Phase 1A Archaeological Survey and Phase 1B Work Plan

Baron Winds Project

Steuben County, New York

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June 2016

Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan

Baron Winds Project

Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland, Steuben County, New York

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MANAGEMENT SUMMARY

SHPO Project Review Number:	15PR02834
Involved State and Federal Agencies:	Department of Public Service (DPS), Article 10 Application
Phase of Survey:	Phase 1A Archaeological Resources Survey
Location Information:	Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland, Steuben County, New York
Survey Area:	
Project Description:	Up to 120 wind turbines and associated infrastructure
Project Area:	Approximately 37 square miles (APE for Direct Effects = approximately 808.6 acres)
USGS 7.5-Minute Quadrangle Map:	*Dansville, Wayland, Naples, Prattsburg, Arkport, Haskinville, Avoca, Rheims, Hornell, Canisteo, Towlesville, Bath, NY*
Archaeological Resources Overview:	Two previously recorded archaeological sites (the Malter Historic Site [USN 10113.000008] and the potentially prehistoric/potentially historic Indian Burial site (USN 101109.000024). The Malter Historic Site occurs within the Archaeological Study Area and is not eligible for listing on the the S/NRHP and the Indian Burial Site occurs outside but within 1-mile of the Archaeological Study Area and has not been formally evaluated with regard to S/NHRP eligibility criteria. No other previously recorded archaeological sites occur within the Archaeological Study Area or within a 1-mile radius.
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Date of Report:	June 2016

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1.0 INTRODUCTION

1.1 Purpose of the Investigation

On behalf of Baron Winds, LLC, Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) has prepared a Phase 1A archaeological resources survey and Phase 1B work plan for the proposed Baron Winds Project (the Facility), located in the Towns of Avoca, , Cohocton, Dansville, Fremont, Howard and Wayland, Steuben County, New York. The Phase 1A survey supports the Preliminary Scoping Statement (PSS) being prepared as part of review of the Project under Article 10 (Certification of Major Electrical Generating Facilities) of the New York State Public Service Law. The information and recommendations included in this report are intended to assist the Department of Public Service (DPS) and the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) in their review of the proposed Project in accordance Article 10. Please note that this report addresses only archaeological resources; information concerning the Project's potential effect on historic-architectural resources has been (and will continue to be) provided to NYSOPRHP under separate cover.

As described in 16 NYCRR § 1001.20 (Exhibit 20: Cultural Resources), an Article 10 application must include:

> (a) A study of the impacts of the construction and operation of the facility interconnections and related facilities on archaeological resources including:
>
> (1) a summary of the nature of the probably impact on any archaeological/cultural resources identified addressing how those impacts shall be avoided or minimized;
>
> (2) a Phase 1A archaeological/cultural resources study for the Area of Potential Effect (APE) for the facility site and any areas to be used for interconnections or related facilities, including a description of the methodology used for such study;
>
> (3) a Phase 1B study, if required, as determined in consultation with OPRHP;
>
> (4) where warranted based on Phase I study results as determined in consultation with OPRHP, a Phase II study based on intensive archaeological field investigations shall be conducted to assess the boundaries, integrity and significance of cultural resources identified in Phase I studies. Phase II shall be designed to obtain detailed information on the integrity, limits, structure, function, and cultural/historical context of an archaeological site, as feasible, sufficient to evaluate its potential eligibility for listing on the State or National Register of Historic Places. The need for and scope of work for such investigations shall be determined in consultation with OPRHP and DPS;
>
> (5) a statement demonstrating that all archaeological materials recovered during the facility cultural resources investigation shall be cleaned, catalogued, inventoried, and curated according to New York Archaeological Council standards; that to the extent possible, recovered artifacts shall be identified as to material, temporal or cultural/chronological associations, style and function; and that the facility archaeologists shall provide temporary storage for artifacts until a permanent curatorial facility is identified; and
>
> (6) an Unanticipated Discovery Plan that shall identify the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance are encountered during the excavation process. This plan shall include a provision for work stoppage upon the discovery of possible archaeological or human remains. In addition, the plan shall specify the degree to which the methodology used to assess any discoveries follows the most recent Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State. Such an assessment, if warranted, shall be conducted by a professional archaeologist, qualified according to the standards of New York State Archaeological Council.

The purpose of the Phase 1A archaeological resources survey and work plan is to:

- define the Project's area of potential effect (APE) relative to archaeological resources;
- determine whether previously identified archaeological resources are located in the APE; and,
- propose a methodology to identify archaeological resources within the APE, evaluate their eligibility for the National Register of Historic Places (NRHP), and assess the potential effect of the Project on those resources.

All cultural resources studies undertaken by EDR in association with the Project have been conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for archaeology (36 CFR 61). The Phase 1A report was prepared in accordance with the *New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work* (the *SHPO Wind Guidelines*; NYSOPRHP, 2006) and applicable portions of NYSOPRHP's *Phase 1 Archaeological Report Format Requirements* (NYSOPRHP, 2005).

1.2 Facility Location and Description

EverPower Wind Holdings, Inc. is proposing to construct an up to 300 (MW) wind powered electric generating project located within the Towns of Avoca, Cohocton, Dansville, Fremont, Howard, and Wayland, Steuben County, New York. The regional Facility location and general Facility area (or Archaeological Study Area) is depicted on Figures 1 and 2, respectively. The Facility will be located on leased private land that is rural in nature (Appendix A: Photographs 1-10). The actual footprint of the proposed Facility components will be located within the leased land, and will enable farmers and landowners to continue with farming operations or other current land uses such as forestry practices.

The proposed Facility consists of the construction and operation of a commercial-scale wind power project, including the installation and operation of up to 120 wind turbines, together with approximately 57 miles of associated collection lines (below grade and overhead), approximately 36 miles of access roads, up to 3 permanent meteorological towers, one operation and maintenance (O&M) building, and up to 4 temporary construction staging/laydown areas. To deliver electricity to the New York State power grid, the Applicant proposes to construct a collection substation adjacent to an existing point of interconnection (POI) substation, which interconnects with NYSEG's Hillside-Meyer 230 kV transmission line.

The following terms are used throughout this document to describe the proposed action:

- **The Facility**: the Baron Winds Project, which includes up to 120 wind turbines and associated infrastructure in the Towns of Avoca, Cohocton, Dansville, Fremont, Howard, and Wayland, Steuben County, New York. (Figures 1 and 2).
- **Facility Site:** the Facility site is defined as all the property parcels containing proposed Facility components of the current Facility layout.
- **Area of Potential Effect (APE) for Direct Effects**: The Area of Potential Effect (or APE) for Direct Effects for the Facility is the area containing all proposed soil disturbance associated with the Project. The current Facility layout has an APE for Direct Effects of 808.6 acres.
- **The Archaeological Study Area**: An approximately 37-square mile box around the APE for Direct Effects which serves as the limits for all analysis associated with the archaeological landscape model (see Figure 2; Section 2.0).

1.3 NYSOPRHP Consultation

16 NYCRR § 1001.20 indicates that the scope of cultural resources studies for a major electrical generating facility should be determined in consultation with NYSOPRHP. In addition, the *SHPO Wind Guidelines* request that cultural resources surveys for wind energy projects include consultation with NYSORPHP to determine an appropriate research design for the identification of archaeological resources.

The Applicant initiated consultation with NYSOPRHP via the Cultural Resources Information System (CRIS) website in May 2015. The consultation submission included the following attachment:

- A copy of the Public Involvement Program Plan (PIP) prepared as part of the Article 10 process, and released in May 2015[1]. The PIP is designed to initiate the Article 10 process, and includes consultation with the affected agencies and other stakeholders; pre-application activities to encourage stakeholders to participate at the earliest opportunity; activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties; the establishment of a website to disseminate information to the public and updates regarding the Facility and the Article 10 process; notifications to affected agencies and other stakeholders; and activities designed to encourage participation by stakeholders in the certification and compliance process.

This Phase 1A archaeological survey report and work plan is being prepared in anticipation of a request for such a study from NYSOPRHP. This report includes a map of the Archaeological Study Area, as well as a review of

[1] The Project's Public Involvement Program Plan (PIP) is available on DPS' website here: http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={41CF7D13-276E-4874-B3AF-19336810D736}

archaeological resources within and near the Archaeological Study Area, and a work plan for a subsequent Phase 1B archaeological survey, including a definition of the APE for Direct Effects. Following submission and review of this work plan by NYSOPRHP, EDR anticipates that a Phase 1B archaeological survey will be conducted, as described herein. As stated in Section 1.1, this report addresses only archaeological resources; information concerning the Facility's potential effect on historic architectural resources is being provided to NYSOPRHP under separate cover via the CRIS website.

1.4 Facility's Area of Potential Effect and Study Area

The Project's APE for Direct Effects relative to archaeological resources is defined as those areas where soil disturbance is proposed to occur during construction. The descriptions below characterize anticipated limits of soil disturbance for each proposed Facility component, which cumulatively make up the Baron Winds Project's APE for Direct Effects. Note that the final Facility layout is still being determined. For purposes of describing the APE, the areas of disturbance listed below represent the temporary extent of soil disturbance anticipated to occur during Facility construction and do not represent permanent soil disturbance associated with the Facility. The assumptions provided below present the anticipated size of the Facility (based on the current, preliminary design) and areas of disturbance associated with proposed Facility components. These assumptions provide a basis for preparing an archaeological survey research design (as presented herein in Section 4.4). The archaeological survey will be conducted concurrently with wetland survey and delineation and that a limited number of proposed Facility components will likely be moved following these surveys to reduce impacts to wetlands and archaeological sites.

Table 1. Impact Assumptions for the Proposed Baron Winds Project.

Facility Components	Typical Area of Vegetation Clearing	Area of Total Soil Disturbance (temporary and permanent)	Area of Permanent Soil Disturbance
Wind Turbines and Workspaces	Up to 200' radius per turbine	Up to 200' radius per turbine	0.20 acre per turbine (pedestal plus crane pad)
Access Roads	75' wide per linear foot of road	60' wide per linear foot of road	20' wide per linear foot of road
Buried Electrical Collection Lines	40' wide per linear foot of line per collection line circuit	40' wide per linear foot of line per collection line circuit	None
Overhead Electrical Collection Lines	100' wide per linear foot of line	15' wide per linear foot of line	0.10 acre per pole

Facility Components	Typical Area of Vegetation Clearing	Area of Total Soil Disturbance (temporary and permanent)	Area of Permanent Soil Disturbance
Permanent Meteorological Towers	1 acre per tower	1 acre per tower	0.10 acre per tower
O&M Building and associated site (4,000 – 6, 000 sf)	2.5 acres	2.5 acres	2 acres
Staging Area	5 acres per staging area	5 acres per staging area	None
Collection Substation	5 acres	5 acres	3 acres

- **Wind Turbines**. A 200-foot radius around each of the 120 proposed wind turbine sites will be cleared of vegetation, temporarily stripped of topsoil, and graded to create a workspace for turbine assembly and erection. This will result in temporary soil disturbance of approximately 2.9 acres per turbine.
- **Access Roads**. The Facility is proposed to include up to 36 miles of gravel-surface access roads. The anticipated permanent width of access roads will be 20 feet. During construction access roads, the anticipated width if access roads will be up to 60 feet, within a 75-foot wide road corridor cleared of vegetation (to allow for crane movement and oversized vehicles delivering turbine components). The APE for Direct Effects for the proposed access roads consists of the maximum extent of soil disturbance.
- **Collection Lines**. The proposed length of combined overhead and underground collection lines that will collect power from the turbines to deliver to the collection substation is approximately 57 miles. Although underground cabling is the primary option for the electrical collector system, overhead cables will also be used where requested by landowners or where underground installation is prohibitive or infeasible due to constraints such as steep slopes, rivers, streams or creek crossings, bedrock etc. The maximum width of temporary soil disturbance will be 40 ft for buried collection line construction. The maximum width of temporary soil disturbance for overhead collection line construction is 15 ft.
- **Meteorological Tower**. Up to three permanent meteorological towers are proposed for the Facility. During construction, it is anticipated that up to 1-acre of vegetation clearing and temporary soil disturbance may be necessary. Following construction, each meteorological tower will occupy approximately 0.1-acre.
- **Staging Area**. Up to four temporary staging areas/laydown yards, up to 5 acres in size each, are proposed for the Facility. Construction of the staging areas/laydown yards will include stripping/stockpiling topsoil, grading and compacting the subsoil, and installation of geotextile fabric and gravel.

- **O&M Facility**. The Facility's O&M facility will be housed in a 4,000-6,000 square-foot building. Construction of the proposed O&M building is anticipated to require up to 2.5 acres of soil disturbance.
- **Substations**. The Facility will require one collection substation which will be constructed adjacent to an existing point of interconnect (POI) substation to allow connection to the existing power grid. Construction of the collection substation is anticipated to disturb up to 5 acres. Since the Facility will use an existing POI substation, there will be no new earth disturbance associated with the POI substation.

Based on these impact assumptions, the Facility's APE for Direct Effects is anticipated to be approximately 808.6 acres in size. Note that this represents the total areas that will be temporarily disturbed by construction. Following construction, the operating Facility is anticipated to have a permanent footprint that is significantly smaller and the remaining portions of the APE will be restored to their current use and/or condition. Note that as the Facility design is further refined, the APE for Direct Effects for the Project may change.

2.0 BACKGROUND AND SITE HISTORY

2.1 Geology and Soils

Steuben County occurs within the Allegheny Plateau physiographic province in what is commonly referred to as the "Southern Tier" of New York State. The area is typified by moderately high elevations and a moderate to high degree to topographic relief between prominent ridge tops and major alluvial valleys. The highest elevation in the county is approximately 2,400 feet (732 meters) above sea level which is achieved at two separate locations, Call Hill in the town of Hartsville and Jackson Hill in the town of Jasper. The lowest elevation in the county is 714 feet (218 meters) at Keuka Lake (United States Department of Agriculture, Soil Conservation Service [SCS], 1978). Bedrock in this portion of the Allegheny Plateau is of Devonian Age (circa 416 to 358 million years ago) and consists primarily of horizontally bedded sandstone, siltstone, and shale which formed as deltaic deposits (SCS, 1978).

The area is drained primarily by the Canisteo and Cohocton Rivers, both of which create a general northwest/southeast-trending drainage patterns. The Canisteo and Cohocton Rivers converge to form the Chemung River which is a tributary of the Susquehanna River. The major alluvial valleys in the region were all shaped by glaciers during the Pleistocene (circa 1.8 million to 12,000 years ago) which gives them a broad, U-shaped, character. Interfluvial ridges are typically steep-sided with flat to rolling tops (SCS, 1978). The majority of the county is part of the Susquehanna River watershed which eventually drains into Chesapeake Bay in the Middle Atlantic. Some small portions of the county are also part of the eastern Great Lakes/St. Lawrence River watershed which eventually drains into the Gulf of St. Lawrence in the North Atlantic.

EDR reviewed the *Soil Survey of Steuben County, New York* (SCS, 1978) for data concerning soils within the Project site as well as electronic data for the Chemung, Tioga, and Upper Genesee subbasins from the Environmental Systems Research Institute (ESRI) and the Natural Resources Conservation Service (NRCS) (ESRI and NRCS, 2016a; 2016b; 2016c). A total of 43 mapped soil units occur within the Archaeological Study Area (see Figure 3); however, only nine soil units make up more than 3% of the Archaeological Study Area, individually. They are summarized in Table 2 and depicted in Figure 3. The major mapped soil units consist primarily of channery silty loams and range from poorly drained to well drained (see Table 2).

Table 2. Major Mapped Soil Units within the Project APE (Esri and NRCS, 2016a; 2016b; 2016c; NRCS, 2016).

Map Unit Name	% of Project APE	Soil Horizon Depth	Color	Texture, Inclusions	Slope %	Drainage	Landform
Fluvaquents and Ochrepts	3%	**Fluvaquents:** H1 - 0 to 12 inches H2 - 12 to 60 inches **Ochrepts:** H1 - 0 to 11 inches H2 - 11 to 72 inches	Unavailable	**Fluvaquents:** silt loam silt loam **Ochrepts:** gravelly sandy loam gravelly sandy loam	0-3%	Poorly drained	flood plains
Fremont silt loam	31%	H1 - 0 to 10 inches H2 - 10 to 32 inches H3 - 32 to 60 inches	Unavailable	silt loam silt loam channery silt loam	2-8%	Somewhat poorly drained	drumlinoid ridges, hills, till plains
Lordstown-Arnot association, steep	4%	**Lordstown:** H1 - 0 to 9 inches H2 - 9 to 27 inches H3 - 27 to 36 inches H4 - 36 to 40 inches **Arnot:** H1 - 0 to 9 inches H2 - 9 to 27 inches H3 - 27 to 36 inches H4 - 36 to 40 inches	Unavailable	**Lordstown:** channery silt loam very channery silt loam extremely flaggy silt loam bedrock **Arnot:** channery silt loam very channery silt loam extremely flaggy silt loam bedrock	20-40%	Well drained	benches, hills, ridges
Lordstown-Arnot association, very steep	4%	**Lordstown:** H1 - 0 to 9 inches H2 - 9 to 27 inches H3 - 27 to 36 inches H4 - 36 to 40 inches **Arnot:** H1 - 0 to 7 inches H2 - 7 to 17 inches H3 - 17 to 21 inches	Unavailable	**Lordstown:** channery silt loam very channery silt loam extremely flaggy silt loam bedrock **Arnot:** channery silt loam very channery silt loam bedrock	40-70%	Well drained	benches, hills, ridges
Mardin channery silt loam	4%	Ap - 0 to 8 inches BE - 8 to 12 inches Bw1 - 12 to 16 inches Bw2 - 16 to 20 inches Bx1 - 20 to 36 inches Bx2 - 36 to 57 inches C - 57 to 72 inches	Unavailable	channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam	15-25%	Moderately well drained	drumlinoid ridges, hills, till plains
Mardin channery silt loam	5%	Ap - 0 to 8 inches BE - 8 to 12 inches Bw1 - 12 to 16 inches Bw2 - 16 to 20 inches Bx1 - 20 to 36 inches Bx2 - 36 to 57 inches C - 57 to 72 inches	Unavailable	channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam	2-8%	Moderately well drained	drumlinoid ridges, hills, till plains
Mardin channery silt loam	10%	Ap - 0 to 8 inches BE - 8 to 12 inches Bw1 - 12 to 16 inches Bw2 - 16 to 20 inches Bx1 - 20 to 36 inches Bx2 - 36 to 57 inches	Unavailable	channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam channery silt loam	8-15%	Moderately well drained	drumlinoid ridges, hills, till plains

Map Unit Name	% of Project APE	Soil Horizon Depth	Color	Texture, Inclusions	Slope %	Drainage	Landform
		C - 57 to 72 inches		channery silt loam			
Volusia channery silt loam	3%	Ap - 0 to 9 inches Bw - 9 to 15 inches Eg - 15 to 17 inches Bx1 - 17 to 29 inches Bx2 - 29 to 54 inches C - 54 to 72 inches	Unavailable	channery silt loam channery silt loam channery silt loam channery loam channery loam channery silt loam	3-8%	Somewhat poorly drained	drumlinoid ridges, hills, till plains
Volusia channery silt loam	13%	Ap - 0 to 9 inches Bw - 9 to 15 inches Eg - 15 to 17 inches Bx1 - 17 to 29 inches Bx2 - 29 to 54 inches C - 54 to 72 inches	Unavailable	channery silt loam channery silt loam channery silt loam channery loam channery loam channery silt loam	8-15%	Somewhat poorly drained	hills on uplands

2.2 History of the Facility Site

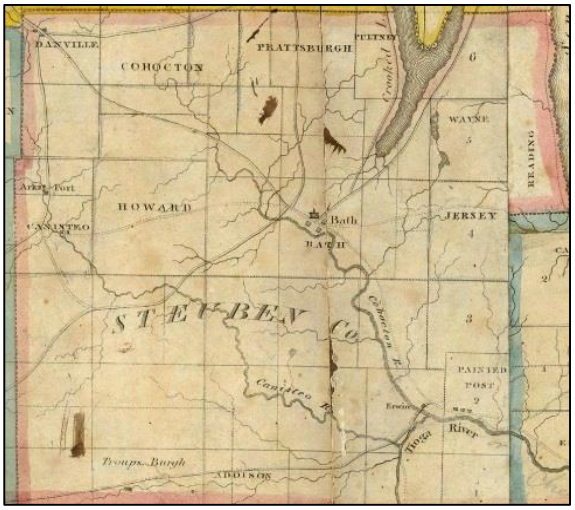
Archives and repositories consulted during EDR's research for the Facility and 5-Mile Study Area included EDR's in-house collection of reference materials, and online digital collections of the New York State Library, Ancestry.com, New York Heritage, David Rumsey Map Collection, and United States Geological Survey (USGS). Sources reviewed for the historic context of the Facility site include the *History of Steuben County* (Clayton, 1879), the *Pioneer History and Atlas of Steuben County, New York* (Thrall, 1942), and *Steuben County: The First 200 Years, A Pictorial* History (Sherer, 1996). Historic maps reproduced in the report include the 1873 Beers *Atlas of Steuben County, NY* (Figure 5), the 1903 *Naples, NY*, 1904 *Wayland, NY*, 1910 *Bath, NY*, and 1918 *Hornell, NY* USGS 1:62000 topographic quadrangle maps (Figure 6), and the 1942 *Dansville, NY*, 1942 *Naples, NY*, 1943 *Wayland, NY*, 1953 *Avoca, NY*, 1953 *Towlesville, NY*, 1954 *Canisteo, NY*, 1965 *Arkport, NY*, 1978 *Haskinville, NY*, and 1978 Hornell, NY USGS 1:24000 topographic quadrangle maps (Figure 7).

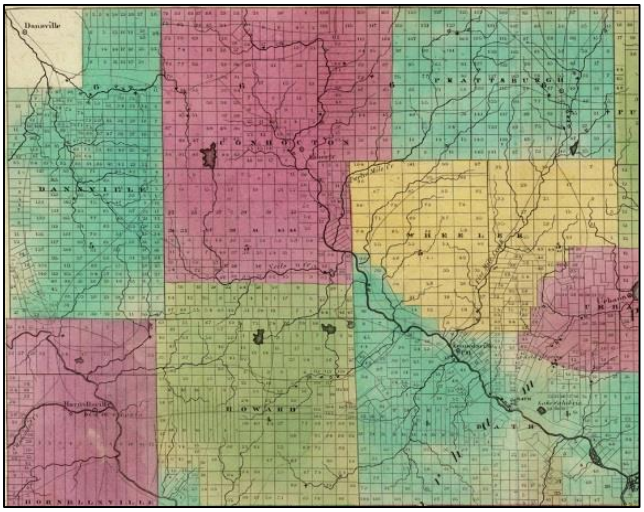
The Facility is located primarily in the Towns of Avoca, Cohocton, Dansville, Fremont, Howard, and Wayland, Steuben County, New York. At the time of European contact and colonization in the eighteenth century, the Facility site was located within the territory of the Seneca Nation of the Iroquois Confederacy and was used as their traditional hunting lands. The Seneca's permitted various other tribes to occupy parts of this land as refugees during times of war. This included Munsi and Unami Delawares during the French and Indian War, and Tuscarora Indians in the wake of the Revolutionary War (Clayton, 1879; Folts, 2005).

The first documentation by European sources comes from the French Captain Pierre Pouchot, a French engineering officer stationed at Fort Erie, who made the first topographic map of the area encompassing the county in 1758. The land comprising Steuben County was initially a portion of the large Phelps & Gorham Purchase in 1788. Once surveyed it was sold to Robert Morris in 1790, and sold again to the London-based businessman Sir William Pulteney. The "Pulteney Estate" suffered from poor relations between the land owner and lessees for almost 80 years. This period

saw increased settlement of the county, mostly in the southern towns of Painted Post and the present-day city of Corning, around the convergence of the Tioga, Chemung, and Cohocton Rivers (Clayton, 1879; Folts, 2005).

Steuben County was officially created in March of 1796 after being split from Ontario County (see Inset 1). At the time of the county's formation, the population was approximately 1,000 residents, and by 1820 had grown significantly, exceeding 20,000. The population then grew by roughly 10,000 people every decade through the nineteenth century, leveling off and entering into slight decline during the twentieth century. Settlements originated and flourished primarily in the river valleys and road junctions (see Insets 1 and 2). These settlements were later complimented by the addition of the Corning and Blossburgh and the Erie Railroad lines in 1839, and 1851, respectively. Various portions of townships subsequently annexed to the surrounding counties up to 1854. The first municipal buildings were located in the town of Bath, including the county courthouse, jail, and poor-house (Clayton, 1879; Folts, 2005).





Inset 1. 1817 Lay *Map of the State of New York* (left)
By 1817, a handful of village centers had been established at the junctions of surface roads and waterways. Eastern portions of the county were eventually annexed by the neighboring counties (Lay, 1817; collections of David Rumsey).

Inset 2. 1829 Burr *Map of the County of Steuben* (right)
By 1829, several new towns had been formed, and laid out in a generally grid-like pattern. The waterways were being navigated frequently, and are more detailed in this map. Several new villages had been settled at this point (Burr, 1829; collections of David Rumsey).

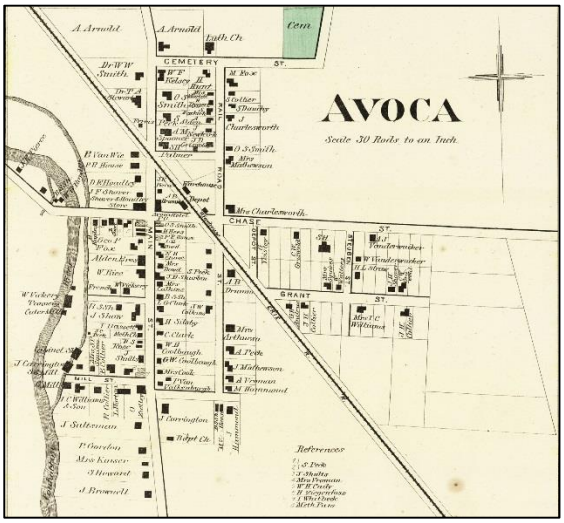
Steuben County's economy focused mainly on agriculture and lumber, augmented by the utilization of the interconnected system of rivers and canals; the main arteries being the Cohocton River, Canisteo River, and Goff Creek. White pine and hemlock wood was floated to markets as far away as Baltimore via these waterways on rafts known as "arks." The village of Arkport derives its name by virtue of acting as a point of departure for these vehicles. The expansion of the railroads in the mid-nineteenth century increased commerce moderately, in particular with the location of an Erie Railroad mechanic station at Hornell. The increase in travel and accessibility to the countryside resulted in the moderate growth of new villages and hamlets in rural areas (see Inset 3).

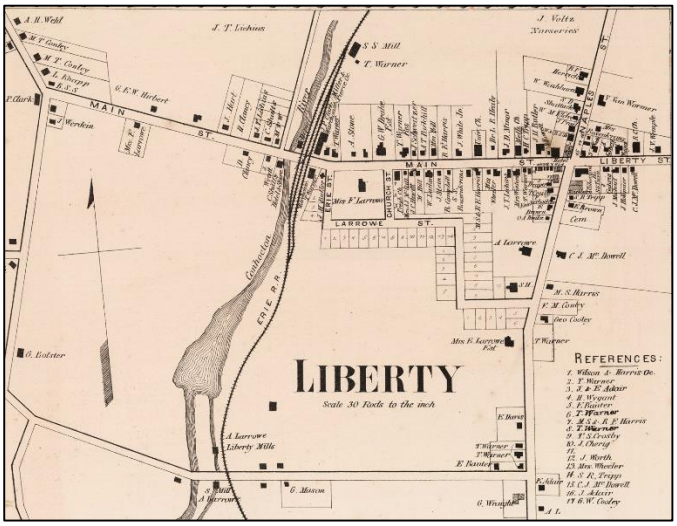
Inset 3. 1873 Beers *Atlas of Steuben County*
By 1873, railroads were constructed along the rivers and major roads traditionally used for travel and commerce. Village post offices increased in number as villages and settlements became more accessible due to road improvements. The increased number established rural roads depicted on this map also illustrates this development (Beers, 1873; collections of David Rumsey).

This period also saw a major expansion of the built environment in the area during the middle of the nineteenth century, as increased economic activity led to the construction of many residences in the contemporaneous Italianate and Queen Anne styles. The late nineteenth century saw an influx of immigrants from Ireland and Italy via the railroads. The agricultural and industrial base experienced a decline in Steuben County during the twentieth century. The number of dairy farms decreased across the county, and by 1935 most farming was commercial in scale and increasingly mechanized. In Cohocton, the Pollio Cheese Factory, originally the Wetmiller's Creamery built in 1911, closed in 1990.

Yet some manufacturing plants remain, including the Gunlocke Furniture factory at Wayland and the Haines Manufacturing plant at Avoca. Dairy farming has been a staple of the Steuben County economy since the late nineteenth century, along with vineyards (Thrall, 1942; Folts, 1996 & 2005; Fox, 1996; Wright and Wright, 2005a; 2005b; 2005c).

The Town of Avoca was formed in 1843 from the Towns of Bath, Cohocton, Howard, and Wheeler. The first settlers appeared in 1794 and consisted of a handful of Scotch-Irish families from eastern New York. These settlements were formed in the Cohocton River Valley, and include the villages of Avoca and Wallace. Subsequent waves of English, Dutch, German, and Swedish origin arrived in the decades that followed (Sherer, 1996; Wright & Wright, 2005b). The first settlers cleared the dense forests of the valley in order to establish farms, and as a result were part of the initial lumber economy that utilized the waterways to export product. The Erie and Delaware and Lackawanna Railroads were built in 1852 and stations were located in Avoca and Wallace (Inset 4). After the arrival of the railroad the local economy grew and diversified. Factories were constructed throughout the second half of the nineteenth century dedicated to the making of dairy products, furniture, wagons and wheels, beehives, and agricultural equipment. The Village of Avoca was incorporated in 1883. The first school building was erected in 1820, and larger, more modern buildings replaced it at 50-year intervals. The current educational buildings were constructed in 1938 (Thrall, 1942; Sherer, 1996; Wright & Wright, 2005b).





Inset 4. 1873 Beers *Atlas of Steuben County*, village of Avoca (left)
By 1873, the village of Avoca had developed a small central commercial district adjacent to both the Conhocton (Cohocton) River and the Erie Railroad depot (Beers, 1873; collection of David Rumsey).

Inset 5. 1873 *Atlas of Steuben County*, village of Liberty (right)
By 1873, the village of Liberty was the center of commerce for the town of Cohocton, which it later adopted as its name (Beers, 1873; collections of David Rumsey).

The Town of Cohocton was formed in June of 1812 from parts of Bath and Dansville. The hamlet of North Cohocton was originally called "Biven's Corners" after an early settler until 1828, when the post office was established under its current name. In a similar manner, the hamlet of Atlanta was known as "Blood's Corners," until 1892. The largest settlement, originally known as "Liberty Corners," evolved into the Village of Cohocton (Inset 5). The town's economy followed the regional pattern of lumber exportation. Dairy and potato farming were established by mid-century, and industrial sites relative to each were operational during the twentieth century. The Village of Cohocton is known for being the birthplace of Orson Fowler, a famous 19th century phrenologist and a chief proponent of the octagon style house. The two National Register-listed sites, the Cohocton Town and Village Municipal Building, and the Larrowe Garage and Cohocton Public Library are located in the village of Cohocton. Cohocton currently has no major employers, and is considered a "bedroom community," as most of its residents travel to nearby communities to work (Thrall, 1942; Folts, 1996; Wright & Wright, 2005c).

The Town of Dansville (not to be confused with the nearby village of Dansville in Livingston County) was formed in 1796, one of the original six townships of Steuben County. However, no significant settlements were present in the town until 1804. The first tavern was opened in 1806, and the first school building erected in 1811. The marshes were drained in 1832, which expanded the opportunities for agricultural business. Farming and lumber were early economic staples of the area. The Rogersville Union Seminary was a high school established in 1848 and a large, three-story educational building was constructed in 1852. The school was torn down in 1907. Stony Brook State Park was established in 1928, and its public buildings and trails were created by the Civilian Conservation Corps in the 1930s. Agricultural transport business and potato farming are still an economic driver in the town of Dansville (Clayton, 1879; Thrall, 1942; Wright & Wright, 2005a; 2005b; 2005c).

The Town of Fremont was settled beginning in 1812, and was formed in November if 1854 from parts of Hornellsville, Dansville, Wayland, and Howard. It was named after the Colonel John C. Fremont of California, who ran as the first Republican party presidential candidate that year. Early economies involved timber and dairy farming. There were four cheese factories in the township in the mid-19th century (Thrall, 1942; Spencer, 2005). The first businesses were typical of the area, with a saw mills and dairy enterprises. A significant development in the milling of flour came in 1833 when Elisha Stephens utilized new technology to manufacture white flour. This drew patrons from far away and was a source of economic pride and energy, and Stephen's Mills became synonymous with the settlement that grew around the mill. The City of Hornell acquired the mill site in 1908. Dairy and potato farming remain chief economic staples (Thrall, 1942; Spencer, 1996; Wright & Wright, 2005a; 2005b; 2005c).

The Town of Howard was formed in 1812 from Bath and Dansville. The first settlers to the area now occupied by the Village of Howard were the Bennett brothers Daniel and Jacob, and as a result the area comprising the village was

known as Bennett's Flats for many years. The waterways utilized by the neighboring townships to support the timber business were not proximately located to Howard, and so the early businesses existed mainly to support the settlers. The coming of the railroad to the area caused a reduction of the population of Howard, whose residents most likely relocated to nearby regional centers. Howard's first two-room school house, built in 1939, is possibly the only Art Deco building in the township. New York State Route 17 was built through the village in 1968 and 1969, bringing additional traffic but not any significant commercial growth. In the late twentieth and early twenty-first centuries, dairy farming continues to be the chief industry (McMaster, 1853; Thrall, 1942; McCallum, 1996; Wright & Wright, 2005).

The Town of Wayland was formed in 1848 from the towns of Cohocton and Dansville. Adam Zimmerman was the first settler to the area in 1806. There was a plank road constructed between Wayland and Dansville n 1842, which helped encourage very early economic development in taverns and hotels constructed along the route. Timber and dairy farming sustained the economy of Wayland until the 1870s, when tourism around Loon Lake began to grow significantly. Portland cement and silk products were made in the early twentieth century. The Gunlocke chair factory has been in production since 1902 at the south end of the village (Thrall, 1942; Scott, 1996; Wright & Wright, 2005).

Historic maps reflect the robust nineteenth century settlement and expansion of the towns within the county and the, and the relative lack of population growth throughout the twentieth century. The 1873 Beers *Atlas of Steuben County, New York* (Figure 5) shows populations within the Archaeological Study Area concentrated around the villages that had formed at major crossroads, or had grown around railroads and waterways throughout the county. The villages of Avoca, Liberty (later renamed Cohocton) and Wayland are the most significant population and commercial centers within the five-mile study area, with numerous hamlets depicted throughout the towns, and residences spaced regularly along roads that primarily follow waterways and topographic lines.

The 1903 *Naples, NY*, 1904 *Wayland, NY*, 1910 *Bath, NY*, and 1918 *Hornell, NY* USGS 1:62000 topographic quadrangle maps (Figure 7) shows a similar condition to the 1873 Beers maps, with a more formalized and defined network of roads located throughout the Archaeological Study Area. The villages of Avoca, Cohocton and Wayland appear to have increased in size, with additional growth noticeable in the nearby hamlets of Atlanta and Perkinsville. Development is relatively sparse in much of the Archaeological Study Area, though several schools are noted on the maps. The 1942 *Dansville, NY*, 1942 *Naples, NY*, 1943 *Wayland, NY*, 1953 *Avoca, NY*, 1953 *Towlesville, NY*, 1954 *Canisteo, NY*, 1965 *Arkport, NY*, 1978 *Haskinville, NY*, and 1978 *Hornell, NY* USGS 1:24000 topographic quadrangle maps[2] (Figure 7) show significant expansion of the villages of Dansville and Hornell, northwest and southwest or the

[2] The 1978 photorevised editions of these maps have been used to provide the most consistency regarding the state of development of the landscape and built environment in the mid-to-late twentieth century. Changes on the maps from their original publishing date are displayed in pink.

Archaeological Study Area, respectively. In addition, Interstates 86 and 390 have been constructed through the study area with some noteworthy additional development in the villages of Avoca, Cohocton and Wayland adjacent to the newly constructed highways. The rural portions of the study area appear to be relatively unchanged from their depiction on previous historic maps, with the exception of lakeside housing that has been constructed on the shores of larger water bodies such as Loon Lake.

2.3 Previous Archaeological Resources Surveys within the Facility Site

Two previous Phase 1A/B archaeological survey have been undertaken within the Archaeological Study Area (see Figure 4). In 2006, the Public Archaeology Facility at the State University of New York at Binghamton (PAF) conducted a Phase 1 archaeological survey for a bridge replacement on New York State Route 21 in the Town of Fremont (06SR56489) (PAF, 2006a) and in 2010, David Perry conducted a Phase 1 archaeological survey for the Babcock Road Cell Tower in the town of Fremont (10SR60219) (Perry, 2010) (Figure 4). PAF (2006a) excavated 31 shovel test pits (STPs) at 50- and 25-foot (15- and 7.5-meter) intervals. They recovered 43 historic artifacts and identified a buried foundation and cellar fill associated with a map-documented structure (MDS). The artifacts and foundations were designated as the Malter Site (USN 10113.000008) which was recommended as not eligible for listing on the State/National Register of Historic Places (S/NRHP) with no further work (see additional discussion below) (PAF, 2006a). Perry (2010) excavated 11 STPs at 100-foot (31-meter) intervals and did not identify any cultural material.

2.4 Previously Identified Archaeological Sites within the Facility Site

The NYSOPRHP *Phase 1 Archaeological Report Format Requirements* (NYSOPRHP, 2005) indicate that Phase 1A survey reports should include a summary of previously identified archaeological sites located within one mile of the project. There are two previously reported archaeological sites located within approximately one mile of the Archaeological Study Area, as summarized in Table 3. The Malter Site (USN 10113.000008) consists of a historic debris scatter and foundation which represent the remains of a pre-1918 farmstead. The site was recommended as not eligible for listing on the NHRP by PAF (2006a). The site occurs within the Archaeological Study Area; however, based on current Facility design, the site does not occur within the APE for Direct Effects.

The Indian Burial site (USN 10109.000024) consists of a possible Native American burial site located outside the Archaeological Study Area (but within 1-mile of the Archaeological Study Area) noted on an 1889 map of the James Cleland Farm in the Town of Cohocton. According to documentation on file in the CRIS database, the notation indicating the potential location of the Native American burial was made in the late 1980s or early 1990s and appears to have been made in error (Folts, 1999). Folts (1999) notes that there was a 19th century Euroamerican grave in the field near the location of the alleged “Indian Burial” and that the notation on the 1889 map may erroneously refer to the historic Euroamerican grave as the Native American burial. He goes on to note that the grave site was plowed over at some

point in the 1990s and the grave is no longer visible on the ground surface (Folts, 1999), although its subsurface components presumably remain intact.

One NYSM site (NYSM 2489) occurs within 1-mile of the Archaeological Study Area, although not actually within the Archaeological Study Area. The site is located on a slope overlooking the Cohocton River Valley to the east. Despite its NYSM number, this site is described in the CRIS database as "Bart's gravel pit – paleofauna" indicating it is a paleontological site, likely containing the remains of Pleistocene megafauna, with no human associations.
Additionally, Six NYSM sites (NYSM Nos. 1691, 1692, 1693, 1694, 1695, and 4852) are present in the vicinity of the Village of Avoca along the Cohocton River approximately 1.8 miles (2.9 km) east of the Archaeological Study Area. The consist primarily of prehistoric sites reported by the State University of New York at Buffalo during the 1960s (Engelbrecht, 1970). These sites are well outside the Facility site and will not be impacted by the proposed Facility; however, they serve to illustrate the predominant pattern of prehistoric settlement in the area which focused on large alluvial valleys (e.g., Funk, 1993; PAF, 2009).

Table 3. Archaeological Sites Located in the Vicinity of the Facility.

Site Identifier	Site Name	Time Period	Site Description	Distance from Archaeological Study Area	S/NRHP Eligibility
10113.000008	Malter Site (SUBi 2603)	Historic	Historic foundations and artifacts	Within Archaeological Study Area	Recommended not eligible
10109.000024	Indian Burial Site	Prehistoric	Possible prehistoric Native American burial site/possibly 19th century Euroamerican grave/family plot	Approximately 1 mile (1.6 km) east of the Archaeological Study Area	Unevaluated
NYSM 2489	Bart's Gravel Pit – Paleofauna	Paleontological	Fossilized mammal remains – no archaeological component	Approximately 0.3 miles from Archaeological Study Area	N/A
Avoca Village Area NYSM Sites					
NYSM 1691	BTH 5-1:UB 517	Prehistoric	(Engelbrecht, 1970:144-145)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated
NYSM 1692	BTH 6-1:UB 609	Prehistoric	(Engelbrecht, 1970:146-147)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated
NYSM 1693	BTH 7-1, UB 610	Prehistoric	Albert Fox collection of pottery from the Cohocton River and Castle Creek (Engelbrecht, 1970:148-149)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated

Site Identifier	Site Name	Time Period	Site Description	Distance from Archaeological Study Area	S/NRHP Eligibility
NYSM 1694	BTH 8-1, UB 515	Prehistoric	(Engelbrecht, 1970:150-151)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated
NYSM 1695	BTH 9-1, UB 514	Prehistoric	One possible Adena Point with broken base, tip, and two pieces of blue glass. (Engelbrecht, 1970:152-153)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated
NYSM 4852	Village	Prehistoric	"Village site in Avoca on the Haskins Farm" (Parker, 1922:697)	Approximately 1.8 miles from Archaeological Study Area	Unevaluated

2.5 Existing Conditions

The Facility is proposed to be located in a rural portion of Steuben County, which is characterized by a mix of agricultural and forested land (see Appendix A: Photographs 1-10). Currently, the APE for Direct Effects occurs predominantly in agricultural lands (see Appendix A: Photographs 4-10). According to the Steuben County Agricultural and Farmland Protection Plan, "agriculture has historically been a critical component of the economy of Steuben County. While changing economic conditions and consolidation of the food and agriculture industries have challenged community-based farms, 15% of Steuben County employees still work in the agricultural industry and related supply chains. The impact of agriculture on the county's economy is significant." Of the 1,667 farms in operation in 2012, the vast majority were small operations. The Towns of Howard, Cohocton, and Wayland have the highest concentration of large farming operations in the County, and the highest concentration of field crops (Steuben County Planning Department et al., 2015).

Existing conditions within the Archaeological Study Area have been observed and evaluated via examination of aerial imagery for the vicinity and limited site visits. Land-use in the area is fairly typical of the Southern Tier and consists of agricultural fields (see Appendix A: Photographs 4-10), scattered residential development along area roadways, and large tracts of undeveloped second-growth forest (see Appendix A: Photographs 1-3). General observations of existing conditions within the vicinity of the Facility site include the following:

- The Archaeological Study Area is characterized by a patchwork of forested woodlots, open agricultural fields (primarily hay and corn), pasture, reverting former agricultural lands in various stages of secondary succession, and scattered residences and farms.

- No areas of concentrated settlement occur within the Archaeological Study Area. Residences are scattered along area roadways.

3.0 ARCHAEOLOGICAL SENSITIVITY ASSESSMENT

3.1 Prehistoric Native-American Archaeological Sensitivity Assessment

As described in Section 2.3 of this report, one previously recorded archaeological site with a potential prehistoric component (USN 10109.000024, the possible "Indian Burial") occurs within 1 mile of the Archaeological Study Area. A cluster of six previously recorded prehistoric sites occurs in the vicinity of the Village of Avoca on the Cohocton River approximately 1.8 miles east of the Archaeological Study Area. In general, major prehistoric sites in this region occur within large alluvial valleys, often at stream/river confluences and often within the floodplain or on a lower terrace. Therefore, given the overall upland nature of the Facility site, it is considered of low sensitivity for major prehistoric archaeological sites.

As part of the background research for the current Phase 1A survey and Phase 1B work plan, EDR reviewed several previous Phase 1B archaeological surveys conducted for wind facilities in western New York. The studies reviewed were conducted in Steuben and Chautauqua counties and occur in similar landscapes and environmental settings to the currently proposed Baron Winds Project (i.e., the all occurred within the northern Allegheny Plateau, in areas characterized by moderate to high topographic relief). Table 4 summarizes the prehistoric archaeological resources (sites and isolated finds) identified during these surveys, and Table 5 summarizes the number of resources identified within each landscape classification zone. Due to the different terminologies used to describe landscape zones by different researchers, the following tables landscape classifications that are simpler and more general than those used in the current Phase 1B work plan presented in Section 4 of this document. It should be noted that EDR also reviewed the Phase 1B surveys for the (proposed) Allegany and (constructed) Howard wind projects. The Phase 1B surveys for these projects included 1,451 and 880 STPs, respectively, but did not identify any prehistoric archaeological sites or isolated finds.

Per the data summarized in Tables 4 and 5, it is immediately evident that more prehistoric cultural resources (both sites and isolated finds) have been identified in upland settings (ridges or saddles) near water (wetlands or streams) than in any other setting. Part of this is due to the siting of windfarms which preferentially selects upland locations. Therefore, upland settings have seen more extensive archaeological survey than valley walls and valley bottoms. For instance, in the recent archaeological survey for the Cassadaga Wind Project (EDR, 2016a) approximately 63% of the archaeological survey was undertaken on upland landforms (both near water features and away from them). However, the preference for upland locations *near water features* is notable and should be considered significant. It is not surprising that prehistoric peoples preferred locations proximate to streams or wetlands because these water features offer not only fresh water for drinking and cooking, but also more diverse floral and faunal resources than areas away from water.

Table 4. Prehistoric archaeological sites and isolated finds identified during archaeological surveys for wind projects in western New York State.

Project	Site Name/Number	Site Type[1]	NRHP Eiligibility	Landscape Class	Equivalent EDR Landscape Class
Allegany Wind (Cattauragus County) (John Milner Associates, Inc. [JMA])	No prehistoric archaeological sites	N/A	N/A	N/A	N/A
Howard Wind (Steuben County) (JMA, 2006a)	No prehistoric archaeological sites	N/A	N/A	N/A	N/A
Cohocton Wind (Steuben County) (PAF, 2006b)	Pine Hill 1 (SUBi-2612)	Isolated find	Not eligible	Uplands overlooking headwaters	Upland ridge/saddle near wetland/stream
	Pine Hill 2 (SUBi-2613)	Isolated find	Not eligible	Uplands overlooking headwaters	Upland ridge/saddle near wetland/stream
	Lent Hill 1 (SUBi-2614)	Isolated find	Not eligible	Uplands – no headwaters	Upland ridge/saddle – no water
	Lent Hill 2 (SUBi-2615)	Isolated find	Not eligible	Uplands overlooking headwaters	Upland ridge/saddle near wetland/stream
	Dutch Hill 1 (SUBi-2618)	Site	Unevaluated	Uplands overlooking headwaters	Upland ridge/saddle near wetland/stream
Prattsburg Wind (Steuben County) (PAF, 2006c)	Burke Road (SUBi-2545)	Isolated find	Not eligible	Upland plateau overlooking feeder drainage	Upland ridge/saddle near wetland/stream
Arkwright Wind (Chautauqua County) (Tetra Tech, 2008a; 2009a; 2009b)[2]	AR-AA IF-1	Site	Not eligible	Upland near water	Upland ridge/saddle near wetland/stream
	Arkwright Campground I	Site	Not eligible	Upland near water	Upland ridge/saddle near wetland/stream
	C23 IF-1	Site	Not eligible	Upland near water	Upland ridge/saddle near wetland/stream
	Cannon I	Site	Unevaluated	Valley wall near water	Valley wall near wetland/stream
	Cannon II	Site	Unevaluated	Upland near water	Upland ridge/saddle near wetland/stream
	Isolated Find T27/I	Site	Unevaluated	Valley wall – no water	Valley wall – no water
	Isolated Find T46R/I	Isolated Find	Unevaluated	Upland near water	Upland ridge/saddle near wetland/stream
	Jurczak I Site	Site	Unevaluated	Upland no water	Upland ridge/saddle - no water
	Lehman I	Site	Unevaluated	Valley wall near water	Valley wall near wetland/stream

Project	Site Name/Number	Site Type[1]	NRHP Eiligibility	Landscape Class	Equivalent EDR Landscape Class
	Maslach I	Site	Unevaluated	Upland near water	Upland ridge/saddle near wetland/stream
Cassadaga Wind (Chautauqua County) (EDR, 2016b)	Allenbrand Precontact Site 2 (USN 01304.002069)	Site	Not eligible	Upland ridge near wetland	Upland ridge near wetland
	Allenbrand Precontact Site 3 (USN 01304.002070)	Site	Not eligible	Upland saddle near wetland	Upland saddle near wetland
	Charrington Creek Precontact Site 1 (USN 01306.000351)	Site	Not eligible	Upland ridge near wetland	Upland ridge near wetland
	Green Highlands Precontact Site 1 (USN 01304.002072)	Isolated Find	Unevaluated	Upland ridge – no water	Upland ridge – no water
	Williams Precontact Site 1 (USN 01304.002079)	Site	Not eligible	Valley wall – no water	Valley wall – no water
	Williams Precontact Site 2 (USN 01304.002080)	Site	Not eligible	Valley wall – no water	Valley wall – no water

[1]To compensate for differing methodologies and terminologies, an Isolated Find is defined as a single prehistoric artifact with no associated artifacts or features; whereas a Site was defined as two or more prehistoric artifacts.
[2]AR-AA IF-1, C-23 IF-1, and Jurczak Site I were not assigned specific landscape classifications by Tetra Tech (2009a), so classification was derived from the site descriptions for the purposes of this analysis.

Table 5. Summary of Prehistoric Archaeological Sites and Isolated Finds by Generalized Landscape Class for Wind Projects in Western New York State.

Generalized landscape class (simplified from EDR's classification)	Prehistoric Sites	Prehistoric Isolated finds
Upland near water	9 (60%)	4 (57%)
Upland – no water	1 (7%)	2 (29%)
Valley wall near water	2 (13%)	1 (14%)
Valley wall – no water	3 (20%)	0 (0%)
Total	15 (100%)	7 (100%)

Based on EDR's experience conducting archaeological surveys for other wind energy projects, the majority of archaeological sites that are identified during surveys for wind projects are historic period sites (e.g., farmsteads and similar). This is typically attributed to the upland and relatively marginal (from a natural resource perspective) character of many wind project sites, which are often sited on ridges or other elevated areas away from the river valleys and

waterbodies that served as attractive resources for larger Native American settlements. This is the case with the currently proposed Facility. As previously discussed, there are several previously recorded Native American archaeological sites in the Village of Avoca approximately 1.8 miles west of the Archaeological Study Area. However, these sites are located on the Cohocton River, a major alluvial valley, in a significantly different environmental setting than any within the current Facility site. Therefore, the overall prehistoric archaeological sensitivity of the Facility Site is considered to be low; however, areas in close proximity to perennial streams and wetlands are considered to have an elevated sensitivity for prehistoric archaeology relative to the rest of the Facility site.

3.2 Historic Period Archaeological Sensitivity Assessment

As described in Section 2.4 and illustrated on historic maps (see Figures 5-7), the Project site has a historic-period occupation history since at least the early-nineteenth century. There is one previously recorded historic archaeological sites within 1 mile of the Archaeological Study Area (USN 10113.000008 – the Malter Site). The Malter site consists of a historic debris scatter and foundation/feature fill which represent the remains of a pre-1918 farmstead. The site was recommended as not eligible for listing on the NRHP by PAF (2006a) with no further work.

The locations of former structures within and near the Project site are shown on the Beers 1881 *Illustrated Historical Atlas of the County of Steuben County, New York* (Figure 5), the 1903 *Naples*, 1904 *Wayland*, 1910 *Bath*, and 1918 *Hornell, NY* 15 minute series topographic maps (Figure 6), and the 1918 Hornell, 1942 *Danville*, 1942 *Naples*, 1943 *Wayland*, 1953 *Avoca*, 1965 *Arkport*, and 1978 *Haskinville, NY* 7.5 minute series topographic maps (Figure 7).

MDS locations within the Facility site are generally located adjacent to existing roadways. In some instances, MDS represent existing buildings and/or farms. In other instances, the MDS locations are abandoned structures that now may be represented only by archaeological remains. Potential archaeological resources associated with these MDS locations could include abandoned residential and/or farmstead sites, wherein the complete residential and/or agricultural complex consisting of foundations, structural remains, artifact scatters, and other features, would constitute an archaeological site. In other locations more limited remains of these sites, perhaps represented by only a foundation or an artifact scatter, may be extant.

Areas located in the immediate vicinity (within approximately 200 feet) of MDS locations are considered to have a high potential for the presence of historic-period archaeological resources. The remaining (non-MDS) portions of the Facility site exhibit minimal (if any) likelihood for significant historic period archaeological sites to be present.

3.3 Prior Ground Disturbance

The *NYAC Standards* indicate that Phase 1 archaeological survey is not necessary in wetland areas, previously disturbed areas, and areas where slopes exceed 12-15% (NYAC, 1994). Slope is anticipated to be a relatively minor factor in the archaeological sensitivity of the Facility site, as steep slopes are fairly limited within the Facility site, and much of the APE for Direct Effects occurs on relatively flat to rolling ridge tops and saddles. Wetland communities within the Project site are being investigated as part of the environmental review for the Facility. In general, Facility components have been and will be sited to minimize impacts to wetland communities.

Previous ground disturbance within the Facility site is for the most part limited to previous or ongoing agricultural activities. Farming is not considered significant in terms of its potential to affect the integrity of archaeological resources (NYAC, 1994; NYSOPRHP, 2005). Additionally, some areas immediately adjacent to existing roads within the Facility site include drainage ditches, culverts, and areas of cut and/or fill. With the exception of these areas, the Facility site in general does not appear to have been subjected to significant previous disturbance.

4.0 ARCHAEOLOGICAL RESOURCES SURVEY WORK PLAN

4.1 Phase 1B Archaeological Survey Methodology

The APE for Direct Effects for the Project includes active agricultural lands (including pastures, corn and hay fields), open meadows, forested/shrubland areas, and steeply sloped areas (i.e., areas in excess of 12-15% slopes per the *NYAC Standards* [NYAC, 1994]). Following previously used fieldwork methods, it is anticipated that EDR's additional archaeological survey work in these areas will consist of the following:

- **Corn fields**. In existing corn fields and/or previously cultivated areas with greater than 80% ground-surface visibility, EDR personnel will conduct a pedestrian surface survey to determine whether archaeological sites are present (in accordance with the NYAC Standards; NYAC, 1994). In these areas, EDR personnel will traverse the APE for Direct Effects along transects spaced at three to five-meter intervals while inspecting the ground surface for artifacts and/or archaeological features. The timing for this work is critical because surface survey needs to be conducted after a field has been freshly plowed and disked, and preferably following a rain event. If any artifacts or other indication of an archaeological site is observed on the ground surface, then the location of all finds will be recorded using sub-meter accuracy Global Positioning System (GPS) equipment. After recording the locations of all artifacts and/or features in a given area, EDR personnel will collect observed artifacts (or a sample thereof) for subsequent laboratory identification and analysis, in accordance with standard archaeological methods.
- **Hay fields, forests, and shrubland**. In selected areas not suitable for pedestrian surface survey, EDR personnel will excavate STPs to determine whether archaeological sites are present. STPs will be excavated along transects or in grid patterns at 5-meter (16-foot) intervals within selected areas to provide for intensive sampling of the various environmental zones within the project site (per the SHPO Wind Guidelines; see *Landscape Classification Geographic Information System [GIS] Model* section below). STPs excavated for the Project will be 30-50 cm (12-20 inches) in diameter and excavated to sterile subsoil or the practical limits of hand excavation (in accordance with the NYAC Standards; NYAC, 1994). Field notes for each STP will be recorded on standardized forms that describe soil stratigraphy, record whether any artifacts were recovered, and note any other relevant observations. All soils excavated from STPs will be screened through 0.25-inch hardware cloth. If prehistoric Native American artifacts are recovered from an isolated STP, then up to eight additional STPs will be excavated at one-meter and three-meter intervals around the original STP to determine whether the artifacts represent an isolated find or may indicate the presence of a more substantial archaeological site.
- **Steeply sloped, wetland, and disturbed areas**. No systematic archaeological survey work is proposed in steeply sloped areas, delineated wetlands, or areas where visual inspection can confirm previous soil

disturbance (per the *NYAC Standards*; NYAC, 1994). In these areas, archaeological survey will be restricted to pedestrian walkover supplemented by judgmental shovel testing if indications of a potential archaeological site are observed (e.g., foundations, structural remains, or rock overhangs suitable for use as shelters).

4.2 Archaeological Work Scope

The Phase 1B survey methodology proposed in this Work Plan was designed in accordance with the 2006 *SHPO Wind Guidelines* (NYSOPRHP, 2006). This approach entails using the acreage of the project's archeological APE (i.e., the APE for Direct Effects) to determine the appropriate level of effort required for the Project, and then concentrating survey efforts within selected portions of each landscape class identified in the Geographic Information System (GIS) model. Table 6 provides the APE for Direct Effects associated with each Facility component, distinguishing proposed pedestrian surface survey areas (i.e., cultivated areas) from proposed shovel testing areas (i.e., wooded or idle areas). Based on review of aerial imagery for the Project site, it is estimated that approximately 35% of the APE for Direct Effects occurs in agricultural fields where pedestrian surface survey will be possible. This is only an estimate and the actual proportion of pedestrian surface survey conducted during the Phase 1B survey effort may be higher or lower than this. The extent of shovel testing will be adjusted in accordance with any adjustments to the extent of pedestrian surface survey so that the overall extent of survey coverage proposed in this work plan will remain the same.

Table 6. Anticipated Phase 1B Archaeological Survey APE and Methods

Project Component	APE for Direct Effects (acres)	Portion of APE within Agricultural Areas Potentially Suitable for Pedestrian Surface Survey (acres)	Portion of APE within Non-Agricultural Areas Where it is Assumed Archaeological Survey Would be Accomplished via Shovel Testing[2] (acres)
Wind Turbines	345.4	110.2	235.2
Access Roads[1]	213.3	74.4	138.9
Collection Lines[1]	219.4	55.6	163.8
Meteorological Towers[3]	3.0		
Staging Areas[3]	20		
O&M Facility[3]	2.5		
Collection Substation	5	1.7	3.3
Total	**808.6**		

[1] In areas where access roads or collection lines overlap turbine workspaces, the overlapping acreage is included under turbine workspaces (and excluded from access road and buried electrical lines) to avoid duplication. Similarly, in areas where buried electrical lines are within the access road width of disturbance, the overlapping acreage is included under access roads.
[2] For instance, forested and/or idle areas are typically not suitable for pedestrian surface survey. However, these estimates do not take into account steeply sloped areas, where no systematic shovel testing will be conducted (see Section 3.3, above).
[3] These components have not been sited as of this Phase 1A report. Therefore, they are not attributed to specific survey techniques (i.e., shovel testing or pedestrian surface survey) or landscape classifications (see Section 4.2).

4.3 Landscape Classification GIS Model

EDR performed a Geographic Information System (GIS)-based landscape classification analysis for the Archaeological Study Area in accordance with the *SHPO Wind Guidelines*. The landscape classification identified environmental zones within the Archaeological Study Area following the example set forth in the New York State Museum Bulletin entitled *Archeological Investigations in the Upper Susquehanna Valley, New York State* (Funk, 1993).

The landscape classification model was created based on a digital elevation model (DEM) obtained from the United States Geologic Survey (USGS) National Elevation Dataset (NED), which provides basic elevation information for earth science studies and mapping applications in the United States (USGS, 2015). The resolution of the DEM used for this analysis was 10 by 10 meters. According to this data, the elevation within the Archaeological Study Area site ranges from approximately 1,350 to 2,145 feet (412 to 654 meters). Based on elevation alone, the area would fall within the valley wall and upland, or interfluve, environmental zones defined by Funk (1993). Review of the DEM and USGS topographic mapping confirmed that the Archaeological Study Area lacks notable broad valley floor areas characteristic of the valley floor environmental zone, such as those associated with nearby Cohocton River (0.7 mile to the east) and Canisteo River (4.2 miles to the west) and Canaserga Creek (4.9 miles to the northwest). The upland and valley wall environmental zones were further divided into the following 10 landscape classes identified within the Archaeological Study Area site:

1. Upland knolls and ridges near streams
2. Upland knolls and ridges near wetlands/hydric soils
3. Upland knolls and ridges without associated water features
4. Upland saddles near streams
5. Upland saddles near wetlands/hydric soils
6. Upland saddles without associated water features
7. Valley Wall near streams
8. Valley Wall near wetlands/hydric soils
9. Valley Wall without associated water features
10. Steep slopes (>12%)

The 10 landscape classes were identified by applying the following methods and definitions to the Archaeological Study Area through the use of ArcGIS software and the associated Spatial Analyst extension:

- *Steep Slopes*. Slope was calculated from the DEM and areas of greater than 12% slope were extracted for this landscape class.
- *Upland, Valley Wall, and Valley Floor*. Based on review of the DEM and USGS topographic mapping, areas of elevation greater than 1,600 feet were classified within the upland environmental zone, and areas of

elevation lower than 1,600 feet were classified within valley wall environmental zone. No areas within the Archaeological Study Area were classified within the valley floor environmental zone.

- *Knolls and Ridges*. For the purposes of this analysis, ridges and knolls were defined as areas of elevation more than 10 feet greater than the local average elevation, where 'local' is defined as a 1,500-foot radius neighborhood around each cell of the DEM.
- *Saddles*. Areas that were not identified ridges/knolls or steep slopes were considered to be saddles.
- *Streams and Wetlands/Hydric Soils*. Areas near streams and wetlands/hydric soils were defined by 328-foot (100 meters, per Funk, 1993) buffers applied to ESRI mapped streams; National Wetland Inventory (NWI) and New York State Department of Environmental Conservation (NYSDEC) mapped wetlands; and soil map units with greater than 66 percent hydric soil components. Hydric soils were included in the analysis as a representation of potential historic/paleo wetlands, which are often significant predictors of pre-contact Native American archaeological sites in landscape sensitivity studies (PAF, 2009). The NRCS Web Soil Survey defines five ratings of hydric soils based on percent of hydric components (NRCS, 2015). Although not explicitly defined, these ratings could reasonably be considered to represent: non-hydric (less than 1 percent hydric components), mostly non-hydric (1 to 32 percent hydric components), partially hydric (33 to 65 percent hydric components), mostly hydric (66 to 99 percent hydric components), and hydric (100 percent hydric components). Therefore, a cut off of 66 percent hydric components was selected for this analysis to include areas of mapped soil types most likely to support wetlands, either currently or historically (i.e. prior to significant development/drainage). Areas where a stream and wetland/hydric soil buffer overlapped were classified as near stream.

The final landscape classification was created by combining the files resulting from the list above into one shapefile representing the spatial extent of each of the 10 landscape classes within the Archaeological Study Area. This file was then evaluated with respect to the proposed Facility layout to determine the acreage of soil disturbance anticipated to occur in each of the landscape classes. Note that the proposed meteorological towers, staging areas, and O&M building have not been sited yet. Therefore, although their proposed disturbance is taken into account in the calculations of overall survey extent/APE for Direct Effect, they are not included in the landscape model calculations presented below.

4.4 Archaeological Survey Research Design

The resulting landscape classification for the Facility is presented in Table 7 and Figure 8. Table 6 provides the acreage of APE for Direct Effects associated with each Facility component within each of the identified landscape classes. Figure 8 depicts the extent of the 10 landscape classes within the APE for Direct Effects in relation to the proposed Facility layout.

Table 7. APE for Direct Effects by Facility Component and Landscape Class

Landscape Classification	APE for Direct Effects by Project Component (Acres)					Total APE for Direct Effects (Acres)
	Wind Turbine	Access Road[1]	Collection Line[1]	Collection Substation	Met Towers O&M Facility and Staging Areas[2]	
Steep Slopes (>12%)	0	<0.1	1.3	0		**1.3**
Upland Ridges and Knolls						
No Associated Water	287.7	160.3	117.3	5		**570.3**
Near Wetland/Hydric Soil	13.0	10.2	8.5	0		**31.7**
Near Stream	0.9	0.2	0.2	0		**1.3**
Upland Saddles						
No Associated Water	26.1	30.5	52.4	0		**109.0**
Near Wetland/Hydric Soil	15.7	11.5	23.2	0		**50.4**
Near Stream	1.9	0.5	4.8	0		**7.2**
Valley Wall						
No Associated Water	0	0	5.0	0		**5.0**
Near Wetland/Hydric Soil	0	0	0.7	0		**0.7**
Near Stream	0	0	5.9	0		**5.9**
Landscape Classification TBD					**25.5**	**25.5**
Total	**345.3**	**213.2**	**219.3**	**5.0**	**25.5**	**808.3**[3]

[1]In areas where access roads or collection lines overlap turbine workspaces, the overlapping acreage is included under turbine workspaces (and excluded from access road and buried electrical lines) to avoid duplication. Similarly, in areas where collection lines are within the access road width of disturbance, the overlapping acreage is included under access roads.
[2] These components have not been sited as of this Phase 1A report. Therefore, they are not attributed to specific survey techniques (i.e., shovel testing or pedestrian surface survey) or landscape classifications (see Section 4.2).
[3] Note: previously, the APE for Direct Effects had been calculated as 808.6 acres, however, due to rounding in the landscape model calculations, the APE for Direct Effects is shown here at 808.3 acres. The discrepancy is not considered significant.

As shown in Table 4, approximately 769.9 acres of the APE occurs on uplands and 11.6 acres on valley walls[3]. A relatively small portion of the Project APE occurs near streams (only 14.4 acres of APE within 328 feet of a mapped stream). Areas of APE near wetlands/hydric soils are more common, but still somewhat rare (82.2 acres) but areas with no associated water features dominate (684.3 acres).

As described in Section 3.1, wind energy projects are typically sited on ridges or other uplands away from the river valleys and waterbodies that served as attractive resources for larger Native American settlements. In most instances, pre-contact sites are located in relatively close proximity to of drainages and/or wetlands, both because of the availability of freshwater and diverse natural resources (e.g., Funk, 1993; PAF, 2009). Therefore, those portions of the APE for Direct Effects generally located proximate to drainages and/or wetlands should be considered as having a relatively higher potential for the presence of prehistoric Native American archaeological resources. In general terms,

[3] Note, this does not include the impacts associated with the proposed meteorological towers, staging areas, and O&M building. The impacts associated with these Facility components (which total 25.5 acres) will be incorporated into the landscape model, using the same logic applied to the other Facility components discussed herein, prior to the initiation of Phase 1B fieldwork.

areas that are not located close to freshwater sources (and associated ecological habitats) are less likely to include pre-contact Native American archaeological sites.

Per the landscape classification model described in Section 4.3 and depicted in Figure 8, areas within the Facility Site classified as "No Associated Water" include those areas located more than 100 meters (or 328 feet) from a mapped stream, wetland, or areas with greater than 66% hydric soils. To allow for a cost-effective and efficient archaeological survey for the Project, EDR proposes that within those portions of the APE for Direct Effects that are identified as "No Associated Water", only 50% of the overall level of effort that would be typically required for the acreage of the APE be sampled (shovel tested) as part of the Phase 1B survey. In other words, approximately 684.3 acres of the APE for Direct Effects are in areas with "No Associated Water". Typically, the total level of shovel testing for these areas would be equivalent to 10,949 shovel tests (at 16 shovel tests/acre). However, because these areas have a relatively lower potential for Native American archaeological sites to be present, EDR proposes excavating 5,474 shovel tests (or 50%) in areas with "No Associated Water" (see Table 8).

In addition to the 50% reduction of Phase 1B survey scope in areas with "No Associated Water", EDR proposes to increase the emphasis on pedestrian survey with a corresponding reduction in shovel testing in these areas. Whereas in areas proximate to water features, EDR has assumed that 35% of the APE for Direct Effects will be suitable for pedestrian survey, we currently propose that in areas with "No Associated Water", 75% of the required Phase 1B survey will be undertaken via pedestrian survey of agricultural fields, with the remaining 25% of survey undertaken via shovel testing (see Table 8). This means that a certain amount of pedestrian surface survey will occur in agricultural fields outside the APE for Direct Effects (but within the Facility site – i.e., in areas that could potentially be included in the APE); however, all shovel testing survey will still occur within the APE for Direct Effects. This proposed methodology should increase the potential to identify prehistoric archaeological materials as well as reducing time spent surveying in relatively unproductive "No Associated Water" areas. It is worth noting that cultivated land within these areas that is suitable for pedestrian survey will be surveyed consistent with the methods described in Section 4.1. In addition, any map-documented structures or areas with other indicators of a potential historic-period archaeological site will be investigated without any reduction in effort.

Without the proposed reduction in sampling in areas with 'No Associated Water', the survey would require the excavation of up to 7,320 shovel tests, which is significantly greater than the level of effort for previous archaeological surveys for wind energy projects in New York. Examples of previous Phase 1B archaeological surveys for wind projects include: Allegany Wind Power Project – 1,455 shovel tests (JMA, 2010); Arkwright Summit (formerly New Grange) Wind Farm – 4,010 shovel tests (Tetra Tech, 2008a, 2009a, 2009b); Copenhagen Wind Farm – 3,425 shovel tests (EDR, 2014); Hardscrabble (formerly Top Notch) Wind Farm – 4,097 shovel tests (Panamerican Consultants, Inc.

[PCI], 2006); Howard Wind Farm – 880 shovel tests (JMA, 2006a); Jericho Rise Wind – 3,455 shovel tests (Tetra Tech, 2008b); Jordanville Wind Farm – 1,562 shovel tests (JMA 2006b); Marble River Wind Farm – 4,913 shovel tests (JMA, 2007a, 2007b); and the Roaring Brook Wind Farm – 3,068 shovel tests (JMA, 2009). The total level of effort proposed for the archaeological survey for the Baron Winds Project is expected to generate an adequate testing sample to evaluate the Facility's potential effect on archaeological resources, particularly given the relatively low density of prehistoric archaeological sites encountered by previous archaeological surveys in the vicinity (see Table 6).

Table 8. Summary of Archaeological Survey Method by Landscape Class

Landscape Classification	Number of Shovel Tests (Idle Areas)	Surface Survey Acreage (Cultivated Areas)
Steep Slopes (>12%)	n/a	0
Upland Ridges and Knolls		
No Associated Water	1,141 [1]	213.9
Near Wetland/Hydric Soil	330	11.1
Near Stream	14	0.5
Upland Saddles		
No Associated Water	218 [1]	40.9
Near Wetland/Hydric Soil	524	17.6
Near Stream	75	2.5
Valley Wall		
No Associated Water	10 [1]	1.9
Near Wetland/Hydric Soil	7	0.3
Near Stream	61	2.1
Landscape Classification TBD[2]		
	306	6.4
Total	**2,686**	**297.2**

[1] The proposed number of shovel tests in areas with "No Associated Water" (i.e., those areas located more than 100 meters or 328 feet from a mapped stream, wetland, or areas with greater than 66% hydric soils) was reduced by 50% to reflect that Native American archaeological sites are not typically located in these areas. Additionally, 75% of the required survey in these areas will be undertaken via pedestrian surface survey and 25% will be undertaken via shovel testing.

[2] As previously noted, these include the proposed meteorological towers, staging areas, and O&M building.

Table 8 provides the research design for the Phase 1B Archaeological Survey. The research design reflects the distribution of various landscape classes according to existing land cover/land use (e.g., agricultural fields, wooded areas) and associated archaeological survey methods (pedestrian surface survey and shovel testing), as appropriate. In addition, the research design assumes that 50% reduction in shovel testing for those portions of the APE for Direct Effects located in areas with "No Associated Water" as well as the shift to 75% pedestrian surface survey and 25% shovel testing for these areas.

The locations of areas selected for intensive archaeological sampling within the APE for Direct Effects will be made on a judgmental basis in the field under the direction of a Registered Professional Archaeologist. Selection of areas for shovel testing, in accordance with the research design presented in Table 3, will prioritize areas of high sensitivity for historic or prehistoric archaeological sites within or adjacent to proposed Facility components. In general, high

prehistoric archaeological sensitivity will be assigned to areas with little to no slope, moderate- to well-drained soils, and close proximity to water sources. High historic archaeological sensitivity will be assigned to areas of the APE in close proximity to historical MDS locations. Additionally, shovel testing at or near MDS locations will emphasize archaeological site boundary definition for the purposes of site avoidance. This may involve testing adjacent to identified archaeological features such as foundations; or testing within the APE for Direct Effects in the vicinity of MDS locations with or without identified archaeological features.

4.5 Phase 1B Archaeological Survey Report and Delivery of Electronic Data

Results of the Phase 1B archaeological survey will be summarized in an illustrated report prepared in accordance with the *New York State Historic Preservation Office (SHPO) Phase 1 Archaeological Report Format Requirements* issued in April 2005 (NYSOPRHP, 2005). Descriptive information for any archaeological sites identified during the Phase 1B survey will be uploaded to NYSOPRHP's online CRIS database at the same time as the survey report. In accordance with the *SHPO Wind Guidelines* (NYSOPRHP, 2006), EDR will also provide accurate location information for any sites identified during the Phase 1B survey. EDR anticipates these data will be provided when uploading site descriptions into the CRIS database.

5.0 SUMMARY AND CONCLUSIONS

5.1 Potential Effect on Archaeological Resources

Relative to the potential for archaeological sites to be located in the Facility site, the results of the Phase 1A archaeological resources survey for the proposed Baron Winds Project can be summarized as follows:

- There is one previously recorded historic archaeological site and no previously recorded prehistoric Native American archaeological sites located within the Archaeological Study Area for the wind generating Facility Site. There is one previously reported potential prehistoric Native American burial site located within 1 mile of the Archaeological Study Area; however, it is likely that this represents a historic period Euroamerican burial. Although none occur within the Archaeological Study Area. Native American archaeological sites that have been identified in the area typically consist of lithic and ceramic scatters, and villages which are generally located within the larger alluvial valleys. In general terms, areas that are not located close to freshwater sources (and associated ecological habitats) are less likely to include pre-contact Native American archaeological sites. Therefore, those portions of the Facility site generally located proximate to drainages and/or wetlands should be considered as having a relatively higher potential for the presence of prehistoric Native American archaeological resources.
- As previously, noted, one previously recorded historic archaeological site (a pre-1918 farmstead) occurs within the Archaeological Study Area. Historic maps (see Figures 5-7) identify the locations of farmsteads and other potential historic-period archaeological sites within the Facility site; archaeological resources associated with these sites could include foundations, structural remains, artifact scatters, and/or other features. The sensitivity for historic period archaeological remains is considered to be high within close proximity to these MDS and low for the rest of the Facility site.

Proposed construction of the Facility will include ground disturbing activities that have the potential to impact archaeological resources. The APE for Direct Effects includes all areas within the limits of disturbance for proposed construction activities. These areas include proposed turbine pad and assembly areas, access roads, buried and overhead collection lines, overhead transmission lines, laydown and staging areas, operations and maintenance facilities, and substations. Any archaeological sites located within the Facility Site, or within the broader Archaeological Study Area, but that are not within the limits of disturbance for proposed Facility components will not be affected by the Facility.

5.2 Summary of Archaeological Survey Work Plan

On behalf of Baron Winds LLC. EDR has prepared a Phase 1A Archaeological Resources Survey and Phase 1B Archaeological Survey Work Plan for the proposed Baron Winds Project, located in the Towns of Avoca, Cohocton, Dansville, Fremont, Howard, and Wayland, Steuben County, New York. Per the *SHPO Wind Guidelines*, a project's APE for Direct Effects is defined as those areas where soil disturbance is proposed to occur during construction (NYSOPRHP, 2006). Based on the current Facility design, the Facility's APE for Direct Effects is 808.6 acres in size. Please note that the Facility layout will be reviewed prior to conducting the Phase 1B survey. The Project APE and survey effort will be adjusted in accordance with Facility layout modifications consistent with the assumptions and methodology for determining the APE as presented herein.

Based on the current Facility design, it is anticipated that the Phase 1B archaeological survey for the Facility will include:

- The excavation of approximately 2,841 shovel tests and the pedestrian surface survey of approximately 287.3 acres APE for Direct Effects located within agricultural fields.
- Preparation of a Phase 1B archaeological survey report, to be submitted to NYSOPRHP via the CRIS website. The report will be prepared in accordance with NYSOPRHP's *Phase 1 Archaeological Report Format Requirements* (NYSOPRHP, 2005).
- Submission of site information for any identified archaeological sites via the CRIS website.

EDR has provided this work plan to NYSOPRHP in advance of conducting the Phase 1B archaeological survey to confirm the landscape classification model, proposed sampling strategy, and anticipated field methodology and to ensure that the proposed scope of the survey is consistent with NYSOPRHP's expectations. Please provide a formal response indicating NYSOPRHP's concurrence with and/or comments on the work plan described herein.

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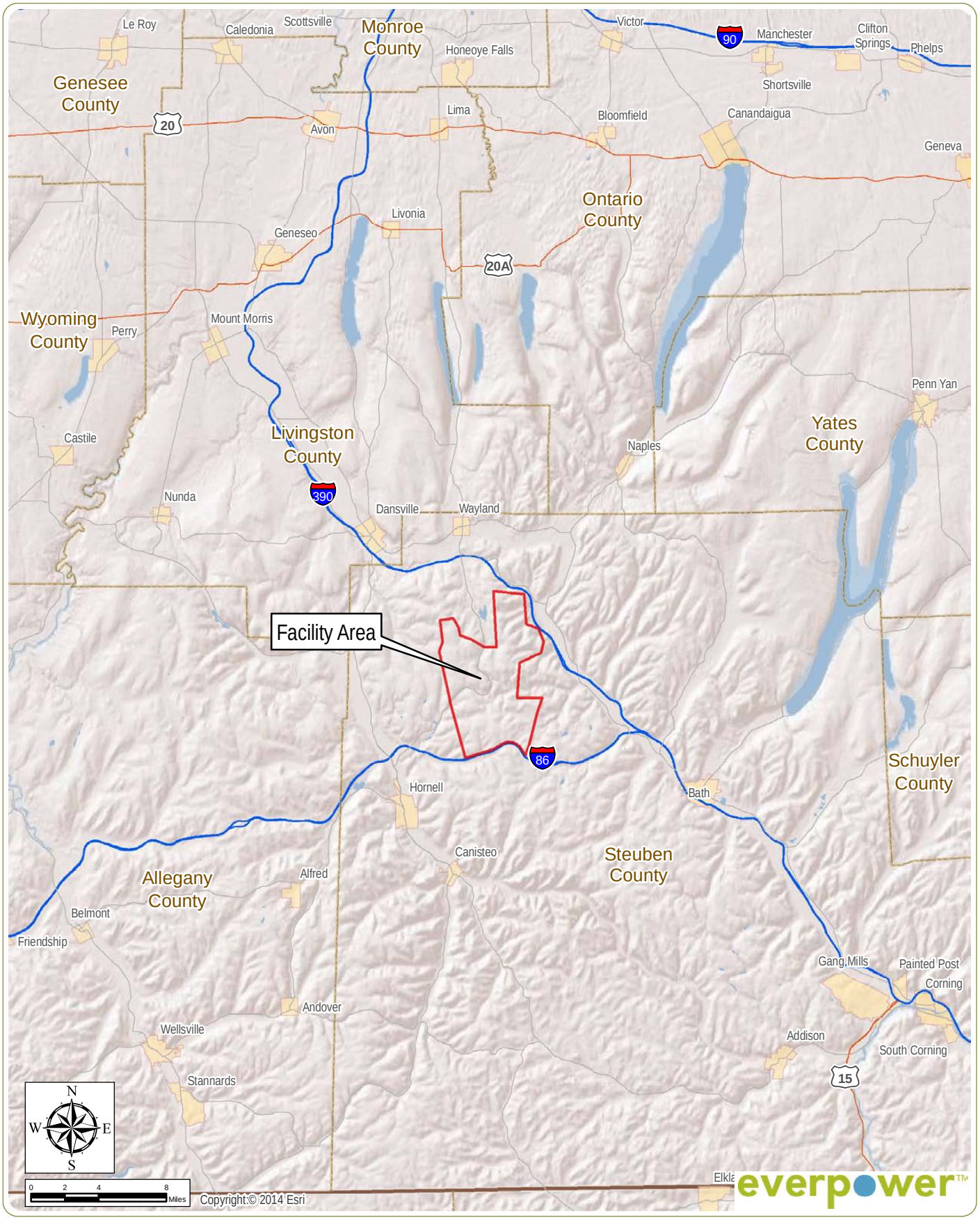
Figures



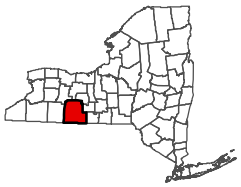
Baron Winds Project

Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 1: Regional Facility Location

June 2016

Notes: 1. Basemap: ESRI ArcGIS Online "World Shaded Relief" Map Service and ESRI StreetMap North America, 2008.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.



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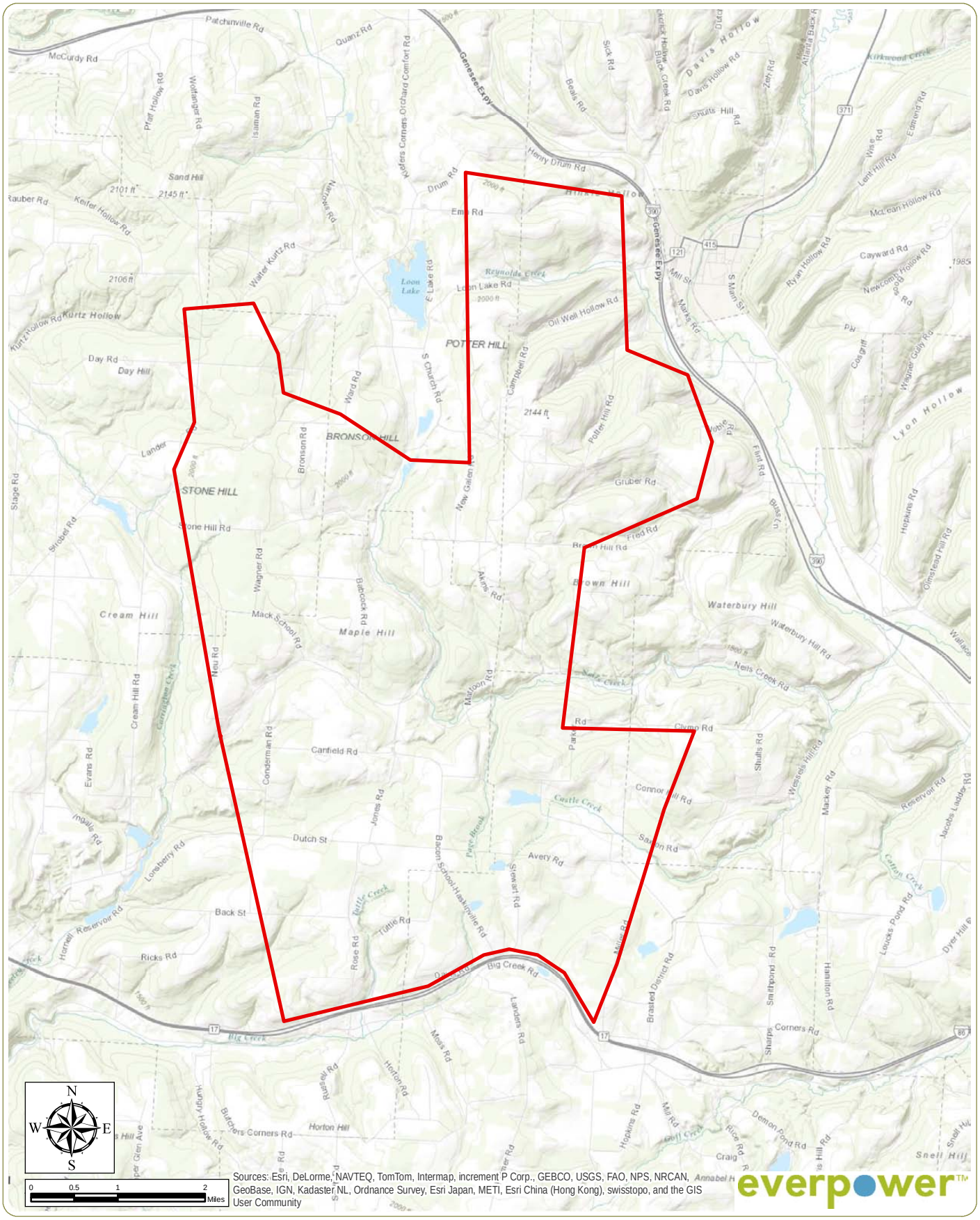

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 2: Facility Topography

June 2016

Archaeological Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic" Map Service.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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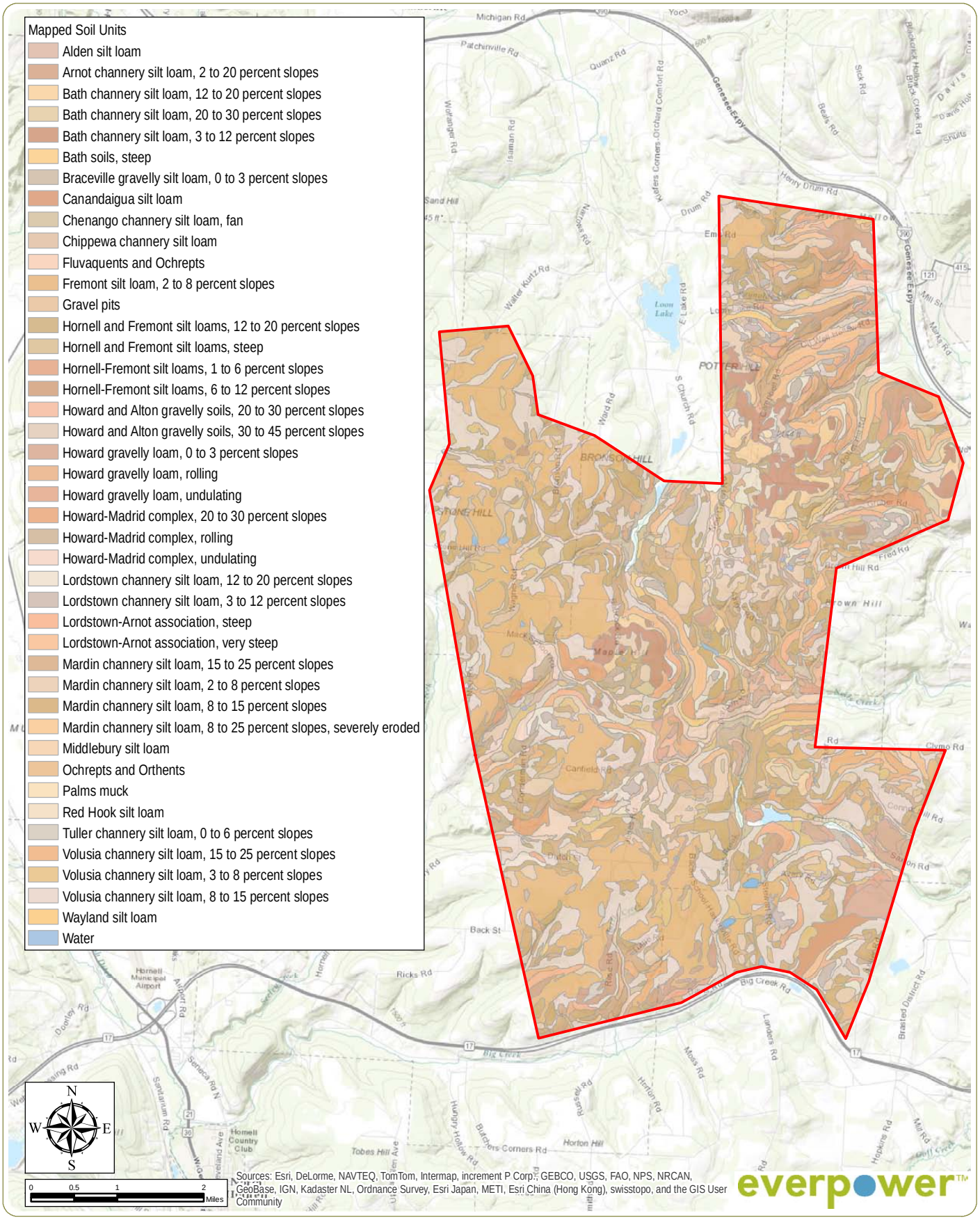

Baron Winds Project

Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 3: Facility Area Soils

June 2016

Archaeological Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic" Map Service.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.
3. Soils data from Esri SSURGO online soil downloader.

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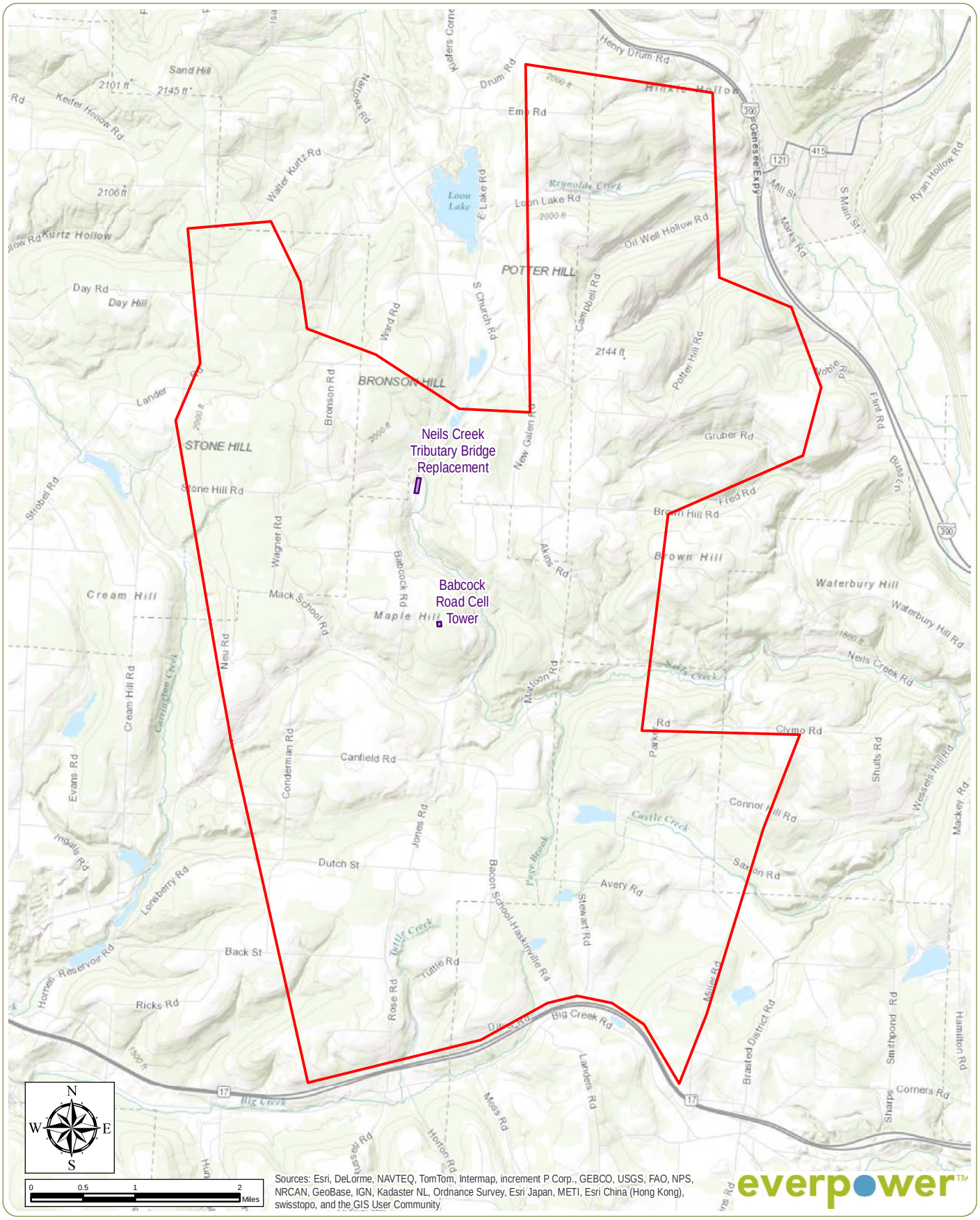

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 4: Previous Archaeological Surveys

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Previous Archaeology Survey

Archaeological Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic" Map Service.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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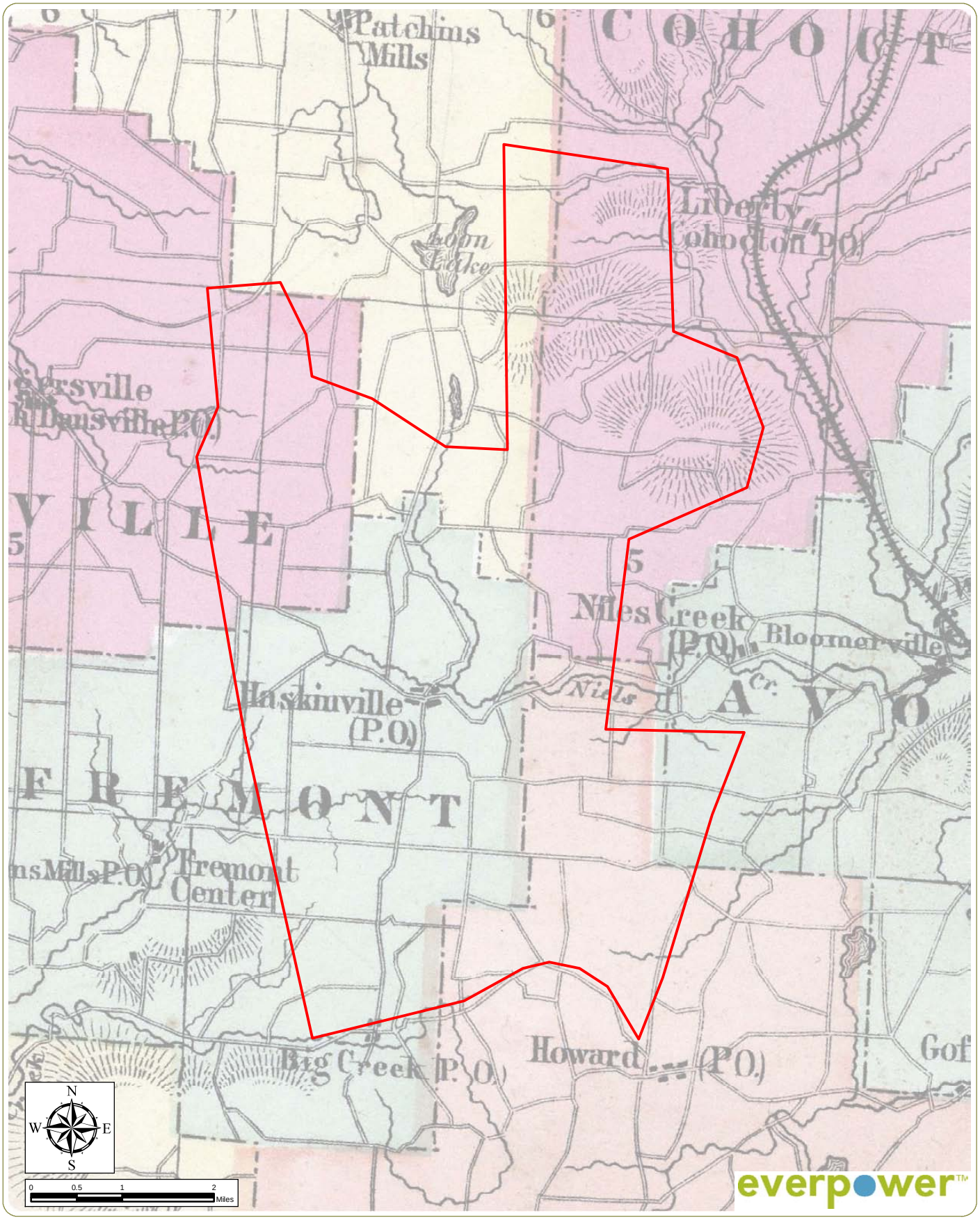

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 5: 1873 *Beers Map of Steuben County*

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Notes: 1. Basemap: 1873 Beers Map of Steuben County.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Archaeological Study Area

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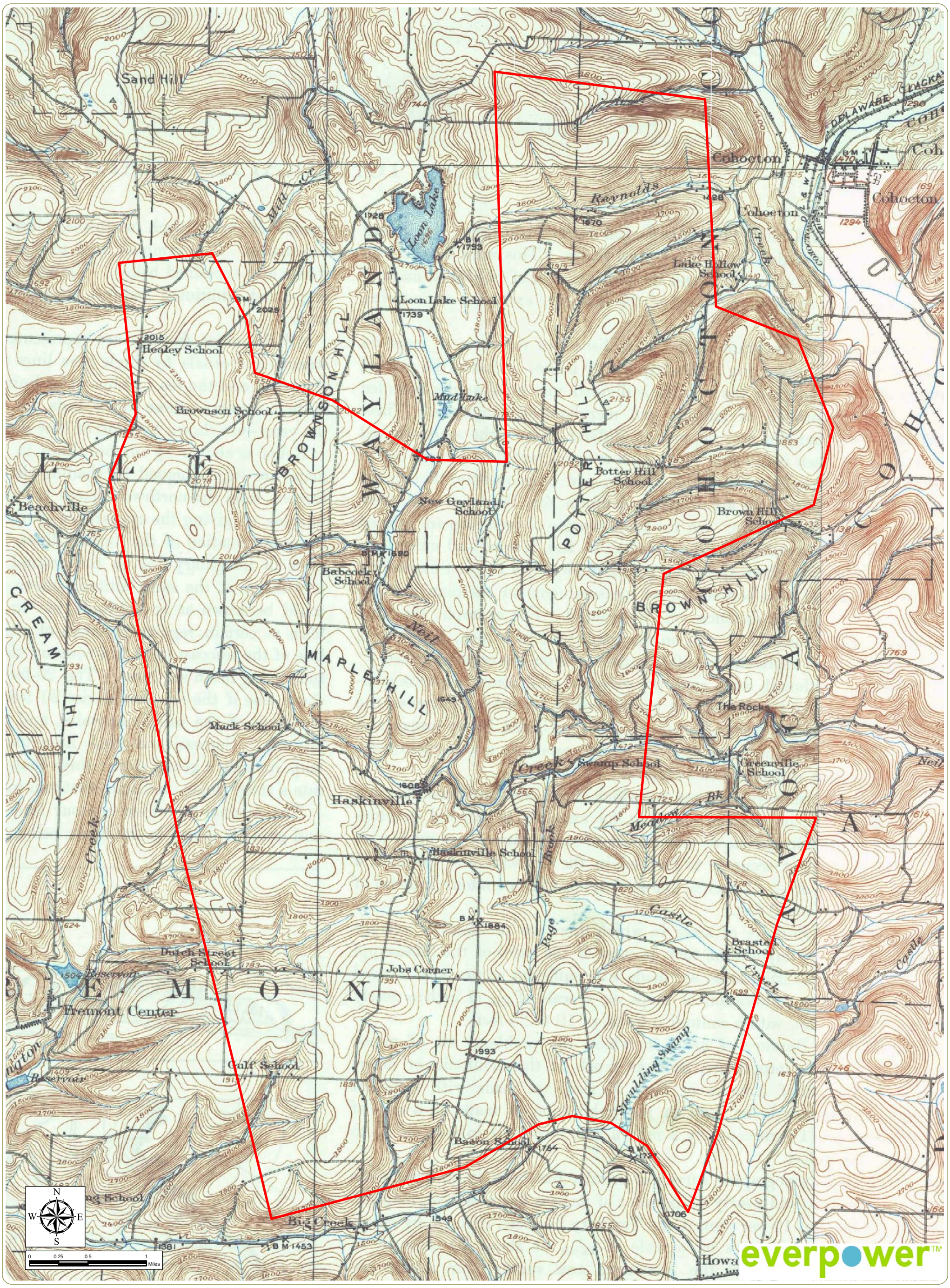

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 6: 1903 *Naples, NY*, 1904 *Wayland, NY*, 1910 *Bath, NY*, and 1918 *Hornell, NY* USGS 1:62000 topographic quadrangle maps

Archaeological Study Area

June 2016

Notes: 1. Basemap: Figure 6: 1903 *Naples, NY*, 1904 *Wayland, NY*, 1910 *Bath, NY*, and 1918 *Hornell, NY* USGS 1:62000 topographic quadrangle maps.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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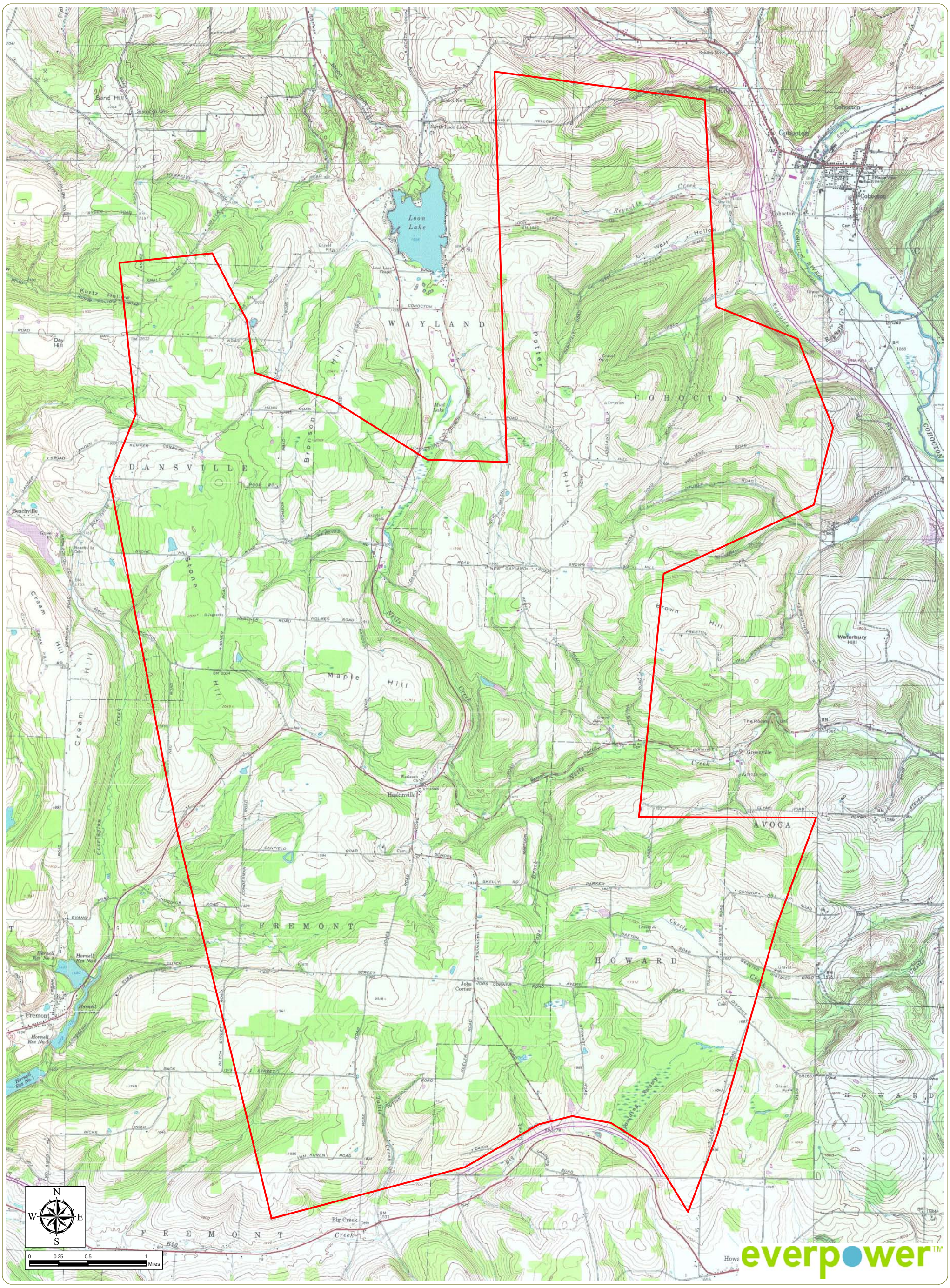

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Archaeological Study Area

Figure 7: 1942 *Dansville, NY*, 1942 *Naples, NY*, 1943 *Wayland, NY*, 1953 *Avoca, NY*, 1953 *Towlesville, NY*, 1954 *Canisteo, NY*, 1965 *Arkport, NY*, 1978 *Haskinville, NY*, and 1978 *Hornell, NY* USGS 1:24000 topographic quadrangle maps

June 2016

Notes: 1. Basemap: 1942 *Dansville, NY*, 1942 *Naples, NY*, 1943 *Wayland, NY*, 1953 *Avoca, NY*, 1953 *Towlesville, NY*, 1954 *Canisteo, NY*, 1965 *Arkport, NY*, 1978 *Haskinville, NY*, and 1978 *Hornell, NY* USGS 1:24000 topographic quadrangle maps, photorevised editions publshed 1971-1978.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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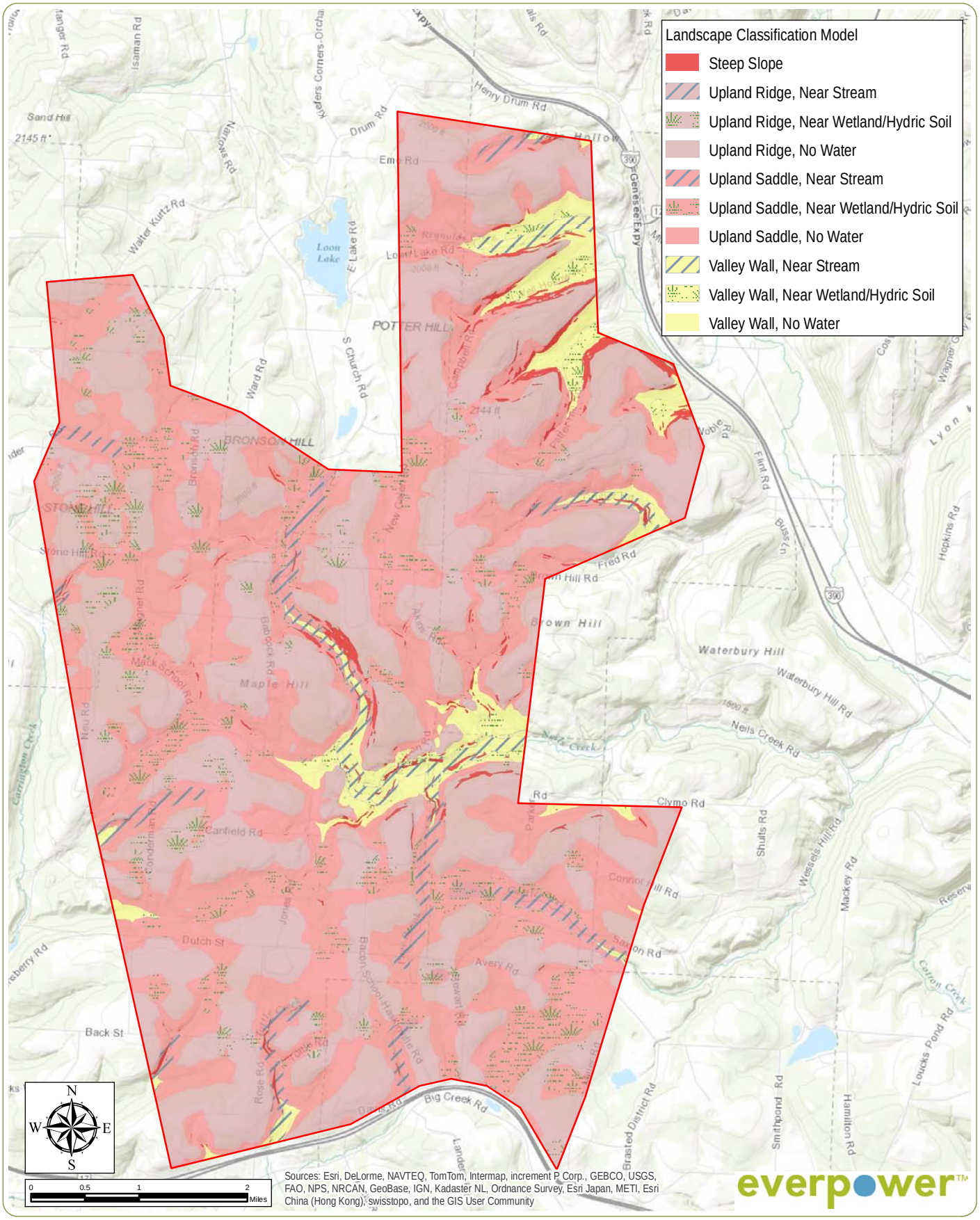

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Towns of Avoca, Cohocton, Dansville, Fremont, Howard and Wayland - Steuben County, New York

Figure 8: Archaeological Survey Landscape Model

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Archaeological Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic" Map Service.
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

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Appendix A:

Photographs

Photo 1

Example of a woods road through successional vegetation and second growth forest within the Archaeological Study Area.

Photo 2

Example of mature second growth forest within the Archaeological Study Area.

Photo 3

Example of a woods road through successional vegetation and second growth forest within the Archaeological Study Area.

Photo 4

Example of planted agricultural field within Archaeological Study Area.

Photo 5

Example of hay field within Archaeological Study Area.

Photo 6

Example of planted corn field within Archaeological Study Area.

Photo 7

Example of successional old-field vegetation within the Archaeological Study Area.

Photo 8

Example of hay field within Archaeological Study Area.

Photo 9

Example of fallow corn field within Archaeological Study Area.

Photo 10

Example of corn field (left) and hay field (right) within Archaeological Study Area.