biological Resources

NYSDEC and USACE wetlands maps are not precise and conditions and boundaries of wetlands may have changed since the maps were developed. Since wetland features have been mapped within 200 feet of the Project Site, site inspections are recommended to corroborate the presence or absence of federally regulated wetlands.

For protected species, state and federal agency consultation and additional field surveys will potentially be required to better determine the occurrence of protected species, specific habitat characteristics, and the need for avoidance and minimization measures.

## 5.2 Protected Lands

Agricultural districting and farmland classification are meant to encourage the continued use of farmland for agricultural production. Programs administered by the USDA and NY Ag & Markets provide landowner incentives and protections, which are meant to forestall the conversion of farmland to non-agricultural uses. If the landowner chooses to convert farmland to non-agricultural production, they would lose associated program benefits and tax incentives.

The lead agency in the SEQR process will likely expect SunEdison to assist in consultation with the SHPO and possibly Native American Tribal Historic Preservation Offices (THPOs). Through consultation, the lead agency and SHPO would define the area of potential effect (APE) for archeological and architectural resources and to reach concurrence on the approach for any needed studies. SunEdison will likely be required to conduct an archeological survey of those areas on the Project Sites that will undergo ground-disturbing activity (i.e. the defined APE) and

perform historic architecture inventory within the defined APE for historic architecture to identify NRHP-eligible properties that may be affected by the Project.

DRAFT

## 6.0 References

### New York State Department of Agriculture & Market

<http://www.agriculture.ny.gov/AP/agsservices/agricultural-districts.html>  
<http://www.agriculture.ny.gov/AP/agsservices/SOILCOUNTY.htm>

### New York State Department of Environmental Conservation (NYSDEC)

<http://www.dec.ny.gov/eafmapper/>  
<http://www.dec.ny.gov/imsmaps/ERM/viewer.htm>  
<http://www.dec.ny.gov/imsmaps/facilities/viewer.htm>  
<http://gis.ny.gov/gisdata/inventories/member.cfm?organizationid=529&nysgis=>  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=931>  
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1097> <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1167> <http://www.dec.ny.gov/natureexplorer/app/> <http://www.dec.ny.gov/animals/>  
<http://www.dec.ny.gov/chemical/36730.html>  
<http://www.dec.ny.gov/lands/36119.html>  
<http://www.dec.ny.gov/pubs/42978.html>  
<http://www.dec.ny.gov/regs/3932.html>  
<http://www.dec.ny.gov/regs/4612.html>  
<http://www.dec.ny.gov/regs/4613.html>  
<http://www.dec.ny.gov/regs/4614.html>  
<http://www.dec.ny.gov/regs/13337.html>  
<http://www.dec.ny.gov/regs/13338.html>  
<http://www.dec.ny.gov/regs/13339.html>  
[http://www.dec.ny.gov/docs/wildlife\\_pdf/wetart24a.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/wetart24a.pdf)

### New York State Department of Parks, Recreation and Historic Preservation

<http://parks.ny.gov/shpo/online-tools/>

### New York State Department of Planning and Development

[http://appext20.dos.ny.gov/coastal\\_map\\_public/map.aspx](http://appext20.dos.ny.gov/coastal_map_public/map.aspx)

### New York State GIS Clearinghouse

<http://gis.ny.gov/gisdata/inventories/member.cfm?organizationID=538>

### New York Natural Heritage Program

<http://www.acris.nynhp.org/>

### New York State Department of Taxation and Finance

[http://www.tax.ny.gov/pdf/publications/orpts/manuals/vol6/rfv\\_propclasscodes.pdf](http://www.tax.ny.gov/pdf/publications/orpts/manuals/vol6/rfv_propclasscodes.pdf)

### U.S. Department of Agriculture

<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

### U.S. Department of Agriculture – Natural Resources Conservation Service (NRCS)

<http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>  
[http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/nedc/training/soil/?cid=nrcs142p2\\_053583](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/nedc/training/soil/?cid=nrcs142p2_053583)  
[http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/pr/soils/?cid=nrcs141p2\\_037285](http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/pr/soils/?cid=nrcs141p2_037285)



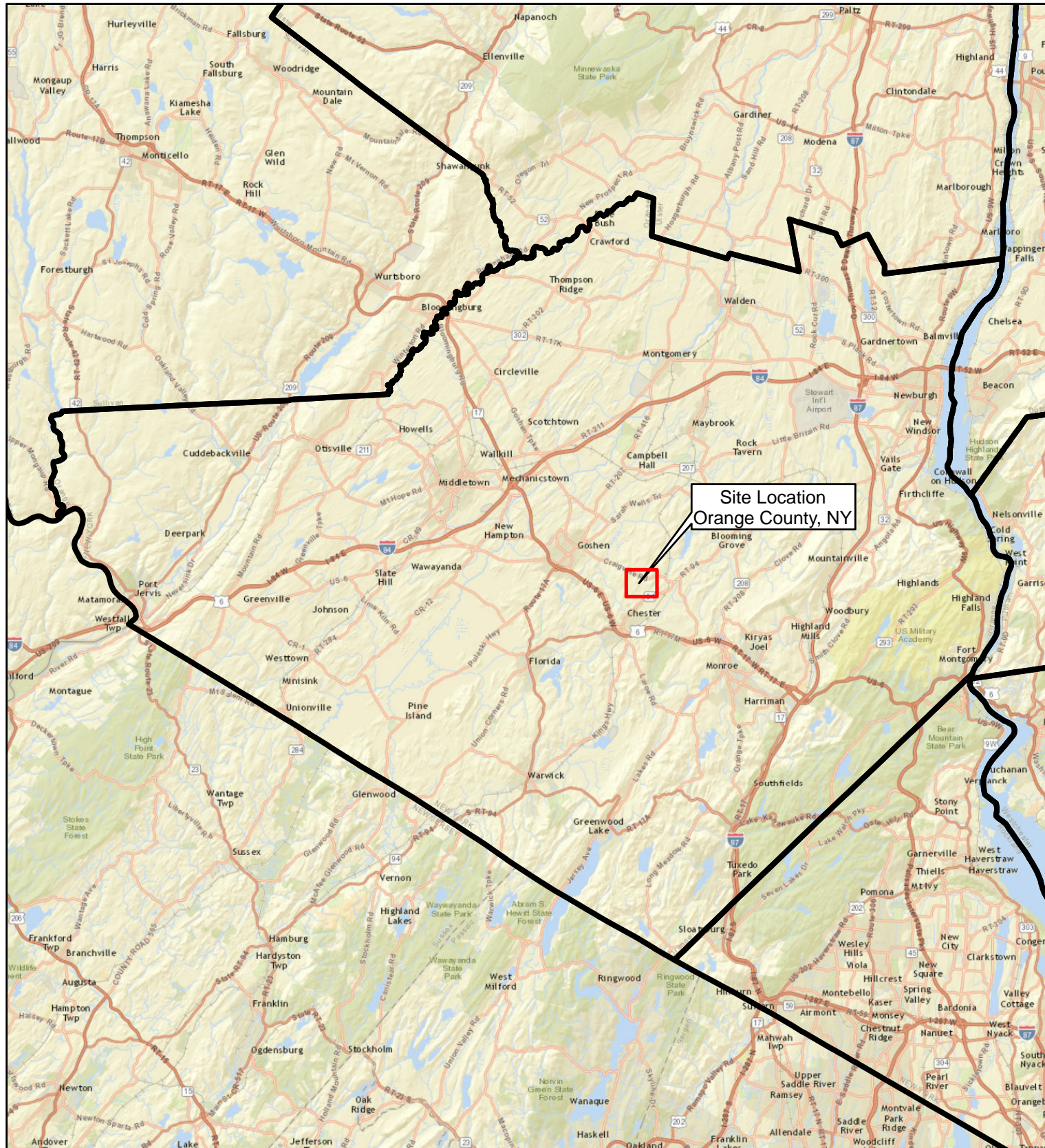
**U.S. Environmental Protection Agency**<http://www.epa.gov/region02/water/aquifer><http://water.epa.gov/infrastructure/drinkingwater/sourcewater/protection/solesourceaquifer.cfm>**U.S. Department of Fish and Wildlife**<http://ecos.fws.gov/ecos/home.action><http://ecos.fws.gov/ipac/><http://107.20.228.18/decoders/wetlands.aspx>**U.S. Geological Society**<http://viewer.nationalmap.gov/viewer/>[http://gis1.usgs.gov/csas/gap/viewer/land\\_cover/Map.aspx](http://gis1.usgs.gov/csas/gap/viewer/land_cover/Map.aspx)[http://nationalmap.gov/small\\_scale/printable/images/pdf/fedlands/NY.pdf](http://nationalmap.gov/small_scale/printable/images/pdf/fedlands/NY.pdf)**U.S. Department of Homeland Security**<https://www.fema.gov/>**U.S. Department of the Interior – National Park Service**<http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf><http://www.nps.gov/history/nr/research/><http://science.nature.nps.gov/im/gis/index.cfm>**U.S. Department of the Interior – National Wild and Scenic Rivers System**<http://www.rivers.gov/new-york.php>

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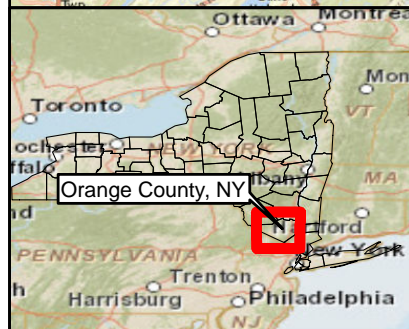
## FIGURES

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Site Location  
Orange County, NY



Legend  
County Boundary



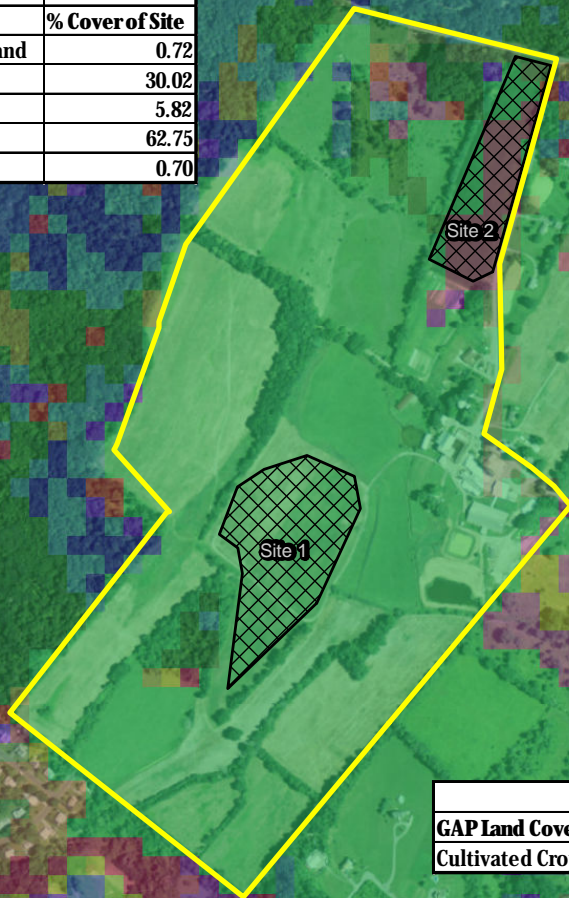
Site Location Map

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom,

Towns of Goshen and Chester, Orange County, New York



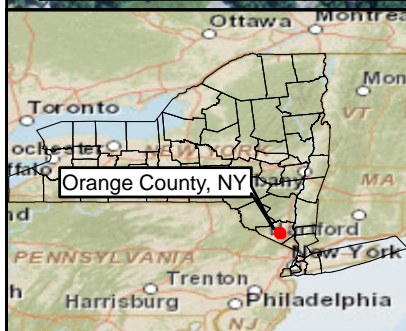
| Site 2                                      |                 |
|---|-----------------|
| GAP Land Cover (Ecological System)          | % Cover of Site |
| Central Appalachian Pine-Oak Rocky Woodland | 0.72            |
| Cultivated Cropland                         | 30.02           |
| Developed, Open Space                       | 5.82            |
| Harvested Forest - Grass/Forb Regeneration  | 62.75           |
| Northeastern Interior Dry-Mesic Oak Forest  | 0.70            |



| Site 1                             |                 |
|------------------------------------|-----------------|
| GAP Land Cover (Ecological System) | % Cover of Site |
| Cultivated Cropland                | 100.00          |

#### USGS GAP Land Cover

|  |   |  |   |
|--|---|--|---|
|  | Appalachian Hemlock-Hardwood Forest                 |  | Introduced Upland Vegetation - Treed              |
|  | Central Appalachian Oak and Pine Forest             |  | Laurentian-Acadian Floodplain Systems             |
|  | Central Appalachian Pine-Oak Rocky Woodland         |  | Laurentian-Acadian Northern Hardwoods Forest      |
|  | Central Interior and Appalachian Floodplain Systems |  | Laurentian-Acadian Northern Pine-(Oak) Forest     |
|  | Central Interior and Appalachian Riparian Systems   |  | Laurentian-Acadian Pine-Hemlock-Hardwood Forest   |
|  | Cultivated Cropland                                 |  | Managed Tree Plantation                           |
|  | Developed, High Intensity                           |  | North-Central Interior and Appalachian Rich Swamp |
|  | Developed, Low Intensity                            |  | North-Central Interior Wet Flatwoods              |
|  | Developed, Medium Intensity                         |  | Northeastern Interior Dry-Mesic Oak Forest        |
|  | Developed, Open Space                               |  | Open Water (Fresh)                                |
|  | Harvested Forest - Grass/Forb Regeneration          |  | Pasture/Hay                                       |
|  | Harvested Forest-Shrub Regeneration                 |  | Ruderal forest                                    |
|  | Introduced Riparian and Wetland Vegetation          |  |   |



#### Legend

- Project Site
- Parcel Boundary

0 250 500 1,000 1,500 2,000 Feet

O

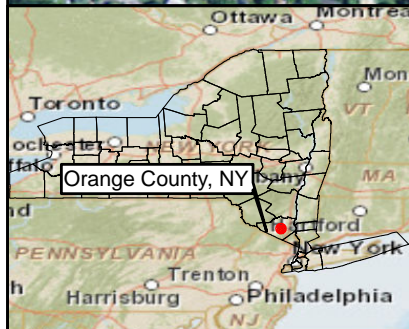
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and







Land Cover

Towns of Goshen and Chester, Orange County, New York





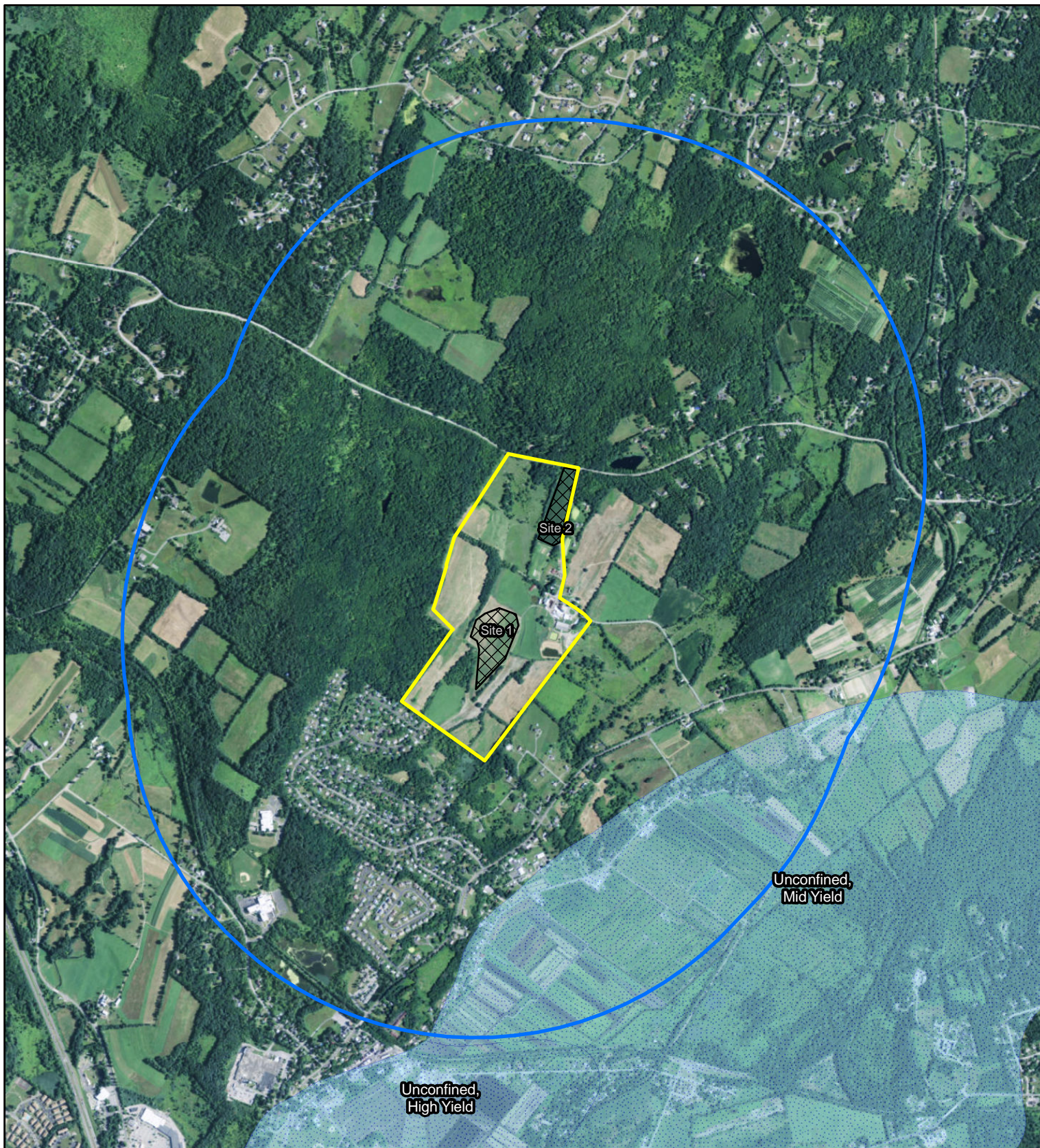
|   |                 |
|---|-----------------|
| <b>Legend</b>   |                 |
|  | Project Site    |
|  | Parcel Boundary |
|  | NYSDEC Streams  |
|  | NWI Wetlands    |

0 250 500 1,000 Feet

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and

|   |   |
|---|---|
|  |  |
| Mapped Wetlands and Surface Waters  |   |
| Towns of Goshen and Chester, Orange County, New York                                  |   |





**Legend**

-  Project Site
-  1 Mile Buffer of Site
-  Parcel Boundary
-  NYSDEC Principal Aquifer



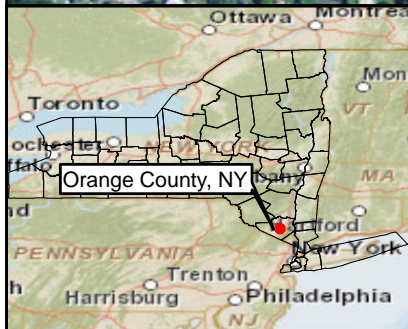
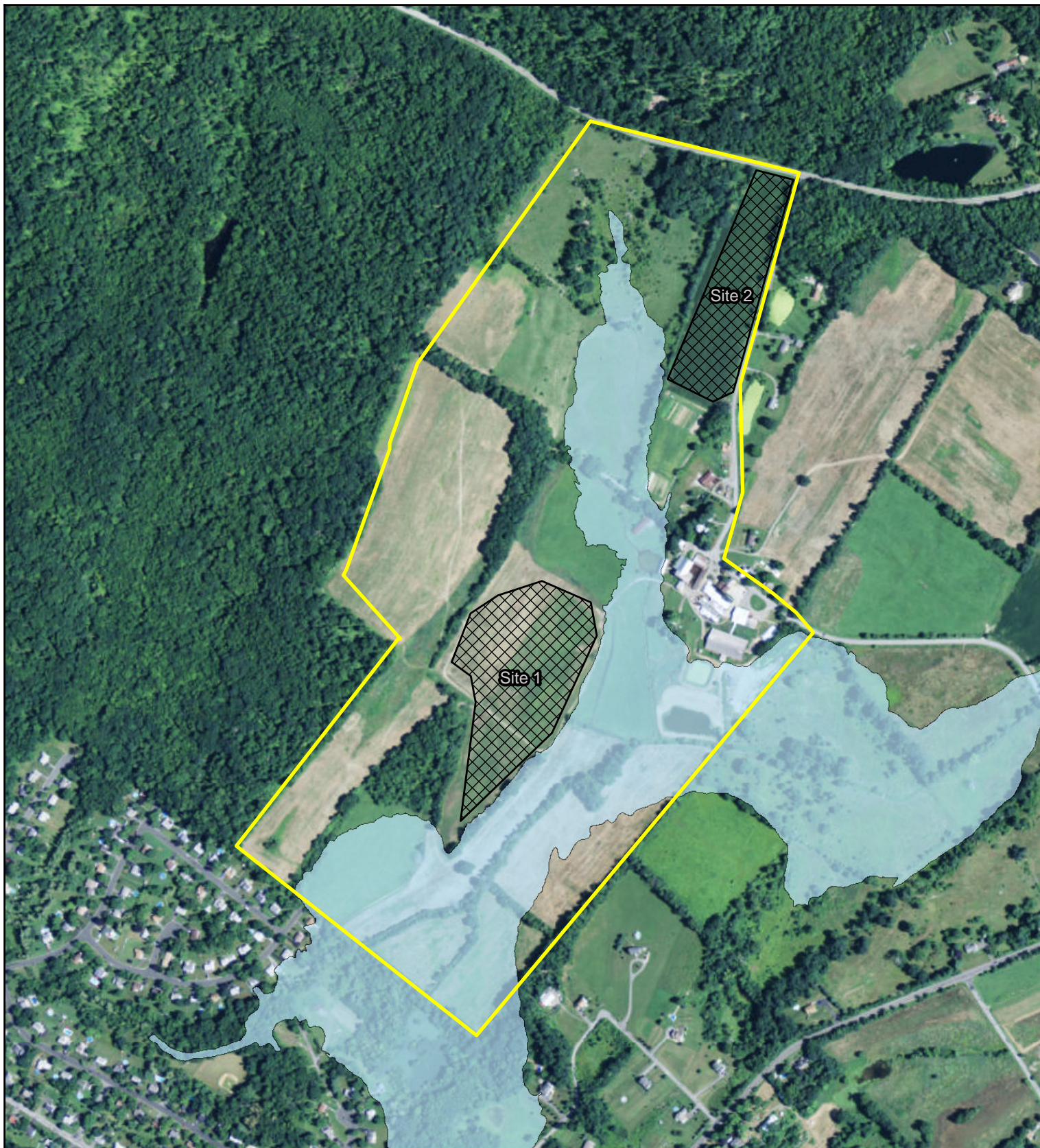
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and



Groundwater

Towns of Goshen and Chester, Orange County, New York





**Legend**



Project Site



100-YR Flood Zone



Parcel Boundary

0 250 500 1,000 Feet



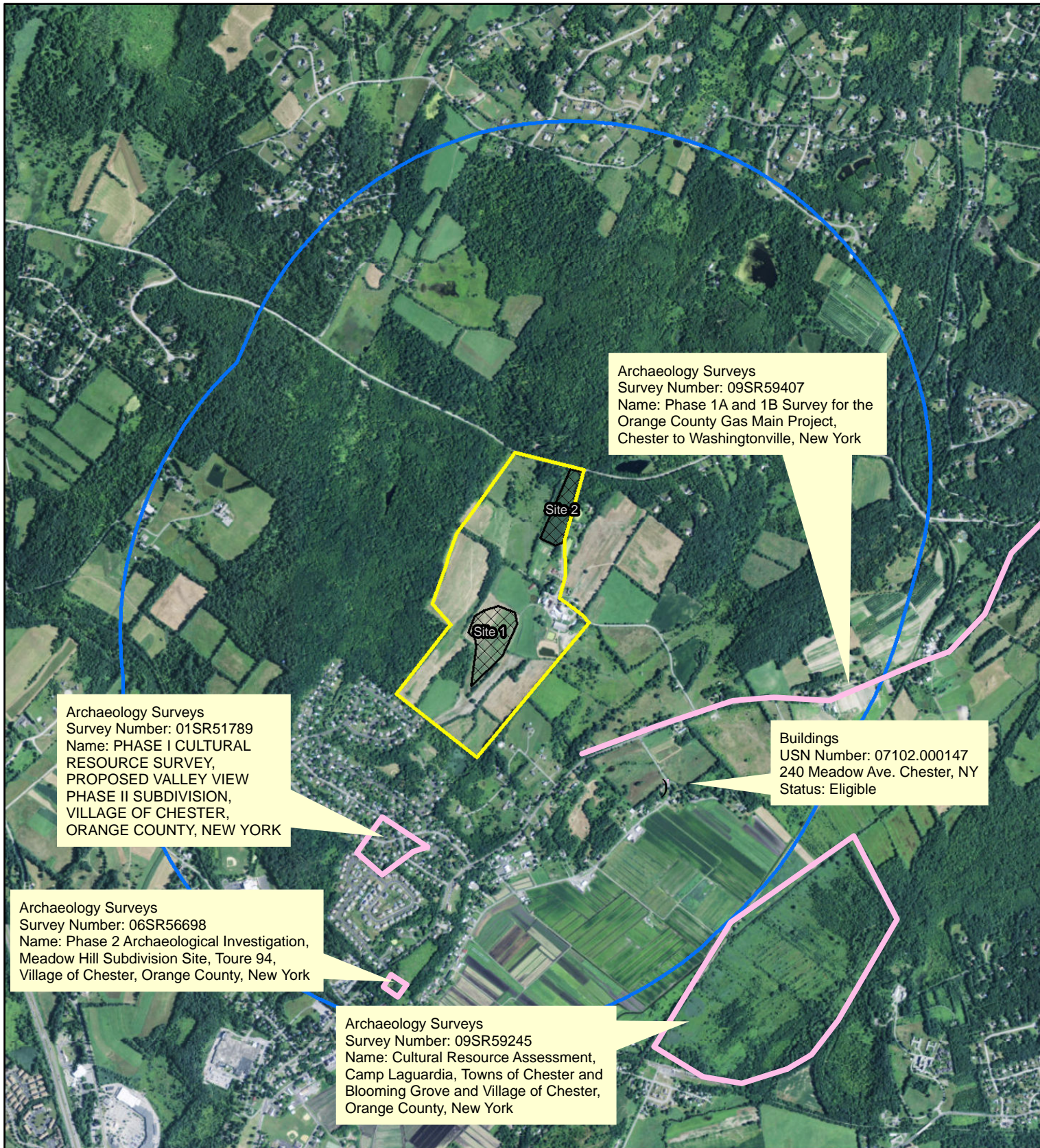
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and



Mapped Flood Hazard Areas

Towns of Goshen and Chester, Orange County, New York





**Legend**

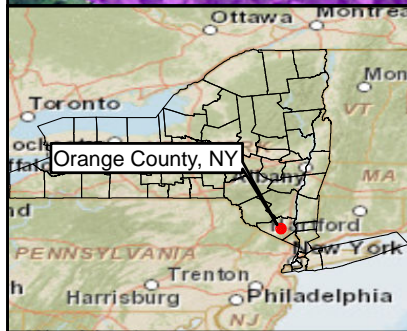
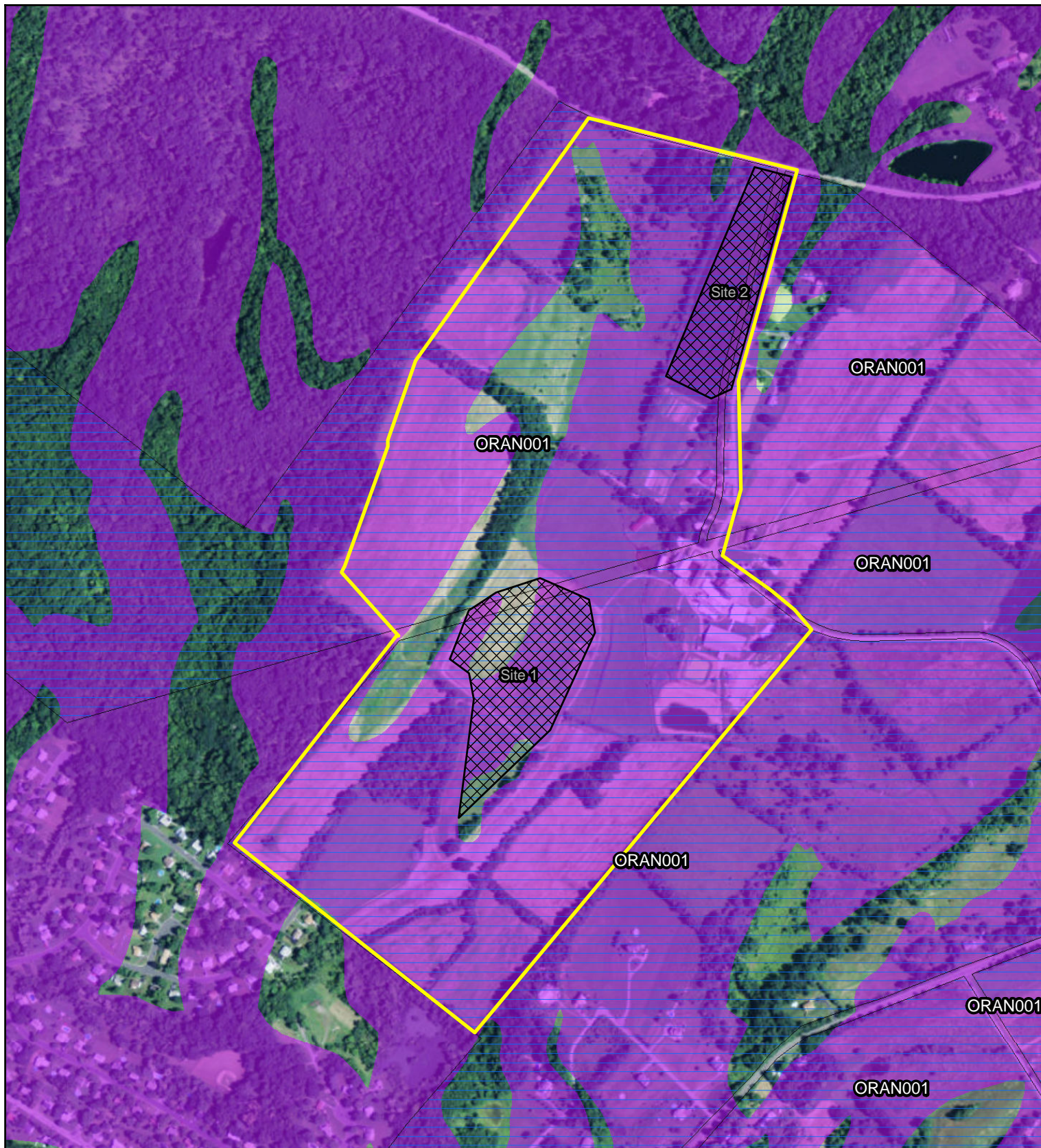
|                       |                 |
|-----------------------|-----------------|
| 1 Mile Buffer of Site | Project Site    |
| Protected Lands       | Parcel Boundary |

0 1,000 2,000 4,000 Feet **O**

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and

|  |                   |
|--|-------------------|
| <b>SunEdison</b><br>Solar in a Box                   | <b>TETRA TECH</b> |
| <b>Protected Lands</b>                               |                   |
| Towns of Goshen and Chester, Orange County, New York |                   |





|               |                                  |
|---------------|----------------------------------|
| <b>Legend</b> |                                  |
|               | Project Site                     |
|               | Parcel Boundary                  |
|               | Agricultural Districts           |
|               | Prime Farmland                   |
|               | Farmland of Statewide Importance |

0 250 500 1,000 Feet

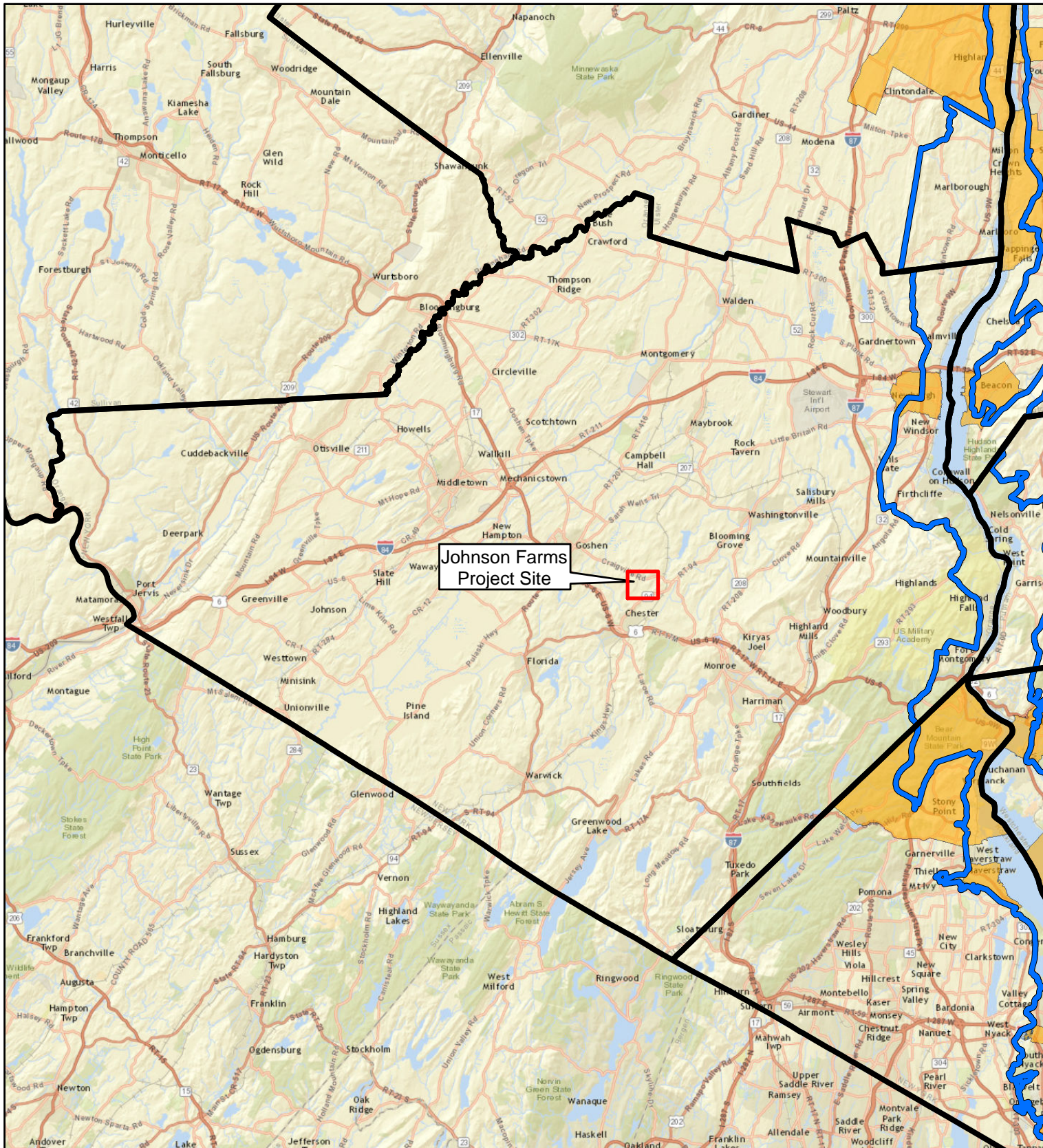
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and

|  |  |
|--|--|
|  |  |
| Mapped Agricultural Districts and Prime Farmland     |  |
| Towns of Goshen and Chester, Orange County, New York |  |

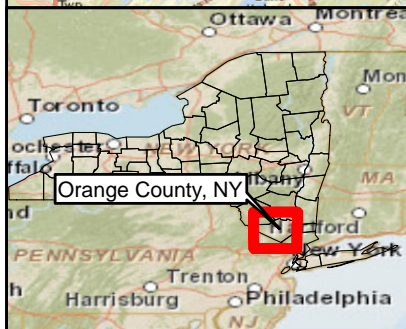








Johnson Farms  
Project Site



Legend

- County Boundary
- Coastal Boundary
- Local Waterfront Revitalization Communities

0 5 10 Miles



Coastal Zone Resources

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom,

Towns of Goshen and Chester, Orange County, New York



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## **APPENDICES**

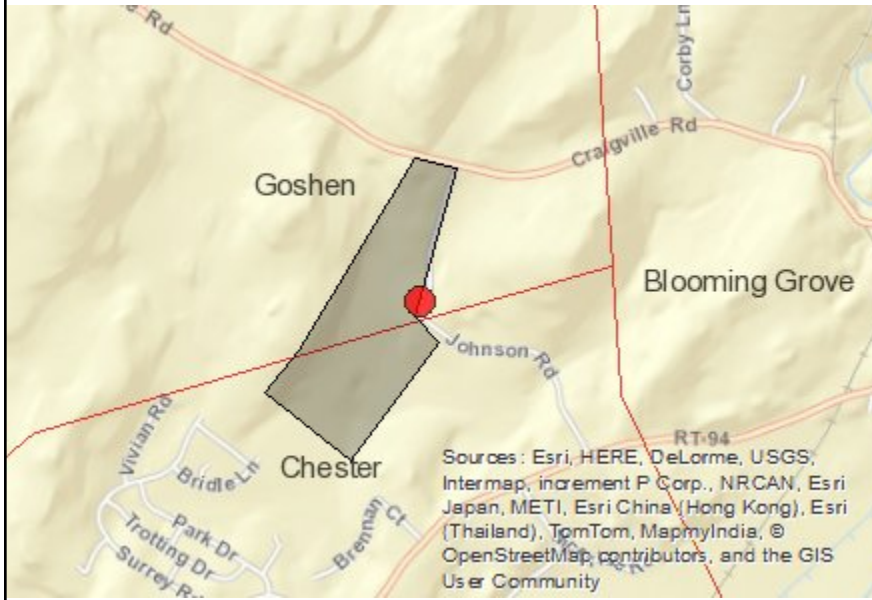
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# **APPENDIX A**

**Summary Report Generated Via NYSDEC EAF Mapper**

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**Disclaimer:** The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



|  |   |
|--|---|
| B.i.i [Coastal or Waterfront Area]   | No  |
| B.i.ii [Local Waterfront Revitalization Area]                                      | No  |
| C.2.b. [Special Planning District]   | Digital mapping data are not available or are incomplete. Refer to EAF Workbook.  |
| E.1.h [DEC Spills or Remediation Site - Potential Contamination History]           | Digital mapping data are not available or are incomplete. Refer to EAF Workbook.  |
| E.1.h.i [DEC Spills or Remediation Site - Listed]                                  | Digital mapping data are not available or are incomplete. Refer to EAF Workbook.  |
| E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database] | Digital mapping data are not available or are incomplete. Refer to EAF Workbook.  |
| E.1.h.iii [Within 2,000' of DEC Remediation Site]                                  | No  |
| E.2.g [Unique Geologic Features]   | No  |
| E.2.h.i [Surface Water Features]   | Yes   |
| E.2.h.ii [Surface Water Features]  | Yes   |
| E.2.h.iii [Surface Water Features]   | Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook. |
| E.2.h.iv [Surface Water Features - Stream Name]                                    | 862-164   |
| E.2.h.iv [Surface Water Features - Stream Classification]                          | C   |
| E.2.h.iv [Surface Water Features - Wetlands Name]                                  | Federal Waters  |
| E.2.h.v [Impaired Water Bodies]  | No  |
| E.2.i. [Floodway]  | No  |
| E.2.j. [100 Year Floodplain]   | Yes   |
| E.2.k. [500 Year Floodplain]   | No  |

|   |  |
|---|--|
| E.2.l. [Aquifers]                             | No   |
| E.2.n. [Natural Communities]                  | No   |
| E.2.o. [Endangered or Threatened Species]     | No   |
| E.2.p. [Rare Plants or Animals]               | No   |
| E.3.a. [Agricultural District]                | Yes  |
| E.3.a. [Agricultural District]                | ORAN001  |
| E.3.c. [National Natural Landmark]            | No   |
| E.3.d [Critical Environmental Area]           | No   |
| E.3.e. [National Register of Historic Places] | Digital mapping data are not available or are incomplete. Refer to EAF Workbook. |
| E.3.f. [Archeological Sites]                  | No   |
| E.3.i. [Designated River Corridor]            | No   |



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## **APPENDIX B**

**State and Federally Protected Plants Occurring in Orange County**

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| English Name              | Scientific Name  | State Status | Federal Status |
|---------------------------|--|--------------|----------------|
| Woodland Agrimony         | <i>Agrimonia rostellata</i>                            | Threatened   |                |
| Puttyroot                 | <i>Aplectrum hyemale</i>                               | Endangered   |                |
| Dragon's Mouth Orchid     | <i>Arethusa bulbosa</i>                                | Threatened   |                |
| Purple Milkweed           | <i>Asclepias purpurascens</i>                          | Threatened   |                |
| Bradley's Spleenwort      | <i>Asplenium bradleyi</i>                              | Endangered   |                |
| Thickleaf Orach           | <i>Atriplex dioica</i>                                 | Endangered   |                |
| Screw-stem                | <i>Bartonia paniculata</i> ssp. <i>paniculata</i>      | Endangered   |                |
| Estuary Beggar-ticks      | <i>Bidens hyperborea</i> var. <i>hyperborea</i>        | Endangered   |                |
| Smooth Bur-marigold       | <i>Bidens laevis</i>                                   | Threatened   |                |
| Green Rock-cress          | <i>Boechera missouriensis</i>                          | Threatened   |                |
| Drummond's Rock-cress     | <i>Boechera stricta</i>                                | Threatened   |                |
| Saltmarsh Bulrush         | <i>Bolboschoenus novae-angliae</i>                     | Endangered   |                |
| Blunt-lobe Grape Fern     | <i>Botrychium oneidense</i>                            | Threatened   |                |
| Side-oats Grama           | <i>Bouteloua curtipendula</i> var. <i>curtipendula</i> | Endangered   |                |
| Terrestrial Starwort      | <i>Callitriche terrestris</i>                          | Threatened   |                |
| Tall Bellflower           | <i>Campanulastrum americanum</i>                       | Endangered   |                |
| Long's Bittercress        | <i>Cardamine longii</i>                                | Threatened   |                |
| Thicket Sedge             | <i>Carex abscondita</i>                                | Endangered   |                |
| Narrow-leaved Sedge       | <i>Carex amphibola</i>                                 | Endangered   |                |
| Clustered Sedge           | <i>Carex cumulata</i>                                  | Threatened   |                |
| Davis' Sedge              | <i>Carex davisii</i>                                   | Threatened   |                |
| Glaucous Sedge            | <i>Carex glaucoidea</i>                                | Threatened   |                |
| Cloud Sedge               | <i>Carex haydenii</i>                                  | Endangered   |                |
| Marsh Straw Sedge         | <i>Carex hormathodes</i>                               | Threatened   |                |
| False Hop Sedge           | <i>Carex lupuliformis</i>                              | Threatened   |                |
| Mead's Sedge              | <i>Carex meadii</i>                                    | Endangered   |                |
| Midland Sedge             | <i>Carex mesochorea</i>                                | Threatened   |                |
| Troublesome Sedge         | <i>Carex molesta</i>                                   | Threatened   |                |
| Black-edge Sedge          | <i>Carex nigromarginata</i>                            | Threatened   |                |
| Reflexed Sedge            | <i>Carex retroflexa</i>                                | Threatened   |                |
| Reznicek's Sedge          | <i>Carex reznicekii</i>                                | Endangered   |                |
| Short's Sedge             | <i>Carex shortiana</i>                                 | Endangered   |                |
| Straw Sedge               | <i>Carex straminea</i>                                 | Endangered   |                |
| Lined Sedge               | <i>Carex striatula</i>                                 | Endangered   |                |
| Bent Sedge                | <i>Carex styloflexa</i>                                | Endangered   |                |
| Cat-tail Sedge            | <i>Carex typhina</i>                                   | Endangered   |                |
| Scarlet Indian-paintbrush | <i>Castilleja coccinea</i>                             | Endangered   |                |
| Atlantic White Cedar      | <i>Chamaecyparis thyoides</i>                          | Threatened   |                |
| Fairy Wand                | <i>Chamaelirium luteum</i>                             | Endangered   |                |
| Water Pigmyweed           | <i>Crassula aquatica</i>                               | Endangered   |                |
| Rattlebox                 | <i>Crotalaria sagittalis</i>                           | Endangered   |                |
| Northern Wild Comfrey     | <i>Cynoglossum virginianum</i> var. <i>boreale</i>     | Endangered   |                |
| Little-leaf Tick-trefoil  | <i>Desmodium ciliare</i>                               | Threatened   |                |

| English Name                  | Scientific Name                                       | State Status | Federal Status |
|-------------------------------|---|--------------|----------------|
| Spreading Tick-trefoil        | <i>Desmodium humifusum</i>                            | Endangered   |                |
| Stiff Tick-trefoil            | <i>Desmodium obtusum</i>                              | Endangered   |                |
| American Waterwort            | <i>Elatine americana</i>                              | Endangered   |                |
| Ovate Spikerush               | <i>Eleocharis ovata</i>                               | Endangered   |                |
| Virginia Snakeroot            | <i>Endodeca serpentaria</i>                           | Threatened   |                |
| Rough Avens                   | <i>Geum virginianum</i>                               | Threatened   |                |
| Featherfoil                   | <i>Hottonia inflata</i>                               | Threatened   |                |
| Wild Hydrangea                | <i>Hydrangea arborescens</i>                          | Threatened   |                |
| Golden-seal                   | <i>Hydrastis canadensis</i>                           | Threatened   |                |
| Riverbank Quillwort           | <i>Isoetes riparia</i>                                | Endangered   |                |
| Small Whorled Pogonia         | <i>Isotria medeoloides</i>                            | Endangered   | Threatened     |
| Weak Rush                     | <i>Juncus debilis</i>                                 | Endangered   |                |
| Woodland Rush                 | <i>Juncus subcaudatus</i>                             | Endangered   |                |
| Downy Lettuce                 | <i>Lactuca hirsuta</i>                                | Endangered   |                |
| Slender Pinweed               | <i>Lechea tenuifolia</i>                              | Threatened   |                |
| Eastern Grasswort             | <i>Lilaeopsis chinensis</i>                           | Threatened   |                |
| Southern Yellow Flax          | <i>Linum medium</i> var. <i>texanum</i>               | Threatened   |                |
| Large Twayblade               | <i>Liparis liliifolia</i>                             | Endangered   |                |
| Dwarf Bulrush                 | <i>Lipocarpha micrantha</i>                           | Endangered   |                |
| Gypsy-wort                    | <i>Lycopus rubellus</i>                               | Endangered   |                |
| Lowland Yellow Loosestrife    | <i>Lysimachia hybrida</i>                             | Endangered   |                |
| Bayard's Adder's-mouth Orchid | <i>Malaxis bayardii</i>                               | Endangered   |                |
| Virginia Bunchflower          | <i>Melanthium virginicum</i>                          | Endangered   |                |
| Green Parrot's-feather        | <i>Myriophyllum pinnatum</i>                          | Endangered   |                |
| Hudson River Water-nymph      | <i>Najas guadalupensis</i> ssp. <i>muenschleri</i>    | Endangered   |                |
| Golden Club                   | <i>Orontium aquaticum</i>                             | Threatened   |                |
| Violet Wood-sorrel            | <i>Oxalis violacea</i>                                | Threatened   |                |
| Swamp Lousewort               | <i>Pedicularis lanceolata</i>                         | Threatened   |                |
| Carey's Smartweed             | <i>Persicaria careyi</i>                              | Endangered   |                |
| Virginia Ground-cherry        | <i>Physalis virginiana</i> var. <i>virginiana</i>     | Endangered   |                |
| Virginia Pine                 | <i>Pinus virginiana</i>                               | Endangered   |                |
| Hooker's Orchid               | <i>Platanthera hookeri</i>                            | Endangered   |                |
| Riverweed                     | <i>Podostemum ceratophyllum</i>                       | Threatened   |                |
| Water-thread Pondweed         | <i>Potamogeton diversifolius</i>                      | Endangered   |                |
| Spotted Pondweed              | <i>Potamogeton pulcher</i>                            | Threatened   |                |
| Comb-leaved Mermaid-weed      | <i>Proserpinaca pectinata</i>                         | Threatened   |                |
| Dwarf Sand-cherry             | <i>Prunus pumila</i> var. <i>depressa</i>             | Threatened   |                |
| Blunt Mountain-mint           | <i>Pycnanthemum muticum</i>                           | Threatened   |                |
| Swamp Buttercup               | <i>Ranunculus hispidus</i> var. <i>nitidus</i>        | Endangered   |                |
| Roseroot                      | <i>Rhodiola rosea</i>                                 | Endangered   |                |
| Rhodora                       | <i>Rhododendron canadense</i>                         | Threatened   |                |
| Tooth-cup                     | <i>Rotala ramosior</i>                                | Threatened   |                |
| Spongy Arrowhead              | <i>Sagittaria montevidensis</i> var. <i>spongiosa</i> | Threatened   |                |

| English Name               | Scientific Name                              | State Status | Federal Status |
|----------------------------|--|--------------|----------------|
| Georgia Bulrush            | <i>Scirpus georgianus</i>                    | Endangered   |                |
| Hyssop-skullcap            | <i>Scutellaria integrifolia</i>              | Endangered   |                |
| Michaux's Blue-eyed-grass  | <i>Sisyrinchium mucronatum</i>               | Endangered   |                |
| Prairie Wedgegrass         | <i>Sphenopholis obtusata</i>                 | Endangered   |                |
| Marsh Arrow-grass          | <i>Triglochin palustre</i>                   | Threatened   |                |
| Northern Gama Grass        | <i>Tripsacum dactyloides</i>                 | Threatened   |                |
| Small Floating Bladderwort | <i>Utricularia radiata</i>                   | Threatened   |                |
| Culver's-root              | <i>Veronicastrum virginicum</i>              | Threatened   |                |
| Southern Arrowwood         | <i>Viburnum dentatum</i> var. <i>venosum</i> | Threatened   |                |
| Large Yellow-eyed-grass    | <i>Xyris smalliana</i>                       | Threatened   |                |

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## **APPENDIX C**

**Potential Permits, Consultations, and Coordination**

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| Potential Permits, Consultations, and Coordination               |   |   |                                     |                                       |  |  |
|--|---|---|-------------------------------------|---------------------------------------|--|--|
| Permitting Agency  | Permit  | Trigger   | Fee                                 | Probability Required (High, Med, Low) | Application Timeline   | Comments   |
| STATE OF NEW YORK  |   |   |                                     |                                       |  |  |
| New York State Department of Environmental Conservation (NYSDEC) | State Environmental Quality Review Act (SEQR)   | Discretionary approval from a NYS agency or unit of local government                      | Lead agency would determine the fee | High                                  | Up to 30 days to establish lead agency and up to 20 days to determine significance. If the lead agency issues a positive declarations, the time frames include up to 60 days for scoping (optional), preparation of a Draft Environmental Impact Statement (DEIS), up to 45 days for determination of completeness, 30 days minimum for public review and comment, and finds of the lead agency. | <p>New York's State Environmental Quality Review (SEQR) Act requires all state and local government agencies to consider environmental impacts equally with social and economic factors during discretionary decision-making. If only one agency is approving, funding or directly undertaking an action, that agency is automatically the lead agency. If there are two or more involved agencies, the involved agencies must agree on a lead agency within 30 calendar days. The proposed project is an Unlisted action and would be classified as Type I or Type II. Type I actions are generally those that exceed the 10-acre physical disturbance threshold or includes a nonagricultural use, occurring wholly or partially within an agricultural district, that exceeds 2.5 acres. Type I actions require a Full Environmental Assessment Form (EAF). Unlisted actions typically require a Short EAF. The lead agency circulates the EAF and any other information to the other involved agencies. The lead agency has 20 calendar days to make its determination of significance and issue a negative declaration or a positive declaration. A negative declaration would end the SEQR process and a positive declaration would lead to scoping and/or preparation of a draft EIS. Type II actions do not require further agency review under SEQR.</p> <p>More information on SEQR in New York State: <a href="http://www.dec.ny.gov/permits/357.html">http://www.dec.ny.gov/permits/357.html</a></p> |
|  | State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Discharges GP-0-15-002 | Soil disturbance of one or more acres   | No fee                              | High                                  | Prior to commencement of construction activity. The DEP has five business days to authorize the SWPPP if it is prepared with the required contents.  | <p>To apply for a Stormwater Discharges from Construction Activity Permit (GP-0-15-002) SunEdison must develop a Stormwater Pollution Prevention Plan (SWPPP) and submit it with a completed Notice of Intent (NOI) to the NYSDEC. The Project under consideration in the Town of Chester (jurisdiction under the Town of Goshen) is not within the Town's Municipal Separate Storm Sewer Systems, which would require submission of the SPDES permit to the Town, not the NYSDEC.</p> <p>More information on Stormwater Permit for Construction Activity: <a href="http://www.dec.ny.gov/chemical/43133.html">http://www.dec.ny.gov/chemical/43133.html</a></p>   |
|  | Involvement in SEQR for Endangered and Threatened Species of Fish and Wildlife; Species of Special Concern  | Any development that has the potential to negatively impact state special status species. | No fee                              | Medium                                | Pre-application / application phases   | Northern Long-eared bat, Indiana Bat, Northern Harrier, Henslow's sparrow, and Upland Sandpiper could potentially utilize portions of the project area as foraging habitat. Regarding bat species, clear-cutting, and similar harvest methods that cut most or essentially all trees from an area, within a ¼ mile of known, occupied roost trees, should NOT take place between April 1 and October 31. However, if only Northern Long-eared bat habitat is present, minimal tree cutting (less than one acre) must NOT take place when pups are present between June 1 and July 31 and can be conducted outside that period. SunEdison should consult with the NYSDEC regarding the status and distribution of these species near the Project. If development of this Project is found to result in impacts to these species, the NYSDEC may, at its discretion, issue a license or permit to a person to take, transport, sell, import and/or possess endangered or threatened species of fish and wildlife for purposes it deems legitimate.   |

| Potential Permits, Consultations, and Coordination |  |  |  |                                       |                                      |  |
|--|--|--|--|---------------------------------------|--------------------------------------|--|
| Permitting Agency                                  | Permit                                     | Trigger  | Fee  | Probability Required (High, Med, Low) | Application Timeline                 | Comments   |
|  | Article 24 Permit for Freshwater Wetlands  | Any activity in freshwater wetlands and their adjacent area.               | Minor Projects - \$200<br>Other Projects - \$200 | Low                                   | Pre-application / application phases | <p>There are no NWI-mapped wetlands within the Parcel Boundary or Project Site location of either of the two Sites (Site 1 and Site 2). The closest mapped feature is a NWI-mapped wetland located approximately 25 feet west of Project Site 2. This wetland is classified as a Palustrine emergent wetland with persistent vegetation that is saturated (PEM1B). A second NWI-mapped PEM1B wetland is located approximately 125 feet southwest of Project site 1. There are no NYSDEC-mapped wetlands within or outside of the Parcel Boundary for either Site 1 or Site 2. SunEdison should avoid placing facilities within 100 feet of a NYSDEC regulated wetland. If impacts to freshwater wetlands are unavoidable, an Article 24 permit is required for freshwater wetlands that are 12.4 acres or larger. Smaller wetlands may be protected if the Department Commissioner deems them to have unusual importance in providing one or more functions described in Article 24 of the Environmental Conservation Law. Adjacent wetlands are also regulated and include 100 feet of buffer.</p> <p>More information on Freshwater Wetland Permits: <a href="http://www.dec.ny.gov/permits/6058.html">http://www.dec.ny.gov/permits/6058.html</a></p> |
|  | Article 15 Permit for Protection of Waters | Disturbance of the bed or banks of a protected stream or other watercourse | No fee   | Low                                   | Pre-application / application phases | <p>There are no NYSDEC-regulated streams within either of the two Project Sites. There is one NYSDEC stream that crosses into the southeastern portion of the Parcel Boundary. It is located approximately 250 feet southeast of Project site 1. This stream is designated as a Class C tributary to Moodna Creek and is listed as a Priority Waterbody by the NYSDEC (ID# 1303-0011) with drainage into the lower Hudson River. A second stream is located approximately 225 feet west of Project Site 2 and is also designated as a Class C stream with the same Priority Waterbody information as the aforementioned stream. Certain waters of the state are protected on the basis of their classification. Streams and small water bodies located in the course of a stream that are designated as C(T) or higher (i.e., C(TS), B, or A) are collectively referred to as "protected streams," and are subject to the stream protection provisions of the Protection of Waters regulations.</p> <p>More information on the protection of waters program: <a href="http://www.dec.ny.gov/permits/6042.html">http://www.dec.ny.gov/permits/6042.html</a></p>   |

| Potential Permits, Consultations, and Coordination                      |  |  |        |                                       |                                      |   |
|---|--|--|--------|---------------------------------------|--------------------------------------|---|
| Permitting Agency   | Permit   | Trigger  | Fee    | Probability Required (High, Med, Low) | Application Timeline                 | Comments  |
| New York State Department of Agriculture and Markets (NYS Ag & Markets) | Submit a Notice of Intent to ensure Compliance with Agricultural District Laws | Any development that has the potential to convert Prime Farmland | No fee | High                                  | Pre-application / application phases | <p>A review of the USDA soil survey data indicates that 2 of the 4 soil units within Project Site 1 are designated as Farmland of Statewide Importance; The remaining 2 soil units within Project Site 1 did not fall within an Agricultural District classification. All 3 of the soil units within Project site 2 are designated as Farmland of Statewide Importance. Prime Farmland and Unique Farmland were not identified within either Project Site 1 or 2. Prime farmland generally includes those lands that economically produce high yields of crops when treated and managed according to acceptable farming methods. Farmland of Statewide Importance does not meet either the Prime or Unique Farmland definition but is used for the production of food, feed, fiber, forage, and oilseed crops. Because the project is located in or within 500 feet of an Agricultural District (District ORAN001), an Agricultural Data Statement (Town or County Village Form) is required and the neighboring landowners are to be notified of the project. It is also beneficial to contact the Department to assist in the determination of project impacts and to identify remedial actions to consider. SunEdison should follow the Notice of Intent (NOI) checklist to prepare a NOI.</p> <p>In addition, consultation with New York State Ag &amp; Markets and/or landowner may be required to determine if the Project is located within property currently or recently under an agricultural assessment.</p> <p>More information on the protections provided through agricultural districts and on the Notice of Intent: <a href="http://www.agriculture.ny.gov/AP/agservices/agdistricts.html">http://www.agriculture.ny.gov/AP/agservices/agdistricts.html</a></p> |

| Potential Permits, Consultations, and Coordination                            |  |  |                                       |                                       |   |  |
|---|--|--|---------------------------------------|---------------------------------------|---|--|
| Permitting Agency   | Permit   | Trigger  | Fee                                   | Probability Required (High, Med, Low) | Application Timeline  | Comments   |
| New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) | Involvement in SEQR for potential impacts to historic or archeological resources | Potential to directly or indirectly affect any building, structure, archeological site, object, landscape or district. | No fee                                | Medium                                | Conducted during the pre-application / application phases               | <p>Review of the New York State Office of Parks, Recreation, and Historic Preservation database did not identify any sites that overlap within one mile of the two Project Sites. The NYSDEC online EAF Mapper also revealed that the two Project Sites are not located in an area designated as sensitive for archaeological sites on the New York State Historic Preservation Office (SHPO) archeological site inventory. However, an online review of The New York State Cultural Resource information System (CRIS) indicated that there is one NRHP eligible property within one mile of Project Sites 1 and 2 as well as three archeological surveys that have been conducted within one mile of the two Project Sites (all of which are located south of Project Site 1). The sites are as follows: NRHP eligible building located at 240 Meadow Ave., Chester, New York (USN Number: 07102.000147); Phase IA and IB Survey for the Orange County gas main project from Chester to Washingtonville, New York (Survey Number 09SR59407); Phase I Cultural Resource Survey for the proposed valley view phase II subdivision (Survey Number 01SR51789); and Phase 2 Archeological Investigation at the Meadow Hill Subdivision site (Survey Number 06SR56698).</p> <p>Developmental project plans should be consistent with any and all applicable NYS Heritage Management Plans and Programs. SHPO would assist the lead SEQR agency in identifying indirect impacts to these locations and avoiding or minimizing any potential adverse effects.</p> <p>More information on the Heritage Areas and their protection programs: <a href="http://nysparks.com/historic-preservation/heritage-areas.aspx">http://nysparks.com/historic-preservation/heritage-areas.aspx</a></p> |
| New York State Department of Transportation (NYSDOT)                          | Divisible Load Overweight Permits  | Required for loads that exceed legal dimensions or weight.   | Ranges from \$360 to \$1,000 per year | Low                                   | Before making any oversize/overweight movement on NYSDOT rights-of-way. | <p>The Project most likely will NOT require a NYSDOT Type 13 Jobsite permit to cover most of the special hauling trips (not including super loads). Type 13 permits are issued at 6 month intervals and can be extended for up to a maximum of one year. An individual permit would be required for each trip over an R-Posted bridge. Several Type 1 permits for individual convoys may also be required such as the following:</p> <ul style="list-style-type: none"> <li>• PERM 85 – Special Hauling Route Survey for Over Dimensional Vehicles</li> <li>• PERM 12 – Special Hauling Pre-Approval Application Form for Future Permit</li> <li>• PERM 80 – Special Hauling Pre-Approval Application Form for a Future Crane Permit</li> <li>• PERM 39-1 – Special Hauling Trip &amp; Building Movement Permit</li> <li>• PERM 39-2k – Special Hauling Monthly, Annual &amp; Blanket Permit</li> <li>• PERM 39-3g – Special Hauling Permit Amendment</li> <li>• PERM 99 – Special Hauling Permit Additional Trailer Attachment Form</li> <li>• PERM 39-4 – Special Hauling Permit Vehicle Configuration Attachment Sheet</li> </ul> <p>More information on Divisible Load Overweight Permits: <a href="https://www.dot.ny.gov/nypermits/divisible-load-permits">https://www.dot.ny.gov/nypermits/divisible-load-permits</a></p>   |

| Potential Permits, Consultations, and Coordination           |   |   |   |                                       |  |  |
|--|---|---|---|---------------------------------------|--|--|
| Permitting Agency  | Permit  | Trigger   | Fee   | Probability Required (High, Med, Low) | Application Timeline   | Comments   |
|  | Highway Work Permit                                     | Physical improvement, new driveways/access, or change of use or expansion of existing development on a state highway. | Project dependent                                 | Low                                   | Upon finalizing Project engineering  | <p>It is not expected that the Project will require a Highway Work Permit (PERM 33) as it is not anticipated that any work would take place within the NYSDOT right-of-way. A Highway Work Permit (PERM 33) would be required for any physical improvements within the NYSDOT right-of-way. This will apply for any state highway intersection or road improvements. The permit application and instructions, as well other forms that SunEdison may need to submit are as follows:</p> <ul style="list-style-type: none"> <li>PERM 32 - Highway Work Permit Application for Utility Work</li> <li>PERM 34 – Instructions to Applicants for Highway Work Permits</li> <li>PERM 36 – Attachment to Highway Work Permit</li> <li>PERM 41- Method of Performing Work Within the State Highway Right of Way</li> <li>PERM 50 – Inspection and/or supervision Payment Agreement</li> <li>PERM 51 – Payment Agreement for HWP Design Review</li> </ul> <p>More information on highway work permits:<br/> <a href="https://www.dot.ny.gov/divisions/operating/oom/transportation-systems/traffic-operations-section/highway-permits">https://www.dot.ny.gov/divisions/operating/oom/transportation-systems/traffic-operations-section/highway-permits</a></p> |
| Town of Goshen (Site 2)                                      |   |   |   |                                       |  |  |
| Town of Goshen Building Inspector                            | Building Permit (Town of Goshen Town Code, §97-64)      | Construction of any building or structure   | \$105 plus \$0.55 per square foot                 | High                                  | Pre-application/application phase. The Building Inspector would promptly review the application and approve or deny it.  | <p>SunEdison must provide the information detailed in §97-63(C) to the building inspector.</p> <p>Town of Goshen Town Code: <a href="http://ecode360.com/GO0551?needHash=true">http://ecode360.com/GO0551?needHash=true</a></p>  |
| Town of Goshen Building Inspector (Code Enforcement Officer) | Certificate of Compliance                               | Any and all work which is the subject of a building permit  | Project dependent                                 | High                                  | Pre-application/application phase. The Code Enforcement Officer would promptly review the application and approve or deny it.  | <p>SunEdison must provide the information detailed in §49C-7 to the building inspector.</p> <p>Town of Goshen Town Code: <a href="http://ecode360.com/10531337#10531337">http://ecode360.com/10531337#10531337</a></p>   |
| Town of Goshen Planning Board                                | Site Plan Review (Town of Goshen Town Code, Article IX) | Public utility in the Agricultural Industrial District  | \$525 plus \$120/du or \$55 per 1,000 square feet | High                                  | The Planning Board may refer the application to the County Planning Board, who would have a 30 day review period. The Planning Board will hold a public hearing within 62 days of receipt of the application and make a decision within 62 days of the public hearing. | <p>Site plan review is required for public utilities in the Agricultural Industrial district. SunEdison must provide the information listed in §97-75(B). The site plan review process will include a public hearing and compliance with SEQR.</p> <p>Town of Goshen Town Code: <a href="http://ecode360.com/GO0551?needHash=true">http://ecode360.com/GO0551?needHash=true</a></p>  |



| Potential Permits, Consultations, and Coordination   |                               |   |                   |                                       |   |   |
|--|-------------------------------|---|-------------------|---------------------------------------|---|---|
| Permitting Agency  | Permit                        | Trigger   | Fee               | Probability Required (High, Med, Low) | Application Timeline  | Comments  |
| Town of Goshen Planning Board  | Floodplain Development Permit | <p>Site preparation within wetlands or 100 foot buffer strip of wetland</p> <p>Site preparation within the one-hundred-year floodplain of any watercourse</p> | Project dependent | Low                                   | Pre-application/application phase. Town Planning Board would refer application to Town Engineer, Building Inspector and Superintendent of highway for review. | <p>It is unlikely that a floodplain development permit will be necessary, as the Project Site locations are not located within a one-hundred-year floodplain or a wetlands area; however, a portion of Site 2 is within 100-foot buffer area of a wetland and Site 1 is just outside of the 100 foot buffer area. Depending on specific Project Site location, a floodplain development permit may be necessary.</p> <p>Town of Goshen Town Code: <a href="http://ecode360.com/9939827#9939827">http://ecode360.com/9939827#9939827</a></p> |
| Town of Chester (Site 1) – Governed under the Local Ordinances and Regulations of the Town of Goshen – See Above |                               |   |                   |                                       |   |   |