DRAFT SCOPING DOCUMENT

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler,

Steuben County, New York

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I. INTRODUCTION

Prattsburgh Wind, LLC (the Applicant) is proposing to submit a siting permit application (Application) to construct and operate a major renewable energy facility under Section 94-c of the Executive Law, in accordance with the Accelerated Renewable Energy Growth and Community Benefit Act (Renewable Energy Act or Act). This document is intended to serve as the Scoping Document for the Application to be prepared for the Prattsburgh Wind Farm (the Facility), a major renewable energy facility as defined by the Act. The Facility is proposed to be an approximately 147-megawatt (MW) wind powered electric generating facility in the Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York (Figure 1). The Facility will be located primarily on leased lands that are rural in nature. The proposed Facility will include the installation and operation of up to 42 wind turbines, together with the associated collection lines (below ground and overhead), access roads, meteorological towers, an operation and maintenance (O&M) building, and transmission facilities, which will include a collection substation, and high-voltage transmission line, and point of interconnect (POI) station.

The Applicant is a wholly-owned subsidiary of Terra-Gen, LLC, a company that specializes in the development, construction, and operation of utility-scale energy generation and storage projects, including wind and solar. Headquartered in New York, New York, with an office in San Diego, California, Terra-Gen, LLC was established in August 2007, and is led by an experienced executive management team averaging over 25 years of relevant industry experience. Since 2010 Terra-Gen, LLC has financed and constructed more than 1,800 MW of wind projects in the US and has a development pipeline of over 2,000 MW of wind and 1,000 MW of solar in various stages of development in several U.S. states. The management team has contracted or re-contracted over 10,000 MW of power generation facilities and has developed or acquired over $25 billion in assets over their careers. For more information on Terra-Gen wind projects see https://www.terra-gen.com/wind.

New York State adopted aggressive policies to combat climate change and modernize the electric system to improve the efficiency, affordability, resiliency, and sustainability of the electric system. The Climate Leadership and Community Protection Act (CLCPA), which was enacted in 2019, sets ambitious and comprehensive public policy goals associated with the climate and clean energy, encompassing climate change impact adaptation, reductions in greenhouse gas (GHG) emissions and investments in technology, as well as job creation and energy worker transitions and the protection of disadvantaged communities. The proposed Facility would help the State of New York achieve the targets set in the CLCPA and advance the State's broader climate, public health, and environmental justice goals, particularly by helping to offset the need for fossil fuel-burning plants, thereby reducing harmful air and GHG emissions. The transition from fossil fuels to renewable energy in New York will play a critical role in the State's efforts to combat climate change and deadly air pollution.

II. CONTENT OF THE SITING PERMIT APPLICATION

This Scoping Document was voluntarily prepared by the Applicant to summarize the proposed content of the Application for the proposed Facility. The scoping process has four main objectives:

1. focus the Application on consideration of (1) local laws concerning zoning, (2) the environment or public health and safety and (3) identifying potentially significant adverse environmental impacts;
2. eliminate non-significant and non-relevant issues;
3. identify the extent and quality of information needed and specific studies to address; and
4. provide the public with an opportunity to participate in the identification of impacts.

Due to the ongoing COVID-19 public health crisis, Applicant will endeavor to include field results of all necessary studies. However, changing conditions may necessitate supplementing or replacing field work with desktop analysis in some situations, which could impact certain studies (e.g. wetland delineations and archaeological surveys). These studies are discussed in additional detail in the sections below.

Regulations setting forth in detail the content of an application filed under the Act have not yet been promulgated. However, the Act requires that Applications filed prior to the promulgation of regulations "conform substantially" to the current requirements of Article 10. It is anticipated that regulations will be made available prior to the submission of the Application for the Facility. The Application will ultimately be prepared and filed in accordance with the Act and regulations. In the meantime, it is anticipated that the Application will include the following information:

A. Overview and Public Involvement

The Applicant initiated review of this Facility under Article 10 of the Public Service Law (PSL), which included the preparation of a Public Involvement Program (PIP) Plan. The Applicant is committed to complying with the PIP throughout the siting process. The Applicant has also conducted significant public engagement and agency consultation to date. Specifically:

- The Draft PIP was filed on August 9, 2019.
- The Department of Public Service (DPS) provided PIP comments on September 9, 2019, and the Applicant prepared the Final PIP, which was filed on September 30, 2019.
- A Revised PIP was filed on March 16, 2020.
- Public information meetings were held on October 7, 2019 and February 25, 2020.

The public meetings were held at the Prattsburgh Fire Hall. Notice of the open houses was provided as follows:

- Published in the Corning Leader (October 7, 2019 and February 25, 2020 meetings),

- Posted at the Prattsburgh Town Hall, a local gas station, and at the supermarket (October 7, 2019 and February 25, 2020 meetings),
- Sent to the Free Library, Prattsburgh Town Board member Pete Schneid, Prattsburgh Town Council candidate, Angela Einwachter (October 7, 2019 and February 25, 2020 meetings),
- Letters were sent to approximately 100 landowners in the Facility Area (October 7, 2019 meeting only),
- Announced at the Special Town Board meeting on February 13, 2020 (February 25, 2020 meeting only), and
- Posted on the Prattsburgh Wind Farm home page and the Town of Prattsburgh home page (February 25, 2020 meeting).

The public meetings were well attended. Participants were able to view posters with information on topics of interest, such as environmental impact assessments, to view preliminary participating Facility parcel maps, and to learn about planned studies that will be undertaken. Participants were also invited to make written or oral comments at the session; and to provide their contact information for future outreach efforts. The Applicant collected names and email addresses from individuals interested in hearing more information about the Facility. Since the Open Houses were held, the Applicant has scheduled several follow-up discussions with stakeholders who attended the event, and/or who have submitted questions or concerns regarding the proposed Facility.

The Applicant has also attended multiple local board meetings, met with town supervisors, town board members, and local school district officials to discuss the Facility. To date, the Applicant has attended 15 local board meetings and met individually with town supervisors, board members, and school district officials on multiple occasions. In addition to meeting with local municipalities, the Applicant has established and is maintaining a Facility-specific website (www.prattsburghwindfarm.com), a toll-free number (1-800-802-8834), and an email address (pwf@terra-gen.com) for the public to communicate comments or questions. The Applicant has also engaged the New York State Department of Public Service (NYSDPS) and the New York State Department of Environmental Conservation (NYSDEC) on procedural and technical aspects of this Facility.

This subsection of the Application will include:

1) An overview of the Facility, including background and summary of Facility development;
2) A description of the intended ownership and operation of the Facility; and
3) A description of public involvement that has occurred prior to, and will occur after submission of, the Application;

B. Consistency with CLCPA and State Energy Policy

The specific goals set by the CLCPA include reaching net 100% carbon-free electricity by 2040 and achieving 70% of New York's electricity generated from renewable sources by 2030. The law also requires a reduction of greenhouse gas (GHG) emissions 85% below 1990 levels in all sectors of the economy by 2050, with the goal of offsetting the additional 15% to achieve net zero emissions. While the CLCPA goals will facilitate the development and implementation of clean energy solutions such as wind, solar, energy efficiency, and energy storage, it also requires that state agencies invest 35% to 40% of the investments in the clean energy programs to benefit disadvantaged communities, create tens of thousands of new jobs, improve public health and quality of life, and provide all New Yorkers with more robust clean energy choices.

The CLCPA was implemented as an enhancement to the current 2015 State Energy Plan and the 2016 Clean Energy Standard which are part of Governor Cuomo's Reforming the Energy Vision strategy to build a clean and affordable energy system that would be available to all New Yorkers and reduce greenhouse gas (GHG) emissions statewide by 2030. New York State's energy planning is undergoing a transition initiated by the State Energy Plan (SEP), the CLCPA, and New York State Energy Research & Development Authority (NYSERDA) competitive solicitations for renewable projects under the Clean Energy Standard (CES). Notably, the CES was adopted pursuant to, and is consistent with, the goals and objectives of the current SEP. As part of the implementation of the CES, NYSERDA conducts competitive solicitations for renewable projects. The Prattsburgh Wind Farm was awarded a contract by NYSERDA for the purchase of its RECs in the 2019 solicitation for large-scale renewables. Accordingly, the construction and operation of the Facility is consistent with the CLCPA, Commission's CES and the SEP.

This subsection of the Application will include:

1) A discussion of how the Facility advances the objectives of the SEP and CES and assists the State in achieving the renewable energy generation objectives adopted as part of the CLCPA and how the Facility will impact New York's current and future energy policies contained in the SEP and CLCPA programs. Specifically, the proposed Facility's consistency with and furtherance of these goals.
2) A summary of the economic benefits anticipated as a result of the construction and operation of the Facility including:
    a) a discussion of jurisdictions that will collect taxes or benefits from the Facility;
    b) and an estimate of the incremental amount of annual taxes (or payments in lieu of taxes [PILOT], benefit charges and user charges) it is projected would be levied against the post-construction Facility Site, its improvements and appurtenances

3) The Applicant also expects to enter into a Host Community Agreement (HCA) with the County, Towns, and potentially with the local school districts consistent with the Act. A discussion of the HCA will be provided in the Application.

C. Detailed Facility Description, Location of Components, and Preliminary Design

Facility components will include up to 42 wind turbine generators, access roads, temporary and permanent meteorological towers, 34.5-kilovolt (kV) collection lines, a collection substation, a new point of interconnect (POI) substation adjacent to the existing New York State Electric and Gas Corporation (NYSEG) 230 kV transmission line, a new 230-kV transmission line to connect the collection substation to the POI, temporary laydown yards, and an O&M building.

This subsection of the Application will:

1) Describe the location of the Facility with respect to village, town, county, and school district boundaries;
2) Describe the generating capacity and proposed layout of the Facility;
3) Provide GIS-based maps showing the location of the proposed Facility, including the renewable energy generation and interconnection components such as wind turbines, access roads, electrical collection system, collection and POI substations, the transmission line, O&M building, laydown yards, and meteorological towers;
4) Describe the Facility components (dimensions, specifications, anticipated lighting, etc.);
5) Include 2-D preliminary design drawings using publicly available lidar (topographic contours) and parcel data depicting:
    a) All proposed generating components and associated infrastructure, including typical design details;
    b) All proposed electrical collection, transmission, substation, and interconnection components, including typical details.

D. Construction Practices, Activities, and Phasing

The methods that will be used to construct the Facility are anticipated to be similar to those typically used in New York State to construct utility-scale wind energy facilities. Construction of the Facility is expected to occur during the construction season of 2022.

This section of the Application will include:

1) A description of the construction process anticipated for the proposed Facility, including the anticipated construction schedule/duration, sequencing, and phasing associated with the proposed generating components and electric collection/interconnection components;
2) An identification of anticipated sediment and erosion control measures, including typical details;
3) Typical spill prevention measures; and
4) A plan to conduct environmental monitoring during Facility construction. The plan will include details on inspection and reporting requirements, the role of the environmental monitor, and complaint resolution protocols for the construction phase of the Facility.

E. Land Use and Zoning

The Facility Area represents the general geographic area of land being considered to host the Facility components; however, not all land included in the Facility Area will ultimately be needed to develop the Facility. The land is primarily agricultural, but also includes forest land and other natural areas, with farms and rural residences occurring along the public roads within the Facility Area. The presence of Facility components will result in the conversion of some land from its current use. During Facility operation, additional impacts to land use should be infrequent and minimal. Aside from occasional maintenance and repair activities, Facility operation is not expected to interfere with ongoing land use (e.g., farming and forestry activities).

The proposed Facility is located in the Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler. Of the towns that the Facility is sited in, only Cohocton and Avoca have established zoning. The Facility's consistency with existing and any proposed zoning will be discussed in the Application. The Towns of Cohocton and Howard currently host wind projects.

The Facility Area overlays portions of designated agricultural districts. Steuben County also has an Agricultural and Farmland Protection Plan, which specifically identifies renewable energy as an economic development goal for the County and encourages the use of renewable resources on agricultural lands as a means of achieving that goal. The Agricultural and Farmland Protection Plan states that wind and solar energy are compatible with agricultural land uses and are identified by the Southern Tier Regional Economic Development Council (STREDC) as a strategy for making the Southern Tier of New York a leader in renewable energy.

This subsection of the Application will include:

1) A GIS map of existing land uses within the Facility Area using publicly available data, including the classification codes defined by the New York Office of Real Property Services (NYSORPS).

2) An assessment of the compatibility of the proposed Facility with existing land uses. This assessment will include a qualitative evaluation of land use impacts on residential areas, schools, civic facilities, recreational facilities, and commercial areas within or adjacent the Facility Area. This will also include an assessment of the Facility's compatibility with relevant local, State, and County planning documents.
3) A GIS map and a description of existing, and any known proposed, zoning districts within the Facility Area, based on data obtained from each municipality and Steuben County. A summary of the zoning regulations, focused on the Facility's consistency with the current zoning districts, will be provided in the Application.
4) A GIS map of lands enrolled in New York State Agricultural Districts, conservation programs, Forest Management Programs, or any other known long-term conservation agreements within the Facility Area will be provided.
5) A discussion of the impacts to agricultural lands and the Facility's consistency with the New York State Department of Agriculture & Markets (NYSDAM) Guidelines for Agricultural Mitigation for Wind Power Projects.

F. Local, State, and Federal Laws

The Applicant will consult with the host municipalities on a range of issues, including identifying applicable procedural and substantive requirements in local laws and ordinances that could impact the Facility as described further below. The Applicant will continue to consult with the municipalities during the Application review process to ensure that all applicable laws and ordinances, among other local concerns, are addressed. During preparation of the Application, the Applicant will consult with the state agencies and authorities whose requirements potentially apply to determine whether all such requirements have been correctly identified. The procedural local laws and ordinances potentially applicable to the Facility as currently proposed are included with this Scoping Document as Appendix A.

This subsection of the Application will include:

1) An updated list of local ordinances, laws, resolutions, regulations, standards, and other requirements of a procedural nature required for the construction (including maintenance of construction equipment) or operation of the proposed Facility will be provided in the Application. A copy of all local laws obtained by the Applicant and/or provided by the host municipalities, including maps, figures, tables and other attachments to local laws (assuming such information is readily available), will be appended to the Application. Based on the preemption provisions of Article 10 and Section 94-c, the Applicant cannot seek authorization under the procedural laws set forth below, but instead will seek approval from the State. The laws listed in Appendix A are referenced as procedural, so it is clear which laws are procedurally preempted.
2) To the extent that the Towns require permits or other approvals for work performed on Town roads or within the Towns' right of way, at this time, it is the Applicant's intent to request approvals from the host municipality.

The Applicant will work with the Towns to follow their procedural and substantive requirements for the permitting of highway work permits. Highway work and similar road permits are primarily an issue of local concern and ministerial in nature.

3) The Towns of Prattsburgh, Avoca, Cohocton, Howard and Wheeler are responsible for reviewing and approving building plans, inspecting a certain portion of the construction work, and certifying compliance with the New York State Uniform Fire Prevention and Building Code, and the Energy Conservation Code of New York State to the extent that the Towns have a municipal official that is a qualified individual. Due to the complex nature of the Facility, there is the potential that the Applicant will arrange with the Towns to pay for consultant services for the review, approval, inspection and compliance certification for work required to comply with the New York State Uniform Fire Prevention and Building Code, and the Energy Conservation Code of New York State, if necessary. For a wind powered electric generating facility, typically, this work is limited to turbine foundations and operations and maintenance buildings. The Applicant will work with the Towns prior to submission of the Application to identify the appropriate individuals to conduct this review and the Application will include a description of any preliminary arrangements between the Applicant and the Towns and the process for review.
4) The Application will include an updated list of applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a substantive nature required (at the time of Application submittal) for the construction or operation of the proposed Facility. Copies of special flood hazard area maps and other similar maps, tables, and/or documents related to local substantive requirements will be included in the Application.
5) The Towns of Prattsburgh, Wheeler and Howard have not adopted any local laws or ordinances establishing zoning designations or classifications. The Towns of Avoca Cohocton have adopted a local zoning law with zoning classifications, with a majority of the Towns located in the Agricultural District. The proposed Facility is in the A (Agricultural) District in the Town of Avoca and the AG-R (Agricultural Residential District) in the Town of Cohocton. As it relates to the Towns of Avoca and Cohocton, the Application will outline where the turbine locations and other Facility components (i.e., O&M Building, substation(s)) within the Facility Site will be located and how they will comply with zoning districts to allow for the construction of wind energy generation facilities by special permit or otherwise.
6) State approvals, consents, permits, or other conditions of a procedural nature which may be required for the construction or operation of the proposed Facility.
7) State approvals, consents, permits, or other conditions of a substantive nature which may be required for the construction or operation of the proposed Facility.
8) Any anticipated federal permit, consent, approval, or license needed for the proposed Facility.

G. Electric System Considerations (Effects, EMF, Interconnection, and Telecommunications)

Interconnection of the Facility to the electric grid will be achieved using multiple systems. Generally, the wind turbines themselves produce power at a low voltage, which is stepped up to a medium voltage (e.g., 34.5 kV) at the base of each turbine. The 34.5 kV collection system comprised of underground and overhead cables transmits the power to a collection substation. The collection substation will step-up the voltage from 34.5 kV to 230 kV, which is then delivered to a POI substation by a new 230-kV overhead transmission line. The POI substation will connect the Facility to NYSEG's existing 230 kV Meyer to Avoca transmission line (Figure 2).

New off-site telecommunication lines are not anticipated at this time. It is likely that data will be transmitted to NYSEG and others using existing telecommunications facilities as the area is generally served by existing cellular and broadband services. Facility communications will be installed on-site as part of substation and O&M building construction.

This subsection of the Application will include:

1) A description of the electric system facility components (collection lines, collection substation, POI substation, and transmission line).
2) A GIS-based map depicting the anticipated number of 34.5 kV collection line circuits.
3) A description of the Facility's interconnection to the regional power grid.
4) An EMF study that will model the strength and locations of electric magnetic fields that will be generated by the Facility's high-voltage transmission line.
5) Information on the means of providing the operational data to NYSEG, and the secure communications network for this operational data.
6) Information regarding a high-speed internet connection to be established, and the means of transmitting the necessary data and other information to the appropriate parties for monitoring and reporting purposes.

H. Noise and Vibration

Construction of wind power projects requires the operation of heavy equipment and construction vehicles for various activities including construction of access roads, excavation and pouring of foundations, the installation of buried and above ground electrical interconnects, and the erection of turbine components. The noise generated by these activities will be associated with gasoline and diesel-powered engines, back-up warning signals, operating dump trucks, and possibly impact noise from jackhammers and/or rock drills, or even localized blasting, if required due to geotechnical conditions.

Adverse noise impacts during operations will be avoided or minimized through carefully siting Facility components based on the results of the sound model that will be developed for the Facility.

This subsection of the Application will include:

1) A GIS map of the location of sensitive sound receptors within 1 mile of proposed turbine and substation locations. Sensitive receptors identified will include residences (including participating, non-participating, full-time, and seasonal), outdoor public facilities and areas, schools, hospitals, care centers, libraries, places of worship, cemeteries, public parks, public campgrounds, summer camps, any historic resources listed or eligible for listing on the State or National Register of Historic Places, and Federal and New York State lands, if any. Seasonal receptors will include, at a minimum, cabins, hunting camps, and any other seasonal residences with septic systems/running water, identified by property tax codes.
2) A Preconstruction Noise Impact Assessment (PNIA) detailing the potential impacts of the Facility during operation. This will be prepared by qualified individuals and will include a detailed Curricula Vitae that demonstrate the qualifications of the individuals that prepared the PNIA. The PNIA will include:
    a) An evaluation of ambient pre-construction baseline noise conditions, taken during day and night in one season. Background monitoring will be conducted at several representative locations in and around the Facility Site for a minimum of 14 consecutive days. The evaluation will include A-weighted sound levels (measured in dBA) and prominent discrete (pure) tone, as a function of time and frequency (1/3 octave bands from 20 Hz up to 10,000 Hz). The Application will include a justification for location selection and specify whether selected locations are representative of potentially impacted receptors. The methodology, instrumentation, and data processing used for the pre-construction surveys will be described. Results of ambient survey monitoring will be reported in the PNIA and the Application.
    b) Future sound levels from the Facility operations, calculated with Cadna/A computer software or similar software that uses the ISO 9613-2 standard[1]. Computer noise modeling will be performed at a minimum for the turbine model with the highest operational broadband A-weighted sound power levels at the highest wind condition (maximum dBA sound power level). Sound levels at sensitive receptors and external property boundaries will be presented as a table and through graphical isolines (noise contours) of A-weighted decibels for the Leq-1-hour. Contours will be at 1-dBA increments starting at a minimum of 30-dBA. Noise contours representing sound levels in multiples of 5 dB will be differentiated.

[1] For the purposes of this document, the term ISO-9613-2 refers to the following equivalent standards: ISO 9613-2: 1996 Standard and ANDI/ASA S12.62-2012/ISO 9613-2: 1996 (Modified) Standard with no meteorological correction (Cmet) or Cmet equal to zero.

c) A complete description of regulations, ordinances, noise standards, and goals applicable to the Facility Site at sound receptors and boundary lines, and a discussion of the Facility's level of compliance with them. The following sound limits are proposed for this Facility:

   i. Limit of 45 dBA Leq(1-hour) at any permanent or seasonal non-participating residence
   ii. Limit of 55 dBA Leq (1-hour) at any permanent or seasonal participating residence
   iii. No audible prominent tone, as defined under ANSI S12.9 Part 4/Annex C at any permanent or seasonal non-participating residence. If a prominent tone is present, the broadband (dBA) sound level for the non-participating residence will be increased by 5 dBA for evaluation with the 45 dBA limit.
   iv. Limit of 65 dB Leq (1-hour) at the full octave bands of 16 Hertz (Hz), 31.5 Hz, and 63 Hz outside any permanent or seasonal non-participating residence.

d) The number of receptors exceeding any identified limit, threshold, goal, or recommendation.

e) Specific modeling input parameters, assumptions, and any associated data used in sound propagation modeling and calculations will be included as an Appendix.

3) A Complaint Resolution Plan that includes specific commitments for addressing noise-related complaints and procedures for dispute resolution during Facility construction and operation.

I. Cultural Resources

The Applicant will initiate consultation with the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) and the State Historic Preservation Office (SHPO) to develop the scope and methodology for cultural resources studies for the Facility. Formal consultation with the NYSOPRHP/SHPO will include initiating Facility review and consultation through NYSOPRHP's Cultural Resources Information System (CRIS) website and submission of technical reports/work plans. Applicant's consultant has performed a preliminary review of CRIS and historical documentation relevant to the Facility Area. Forty-four previously identified pre-contact Native American and/or historic-period archaeological sites have been identified within, or immediately adjacent to the Facility Area, and the Facility is located in an area of elevated archaeological sensitivity (per the CRIS database). Thirty-nine of the previously identified sites have currently undetermined National Register of Historic Places (NRHP) or State Register of Historic Places (SRHP) eligibility. According to the CRIS review, 14 previous archeological surveys have been conducted in the immediate vicinity of the Facility. In addition, 36 S/NRHP-listed or eligible buildings have been identified within or immediately adjacent to the Facility Area, per the CRIS database. No S/NRHP eligible archaeological resources have been identified within or immediately adjacent to the Facility Area. Figure 3 displays the nearest S/NRHP-listed resources identified in the vicinity of the Facility Area

The Applicant will seek to avoid impacts to archaeological sites identified within the Facility Site by locating Facility components in areas determined to be free of cultural resources. However, to the extent that impacts cannot be avoided or minimized, the Application will include a discussion of proposed mitigation strategies.

Construction of the Facility is not anticipated to require the demolition or physical alteration of any historic structures. As the Facility is planned to be constructed almost entirely on open lands, no direct physical impacts to historic properties are anticipated to occur as a result of the Facility. Historically significant properties typically include buildings, districts, objects, structures and/or sites that have been listed on the NRHP, as well as those properties that NYSOPRHP has formally determined are eligible for listing on the SRHP.

The Facility's potential for indirect effects on historic resources may include changes in the visual setting resulting from the introduction of wind turbines. These potential effects may be highly variable and are dependent on several factors, including distance to the Facility, the number of visible components, the extent to which the Facility is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter or modern intrusions in the view.

This subsection of the Application will include:

1) A *Phase 1A Archaeological Resources Survey* for the Area of Potential Effect (APE) for the Facility Site, which will be submitted through the NYSOPRHP's CRIS website. The purpose of the *Phase 1A Archaeological Resources Survey* is to:
    a) Define the Facility's APE relative to archaeological resources based on the anticipated area of disturbance for Facility components;
    b) Determine whether previously identified archaeological resources are located in the APE; and
    c) Propose a methodology to identify archaeological resources within the APE, evaluate their eligibility for the S/NRHP, and assess the potential effect of the Facility on those resources.

    The Phase 1A report will also provide a detailed methodology and scope for the future Phase 1B archaeological survey that will be based on site-specific landscape modeling and archaeological sensitivity analysis. This will include summary of the results of previous archaeological studies in areas near the proposed Facility Site. The report will be prepared in accordance with NYSOPRHP's Phase 1 Archaeological Report Format Requirements (NYSOPRHP, 2005) as well as the *SHPO Wind Guidelines* and will be submitted to NYSOPRHP/SHPO via their CRIS website.
2) A discussion of proposed mitigation strategies for impacts to archaeological resources.
3) An Unanticipated Discovery Plan to identify the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance or human remains are encountered during Facility

construction. The Unanticipated Discovery Plan will 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.

4) A Phase 1B Archaeological Survey, to determine whether archeological sites are located in the areas of proposed ground disturbance for the Facility. The Phase 1B survey will be conducted under the supervision of a Registered Professional Archeologist (RPA) in a manner consistent with the *SHPO Wind Guidelines,* and in accordance with NYSOPRHP's *Phase 1 Archeological Report Format Requirements* (NYSOPRHP, 2005).
5) A *Phase 1A Historic Resources Survey.* The purpose of the *Phase 1A Historic Resources Survey* is to:
    a) Define the Facility's APE for Indirect Effects relative to aboveground historic resources (including buildings, cemeteries, monuments and other historic sites);
    b) Determine whether previously identified aboveground historic resources are located in the APE for Indirect Effects; and
    c) Propose a methodology for the future identification of potentially new aboveground historic resources within the APE for Indirect Effects, evaluate their eligibility for the S/NRHP, and assess the potential effect of the Facility of those resources.

J. Geology, Seismology, and Soils

The Application will include a study of the existing geology, seismology, and soil conditions of the Facility Site as defined at time of Application submission. Facility construction is not anticipated to result in any significant impacts to regional geology. Based on the Applicant's experience, only minor impacts to soils are expected as a result of construction activities, and adverse impacts to geology or soils are not anticipated.

This subsection of the Application will include the following:

1) A description of the existing geologic, seismologic, and soil conditions of the Facility Site.
2) An identification of the presence of sensitive geologic resources, such as karst features, that may be present in the Facility Site.
3) GIS maps depicting details of the existing conditions and underlying features including depth to groundwater, depth to bedrock, and underlying bedrock types.
4) A discussion of the suitability of the conditions underlying the proposed Facility Site for the proposed use, including results of the preliminary geotechnical evaluation, and potential impacts of Facility construction and operation, including a description of potential excavation techniques anticipate to be used during construction.
5) GIS maps depicting soil types at the Facility Site using data from the U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Web Soil Survey (WSS).

6) A discussion of the characteristics of the soil types identified in the Facility Site and the suitability of existing soils for construction purposes.

K. Ecological and Biological Resources

The Application will evaluate the Facility's potential impact on terrestrial ecological resources, including wildlife and wildlife habitat. In some instances, this evaluation will be based on the results of targeted studies of existing wildlife conditions within the Facility Site, the methodologies of which have been developed in consultation with the NYSDEC and other relevant agencies (e.g., avian and bat species). The Draft Avian and Bat Work Plan that has been shared with the NYSDEC and other relevant agencies is attached as Appendix B. A final work plan will be shared with the agencies once available. Review of existing databases and the results of studies conducted for nearby projects will be used to supplement the targeted studies.

Facility-related temporary disturbance will include vegetation clearing for construction, as well as permanent vegetation loss in areas converted to facilities, roads, turbine foundations, substations, and other Facility components or new impervious surfaces. Construction-related impacts to wildlife may include incidental injury and or mortality due to construction activity and vehicular movement, habitat disturbance or loss associated with clearing and earth-moving activities, and displacement of wildlife due to increased noise and human activities. Figure 4 presents the land cover types, based on the U.S. Geologic Survey (USGS) National Land Cover Database (NLCD), likely to be found in the Facility Area.

This subsection of the Application will include:

1) A description of ecological communities within the Facility Site. GIS maps showing the approximate locations and extents of identified ecological communities will be included.
2) An evaluation of the temporary and permanent impacts to the ecological communities from construction and operation.
3) A description of the proposed measures that will be implemented to avoid, minimize, and mitigate for temporary and permanent impacts to ecological communities.
4) A discussion of construction-related impacts that may occur to wildlife, and a discussion of operational and maintenance impacts.
5) A description of the proposed measures that will be implemented to avoid, minimize, and mitigate for temporary and permanent impacts to wildlife.
6) A summary of the avian survey work plans, which were developed in consultation with the NYSDEC and U.S. Fish and Wildlife Service (USFWS).

7) Results of site-specific avian surveys, including a migratory bird survey, breeding bird survey, eagle point count survey, and raptor migration survey.
8) An Avian Risk Assessment.
9) An evaluation of impacts to state- or federally-listed avian and bat species, and proposed mitigation.
10) Results of database and agency inquiries regarding federally- and state-listed threatened and endangered (T&E) species, other than avian and bat species, and an evaluation of the potential impact to these species.

L. Wetlands and Water Resources

Facility components will be sited to avoid or minimize both temporary and permanent impacts to wetlands and surface waters to the extent practicable. Federal and State mapped wetlands are displayed on Figure 5. Large built components of the Facility, including wind turbine foundations, the O&M building, and substations, are anticipated to avoid surface waters to the maximum extent practicable. In addition, large temporary construction areas (i.e., laydown yards) will avoid surface water impacts to the maximum extent practicable. The number of and overall impacts of access road and collection line crossings will be minimized by utilizing existing crossings and narrow crossing locations to the extent practicable. Where crossings of surface waters are required, BMPs will be used as required by the NYSDEC and U.S. Army Corps of Engineers (USACE). Specific measures for protecting surface water resources will be described in the Application.

During construction, potential direct or indirect impacts to surface waters may occur as a result of the installation of access roads, wind turbine foundations, collection lines, the O&M building, or substations; the upgrade of local public roads; or the development or use of temporary construction workspaces.

The Facility is not anticipated to result in any significant impacts to groundwater quality or quantity, drinking water supplies, or aquifer protection zones. Details regarding groundwater impacts will be provided in the Application, including results of the preliminary geotechnical evaluation, as well as specific avoidance, minimization, and mitigation measures that will be implemented to protect groundwater resources during construction of the Facility. The Application will also address potential Facility-related impacts to drinking water supplies, to ensure that drinking water sourced at surface intake sites are not degraded by Facility construction or operation.

This subsection of the Application will include:

1) A GIS map of groundwater aquifers and recharge areas, location of all public and private groundwater wells or known points of groundwater extraction, well-head and aquifer protection zones, and drinking water intakes within the Facility Area, based on publicly available information.

2) An analysis and evaluation of potential groundwater impacts from the construction and operation of the Facility on drinking water supplies and groundwater quality and quantity in the Facility Area.
3) A GIS map of wetland and stream locations based on publicly available data from the NYSDEC and USFWS.
4) A GIS-based desktop analysis and identification of vernal pools, wetlands, and streams within the Facility Site. The analysis will include GIS maps of the locations of these features.
5) A determination of wetland boundaries based on on-site field investigations conducted by qualified individuals within 100 feet of any Facility component. Wetland boundaries will be defined in accordance with the three-parameter methodology described in the USACE Wetland Delineation Manual and the appropriate Regional Supplement to the USACE of Engineers Wetland Delineation Manual. Freshwater wetlands regulated under Article 24 of the New York Environmental Conservation Law (ECL) will be determined according to methods described in the NYSDEC Freshwater Wetlands Delineation Manual (1995).
6) An evaluation and discussion that describes all potential impacts to surface waters, including vernal pools, wetlands, and streams identified in the desktop analysis and subsequent field analysis. The number, approximate acreage, and linear distance of surface waters that will be temporarily or permanently impacted by the construction and operation of the Facility will be calculated, based on the proposed Facility footprint, impact assumptions, and surface water resources identified in the desktop analysis.
7) An identification and evaluation of reasonable avoidance measures. Where impacts are unavoidable and have been minimized to the greatest extent possible, mitigation measures will be proposed for groundwater and surface water impacts.

M. Visual and Aesthetic Resources

The Application will evaluate the potential impacts of the Facility on the visual and aesthetic resources within a defined Visual Study Area based on the Facility components as specified at the time of Application. The Applicant will conduct an analysis that includes identifying the Visual Study Area (VSA) using an appropriate radius around the proposed Facility components. Within this VSA, the Applicant will identify Visually Sensitive Resources (VSRs) that may be impacted as a result of Facility construction and operation, and summarize the potential impacts, and present a discussion of potential measures to avoid or mitigate these impacts.

This subsection of the Application will include:

1) A Visual Impact Assessment (VIA) to determine the extent and assess the significance of the Facility's visual impacts. The VIA procedures used for this study will be consistent with methodologies developed by various state and federal agencies, including the U.S. Department of the Interior, Bureau of Land Management (1980), U.S. Department of Agriculture, National Forest Service (1995), the U.S. Department of Transportation,

Federal Highway Administration (1981), and the New York State Department of Environmental Conservation (NYSDEC, 2019). The components of the VIA will include:

a. The identification of VSRs identified within the VSA, which may include sites listed on the New York State or National Registers of Historic Places; state or national parks, forests, or scenic areas, as well as description of the public or private data sources used to identify VSRs.
b. Topographic and vegetation viewshed analyses to identify locations within the VSA where it may be possible to view the proposed wind turbines and other proposed above ground facilities from ground-level vantage points. Potentially visible areas will be identified on GIS maps.
c. Photo-realistic simulations of built turbines and other visible Facility components to depict the Facility's appearance, created from a representative sample of viewpoints from which the Facility is likely to be visible. The Applicant will solicit one round of feedback from the Towns regarding the identification of important aesthetic resources and/or representative viewpoints in the vicinity of the Facility to inform field review efforts and the eventual selection of candidate viewpoints for the development of visual simulations.
d. A discussion of the visual impacts of the Facility, based on contrast between the existing conditions and the visual simulations by appropriate professionals in the visual and aesthetic field.

2) An analysis of the potential for shadow flicker to occupied structures within a 10-rotor diameter area of proposed turbine locations. A threshold of 30 hours of shadow flicker per year will be applied to the analysis of the proposed Facility to identify any potentially significant impacts on identified non-participating receptors[2]. Model input, assumptions, and products of the shadow flicker modeling calculations will include the following:

a. Latitude and longitude coordinates of all proposed wind turbine sites.
b. The rotor diameter and hub height of the largest proposed turbine model under consideration.
c. Latitude and longitude coordinates for residential structures (both participating and non-participating), schools, office buildings, storefronts, or known public recreation areas (e.g., campgrounds, trailheads within State Forest land) located within the 10 rotor diameters of Facility turbines.
d. USGS 1:24,000 topographic mapping and USGS digital elevation model (DEM) data (10-meter resolution).
e. Annual wind rose data.
f. Average monthly percent of available sunshine from the nearest National Oceanic and Atmospheric Administration weather station.

[2] No consistent national, state, county, or local standards exist for allowable frequency or duration of shadow flicker from wind turbines. However, the New York State Board on Electric Generation Siting and the Environment (Siting Board) uses a maximum of 30 hours annually at any non-participating residential receptor (Siting Board, 2017, 2019a, 2019b, 2019c, 2019d).

g. Calculated shadow flicker exposure in number of days per year, hours per year, and maximum minutes per day.

h. Mapped contours generated by the shadow flicker software, overlain on mapping of known public recreational areas (e.g., trails, state forest land).

3) Results of consultations with the Federal Aviation Administration (FAA) pursuant to Title 49 of the U.S. Code, Section 44718. The potential visibility of FAA warning lights for the proposed turbines will also be provided in the VIA.

N. Public Roads and Transportation

Based on the experience of the Applicant and analysis of traffic volumes from other wind projects, it is anticipated that the typical Facility operations will result in a negligible increase in existing traffic volumes. No new traffic control devices are anticipated to be necessary, and no damage to roads due to normal operation of the Facility are expected to occur. The Applicant anticipates entering into Road Use Agreements (RUAs) with the host municipalities. These agreements will establish the measures that the Applicant will implement to ensure that any impacts to local roads resulting from Facility construction will be mitigated in a manner that is acceptable to the Towns, the County, and the Applicant. The RUAs will also include mitigation measures for any impacts that may occur to local roads during operations as a result of Facility maintenance activities.

This subsection of the Application will include:

1) A Route Evaluation Study to evaluate the suitability of and potential impacts to the transportation networks to be used in the construction of the Facility. The study will include:
   a) Anticipated delivery routes and an analysis of the adequacy of the pre-construction characteristics of the routes and roads in the vicinity of the Facility Area.
   b) A description of the vehicle trips generated by the construction vehicles for the Facility.
   c) The anticipated traffic conditions as a result of construction and operation of the Facility
   d) An identification of measures to mitigate any traffic and transportation impacts identified.
2) The proposed RUAs with the host municipalities.

O. Communications

The Application will include an inventory of the existing broadcast and other communication sources within an appropriate radius of the Facility Site as defined at time of Application submission. The potential for Facility construction or operation to impact these communications sources by structural interference, line-of-sight interruption, physical

disturbance during construction, or other disturbances will be discussed. Facility construction is not anticipated to result in any physical impacts to communications systems.

This subsection of the Application will include:

1) Analyses of the potential impacts on to following communication systems:
    a. AM/FM radio
    b. Off-air TV
    c. Microwave frequencies
    d. Government radar sources
    e. Land mobile and emergency services
2) Results of the Applicant's consultation with the National Telecommunications and Information Administration.
3) A discussion of any post-construction activities that will be undertaken to mitigate any adverse effects on the communication systems identified above.

P. Decommissioning

The Applicant anticipates the lifespan for the Facility is 25 years or more. In the event the Facility reaches end of life and ceases operations without expectation of repowering or otherwise returning to operation, or if the initial construction cannot be fully completed, the Facility will be decommissioned per a Decommissioning Plan, a draft of which will be provided in the Application. The Decommissioning Plan will address the decommissioning process, schedule, and funding, and provide a detailed cost estimate.

All Facility components will be located on private land under lease agreement with the landowners, and all leases with private landowners will contain a provision on decommissioning. Although the specific terms of these lease agreements, including the decommissioning provisions, are confidential, decommissioning will involve the removal of all above and below ground Facility components as described in the Decommissioning Plan.

This subsection of the Application will include:

1) A Site Restoration and Decommissioning Plan including:
    a) A detailed estimate to support the proposed decommissioning and site restoration funding upon the cessation of operation of the Facility, based on the propose turbines and actual decommissioning costs from other similar projects, if available
    b) A section describing the financial assurance of the decommissioning and site restoration estimate.
    c) A process for notifying the host municipalities, landowners, and the public prior to decommissioning and site restoration activities.

d) A description of proposed decommissioning activities and schedule for completion of these activities.

Q. Environmental Justice

The Applicant will provide information regarding the potential impact of the Facility on Environmental Justice (EJ) communities. The intent of an EJ evaluation is to determine whether the construction or operation of a proposed project will result in any significant and adverse disproportionate environmental impacts to vulnerable communities. Figure 6 displays potential EJ areas in the vicinity of the Facility. The Applicant will conduct an EJ analysis for the area within 0.5 mile of the Facility components at the time of Application. If EJ communities are identified within 0.5 mile of Facility components, the Application will address specific measures the Applicant plans to take to avoid, minimize, or mitigate impacts to the maximum extent practicable.

R. Public Health, Safety, and Security

Overall safety and security risks associated with the Facility are anticipated to be minimal. The Application will evaluate the potential significant adverse impacts of Facility construction or operation on the health and safety of the public, in a level of detail consistent with the relative severity and likelihood of such impacts. Wind power facilities do not contribute to climate change or negatively impact air quality and are associated with net benefits to public and environmental health. Potential public health and safety risks from wind power facilities include blade shear and ice shedding, but these risks are very minimal and such events are extremely rare. In addition, setbacks are generally sufficient to protect area homes and public roads. The Applicant will coordinate with the local and state emergency departments and local first responders to ensure appropriate actions are taken in the event of an emergency.

This subsection of the Application will include:

1) A summary of the potential public health risks and safety concerns associated with blade shear and ice shedding.
2) A summary table of setback requirements. The table will include setbacks as required by any local ordinance or law.
3) A discussion of any proposed measures to mitigate or offset any anticipated impacts.
4) A summary of anticipated emergency response measures.

S. Proposed Standards and Conditions

The Office of Renewable Energy and Siting (ORES) will establish a set of uniform standards and conditions for siting, design, construction, and operation of each type of major renewable energy facilities. The Applicant anticipates that

the Facility will adhere to these standards and conditions to the extent practicable and will review these conditions once they are available.

T. Topics Not to Be Addressed in Application

Some topics that have been addressed in state siting applications prepared in accordance with Article 10 of the Public Service Law will not be addressed in the Application, because (1) no significant adverse environmental impacts distinct to the construction and operation of this Facility are anticipated and (2) it is anticipated that these topics will otherwise be addressed in proposed standards and conditions.

These topics include the following:

1) System reliability impact study
2) Example type certification
3) Electric system production modeling
4) 3-d designs (e.g., proposed grades, profile drawings)
5) Cost of Facility
6) Post-construction noise evaluations
7) Invasive species survey and control
8) JEDI modeling and detailed economic assessment

As previously mentioned, due to the ongoing COVID-19 public health crisis, Prattsburgh Wind will endeavor to include field results of all necessary studies. However, changing conditions may necessitate supplementing or replacing field work with desktop analysis in some situations, which could impact certain studies (e.g. wetland delineations and archaeological surveys).

REFERENCES

New York Office of Parks, Recreation and Historic Preservation (NYSOPRHP). 2005. *State Historic Preservation Office (SHPO) Phase I Archaeological Report Format Requirements.*

New York State Board on Electric Generation Siting and the Environment (Siting Board). 2017. Proposed Certificate Conditions in the Matter of 14-F-0490 Application by Cassadaga Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law for the Cassadaga Wind Project, Towns of Charlotte, Cherry Creek, Arkwright, and Stockton, Chautauqua County. Case No. 14-F-0490. Condition 55.

Siting Board. 2019a. Proposed Certificate Conditions in the Matter of 15-F-0122 Application by Baron Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law for the Baron Winds Project, Towns of Cohocton, Dansville, Fremont, and Wayland, Steuben County. Case No. 15-F0122. Condition 57.

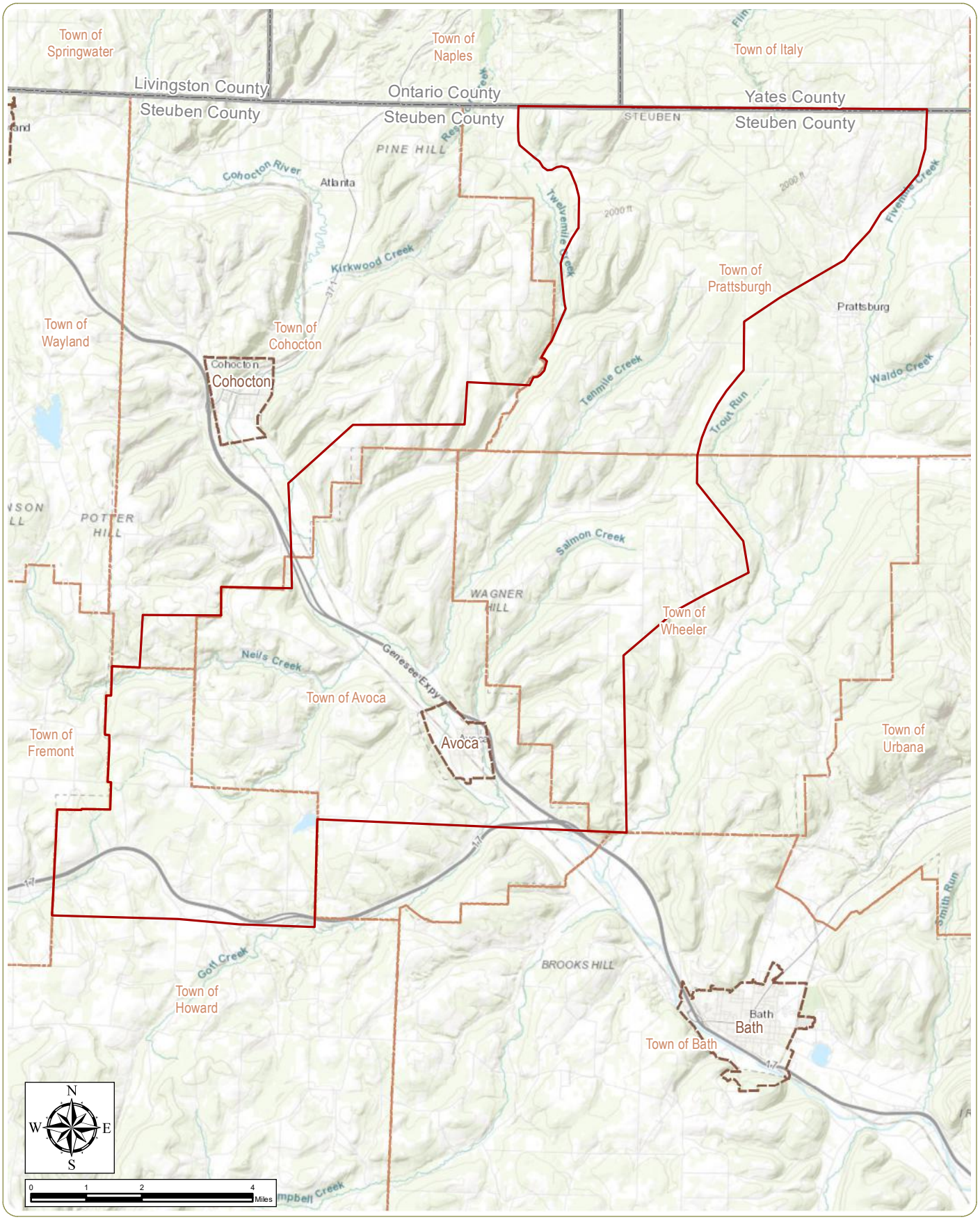
Siting Board. 2019b. Proposed Certificate Conditions in the Matter of 16-F-0062 Application by Eight Point Wind, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law for the Eightpoint Wind Project, Towns of Greenwood and West Union, Steuben County. Case No. 16-F-0062. Condition 31.

Siting Board. 2019c. Proposed Certificate Conditions in the Matter of 16-F-0328 Application by Number Three Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law for the Number Three Wind Project, Towns of Lowville and Harrisburg, Lewis County. Case No. 16-F-0328. Condition 57.

Siting Board. 2019d. Proposed Certificate Conditions in the Matter of 16-F-0559 Application by Bluestone Wind, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law for the Bluestone Wind Project, Towns of Windsor and Sanford, Broome County. Case No. 16-F-0559. Condition 64.

New York State Historic Preservation Office (SHPO). 2006. *Guidelines for Wind Farm Development Cultural Resources Survey Work.* March 8, 2006.

FIGURES



Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Figure 1. Facility Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. **2.** This map was generated in ArcMap on June 2, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

Facility Area

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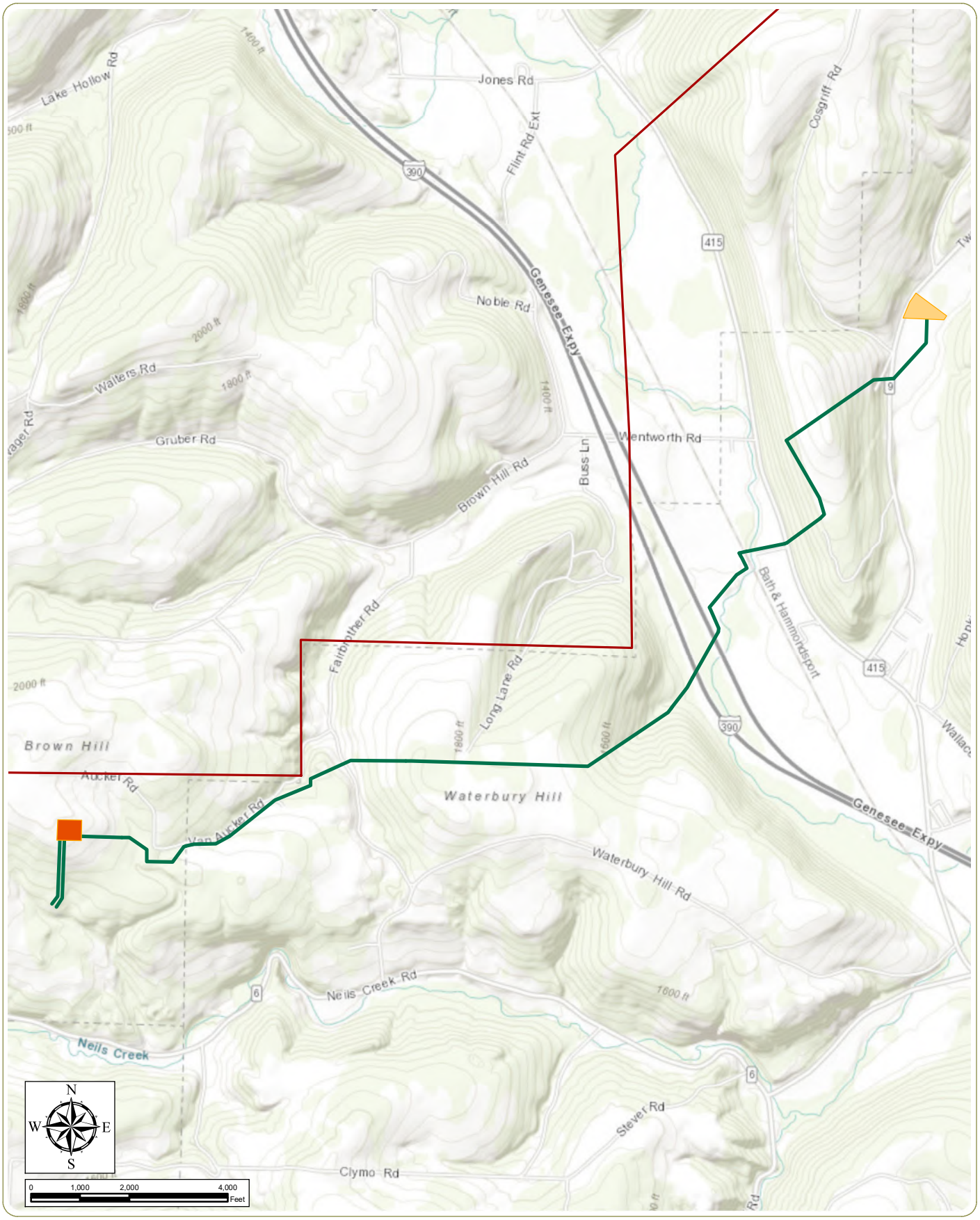

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Figure 2. Transmission Facilities

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. **2.** This map was generated in ArcMap on June 3, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Transmission Line
- Collection Substation
- POI Substation
- Facility Area

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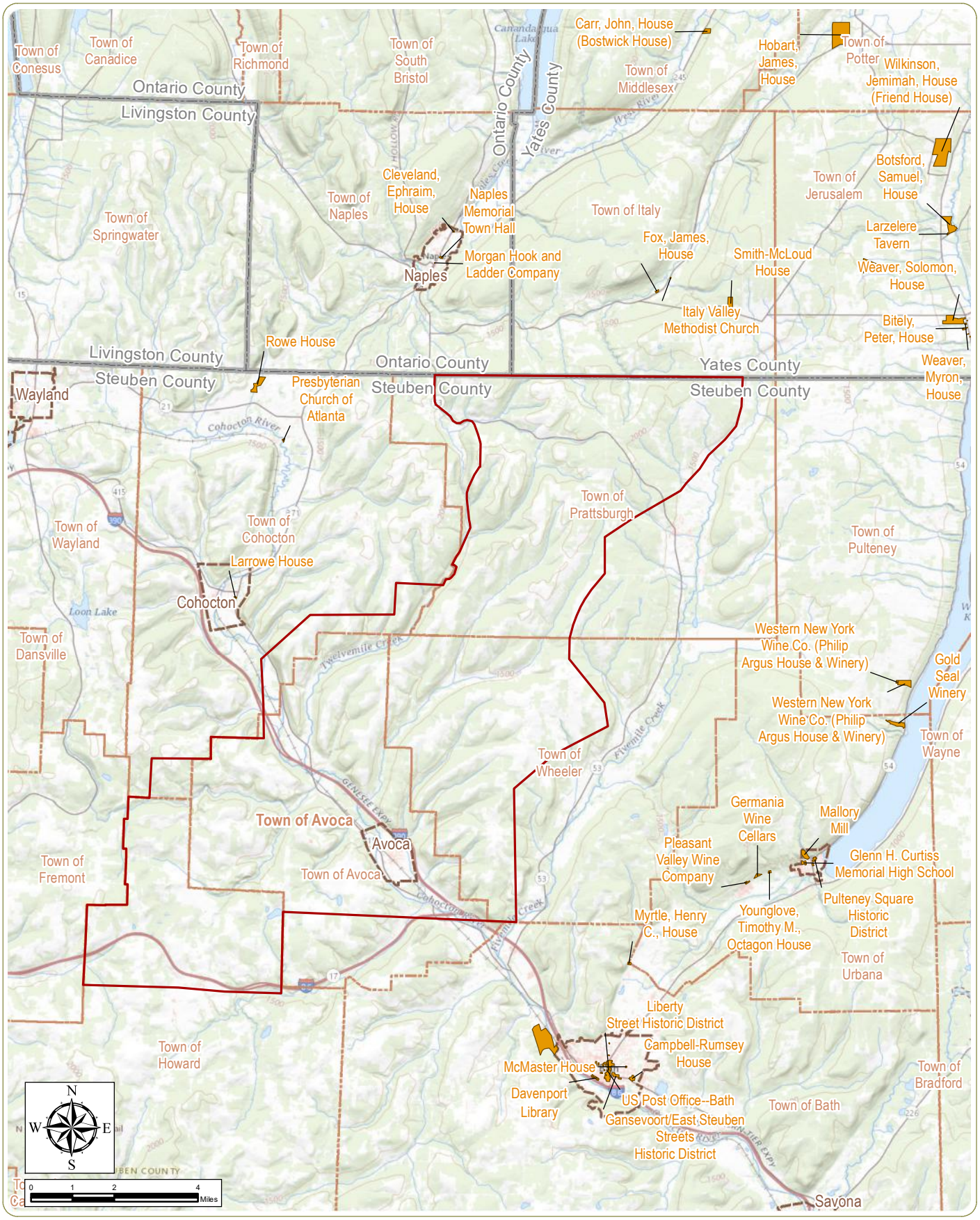

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Figure 3. Mapped Cultural Resources

Notes: 1. Basemap: ESRI ArcGIS Online "USGS Topo" map service. **2.** This map was generated in ArcMap on June 3, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

NRHP-Listed Site

Facility Area

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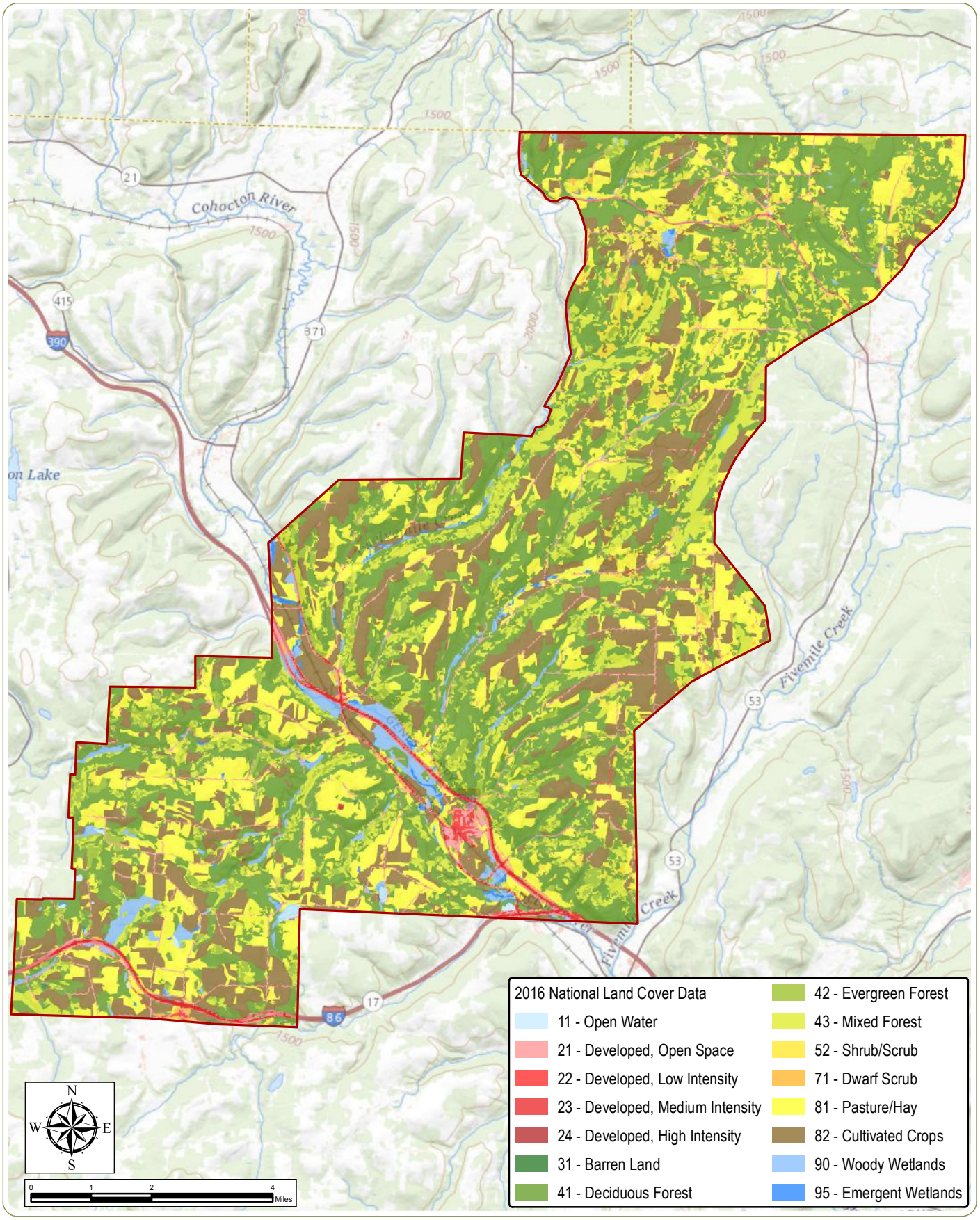

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Facility Area

Figure 4. National Land Cover Data

Notes: 1. Basemap: ESRI ArcGIS Online "USGS Topo" map service. **2.** This map was generated in ArcMap on June 3, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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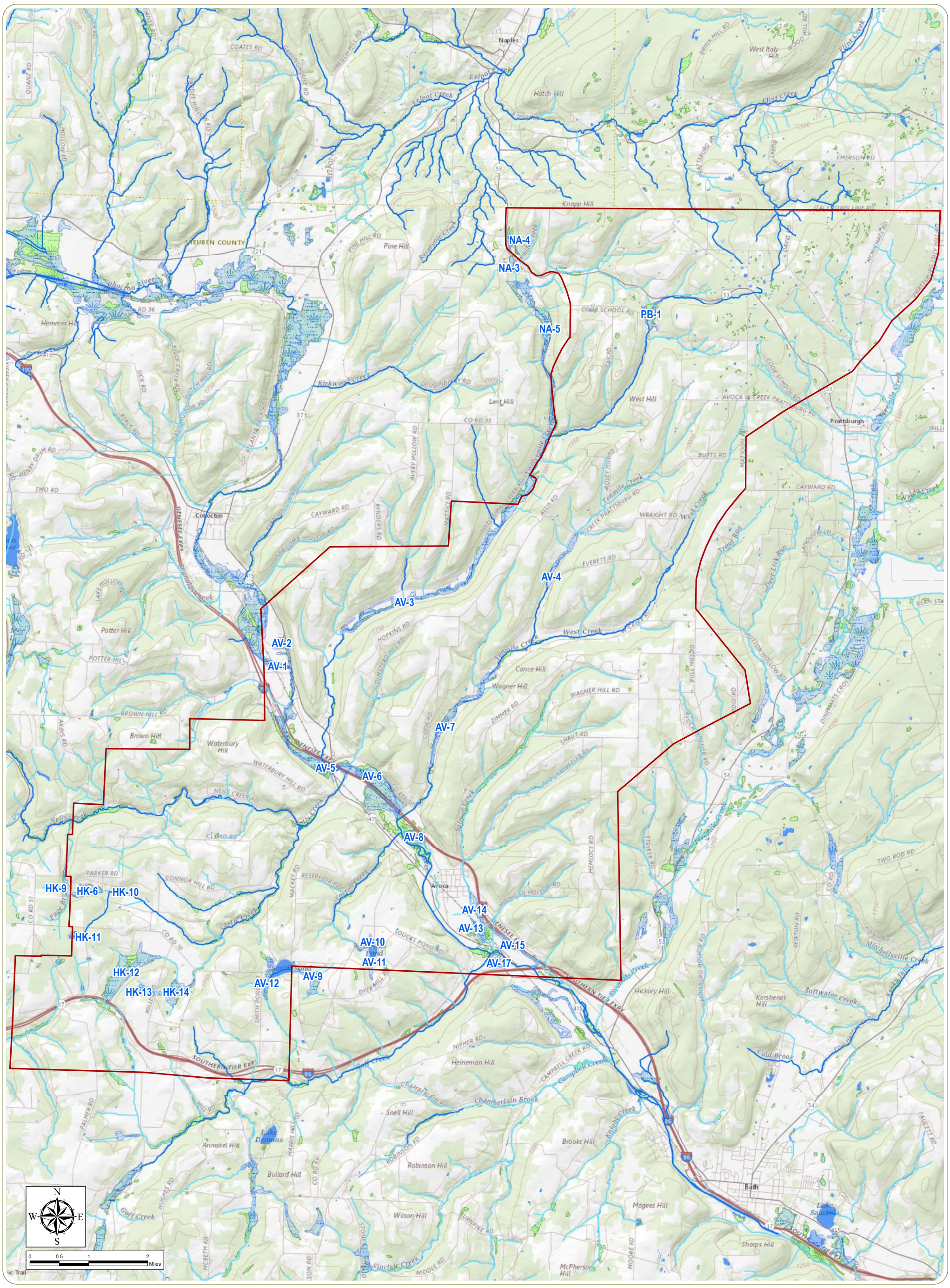

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Figure 5. Mapped Wetlands and Streams

- Class A, B, C(TS), or C(T) Stream
- Class C or D Stream
- NYSDEC Mapped Wetland
- NWI Mapped Wetland
- NWI Mapped Lake/Pond/Riverine
- Facility Area

Notes: 1. Basemap: ESRI ArcGIS Online "USGS Topo" map service. **2.** This map was generated in ArcMap on June 3, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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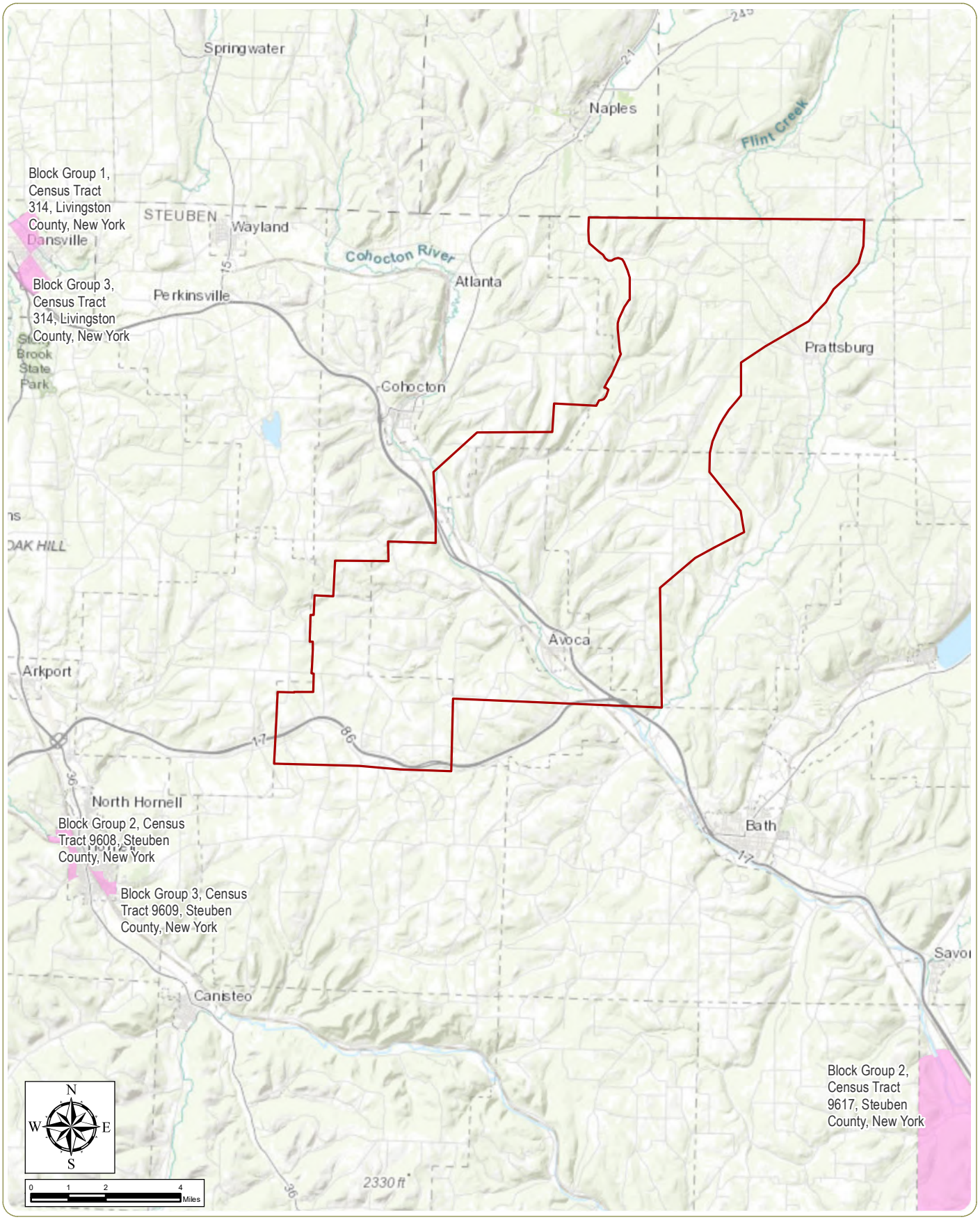

Prattsburgh Wind Farm

Towns of Prattsburgh, Avoca, Cohocton, Howard, and Wheeler, Steuben County, New York

Section 94-c Scoping Document

Figure 6. Environmental Justice Areas

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service.r. **2.** This map was generated in ArcMap on June 3, 2020. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

Environmental Justice Area

Facility Area

TERRA-GEN

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APPENDIX A

Local Laws

Appendix A
LOCAL LAWS AND ORDINANCES

During preparation of the Application, the Applicant will continue its consultation with the host municipalities on the application of local laws to the Facility to determine whether all such requirements have been correctly identified, and to determine whether the Applicant must request waivers and the Town's position on such requests.

The Application will contain the following information.

(a) List of Applicable Local Ordinances and Laws of a Procedural Nature

An updated list of applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a procedural nature required for the construction (including maintenance of construction equipment) or operation of the proposed Facility will be provided in the Application. A copy of all local laws obtained by the Applicant and/or provided by the host municipalities, including maps, figures, tables and other attachments to local laws (assuming such information is readily available), will be appended to the Application. Based on the preemption provisions of Article 10 and Section 94-c, the Applicant cannot seek authorization under the procedural laws set forth below, but instead will seek approval from the State. The laws below are listed so it is clear which laws are procedurally preempted.

The procedural local laws and ordinances potentially applicable to the Facility as currently proposed include[1] the following:

<u>Town of Prattsburgh</u>

- 2008 Local Law 2, Flood Damage Prevention
  - Section 4.2 – Floodplain Development Permit
  - Section 4.4-7 – Certificate of Compliance
- 2012 Local Law 1, Land Use Administration law
  - Section 5.00 – Site Plan Review
  - Section 5.70 – Modifications to Approved Site Plans

  2016 Local Law 3, Amendment to Land Use Administration Law
  - Section 5.00 – Site Plan Review

[1] This section will include all procedural local ordinances enacted up to the time of Application.

- 2012 Local Law 2, Wind Energy Facilities Law
    - Article 5 – Authority and Procedure
    - Article 5, Section 3(C) – Sound[2]
    - Article 5, Section 4 – Operational Considerations: Decommissioning

    2019 Local Law 2, Amendment to Wind Energy Facilities Law
    - Section 4 – Provisions, Amendment to Setback Requirements
- 2012 Local Law 5, Highway Preservation and Restoration Law
    - Section 4(1) – Provisions, Permit Required
    - Section 3(A) – Use of Designated Roads by Developer
- 2017 Local Law 8, Site Plan Review Law
    - Section 2.2 – Site Plan Approval

<u>Town of Avoca</u>

- 1989 Local Law 1, Zoning Law
    - Amended by 1998 Local Law 1, 2001 Local Law 1, 2002 Local Law 1, 2003 Local Law 4, 2016 Local Law 2
    - Section 4.2.1 – Obtaining a Zoning Permit
    - Section 4.2.3 – Obtaining a Certificate of Zoning Compliance
    - Section 6 – Supplemental Regulations
- 2009 Local Law 1, Wind Energy Facilities Law
    - Section 5 – Permits Required
    - Section 9 – Applications for Wind Energy Permits for Wind Turbine Generators
    - Section 15 – Noise and Setback Easements
    - Section 27 – Waivers

    2017 Local Law 1, Amendment to Wind Energy Facilities Law
- 2012 Local Law 1, Administration and Enforcement of the New York State Uniform Fire Prevention and Building Code (superseding 2007 Local Law 1)
    - Section 4 – Building Permits
    - Section 5 – Construction Inspections
    - Section 7 – Certificates of Occupancy/Certificates of Compliance
    - Section 11 – Fire Safety and Property Maintenance Inspections

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[2] The Applicant anticipates consulting with the Town regarding the application of the sound standard to the Project as the standard differs from recently approved wind projects under Article 10.

- 2012 Local Law 2, Use and Repair of Roads
- 2018 Local Law 1, Logging Law
    - Required Permit.

Town of Cohocton Article XI of the Zoning Law of the Town of Cohocton (Local Law 2 of 2006 Amending the Zoning Law of the Town of Cohocton, New York to Regulate Windmills and Windmill Facilities and as amended by Local Law 1 of 2011)

- Section 1110 Required Approvals
    - Including Section 1110 3. Certificate of Completeness which was added by amendment by Local Law 1 of 2011
- Section 1120 Environmental Review
- Section 1140 Modifications and Waivers
- Section 1150 Duration of Special Use Permit and Continuing Obligations
- Section 1160 Enforcement
- Section 1170 Penalties

Town of Howard

- 1987 Local Law 1, Flood Damage Prevention
- 2006 Local Law 2, Administration and Enforcement of the New York State Uniform Fire Prevention and Building Code
    - Section 4 – Building Permits
    - Section 5 – Construction Inspections
    - Section 7 – Certificates of Occupancy/Certificates of Compliance
- 2007 Local Law 2, Planning Board Law (superseding 2003 Local Law 1)
    - Section 8 – Procedures
    - Section 9 – Powers
- 2007 Local Law 3, Wind Energy Facilities Law (superseding 2006 Local Law 1)
    - Article 5, Section 1 – Permit Approval
    - Article 5, Section 2 – Application; Fee; Procedure; Public Hearing; Decision
    - Article 6 – License
- 2009 Local Law 2, Regulation of Highways during Logging Operations
    - Required Permit
- 2012 Local Law 1, Land Use Site Planning Law (superseding 2010 Local Law 1 and 2011 Local Law 2)
    - Chapter 2 – Applicability
    - Chapter 4 – Supplemental Provisions

    - Section 4.6 – Storm Water and Erosion Control
    - Section 4.7 – Driveways
    - Section 5.2-4 – SEQRA Compliance
    - Section 5.2-8 – Performance Guaranty
    - Chapter 6 – Special Permits
    - Section 8.1 – Land Use Permit
- 2015 Local Law 1, Subdivision Law (superseding 2003 Local Law 3)
    - Section 1.5 – Administration
    - Section 3 – Procedures for Plat Approval
    - Section 4 – Subdivision Development Standards
    - Section 5 – Documents to be Submitted
    - Section 6 – Administration and Enforcement

      Note- The Applicant will seek any necessary subdivision approval from the Town.

<u>Town of Wheeler</u>

- 2011 Local Law 1, Planning Board Law
    - Section 8 – Procedures
    - Section 9 – Powers
- 2012 Local Law 1, Road Preservation Law
    - Section 7 – Permit Issuing Authority and Enforcement Authority
    - Section 9 – Alternative to Permit: Road Use Agreement
    - Section 12 – Maintenance Bond and Letter of Credit
- 2014 Local Law 1, Administration and Enforcement of the New York State Uniform Fire Prevention and Building Code (superseding 1999 Local Law 2)
    - Section 4 – Building Permits
    - Section 5 – Construction Inspections
    - Section 7 – Certificates of Occupancy

<u>Steuben County</u>

- 2006 Local Law 19, Administration and Enforcement of the New York State Uniform Fire Prevention and Building Code
    - Section 4 – Building Permits
    - Section 6 – Construction Inspections
    - Section 8 – Certificates of Occupancy

(b) Local Procedural Requirements That the Applicant Will Seek Permits From the Local Municipalities

To the extent that the Towns require permits or other approvals for work performed on Town roads or within the Towns' right of way, at this time, it is the Applicant's intent to request approvals from the host municipality. The Applicant will work with the Towns to follow their procedural and substantive requirements for the permitting of highway work permits. Highway work and similar road permits are primarily an issue of local concern and ministerial in nature provided the Applicant meets the applicable standards.

This also includes subdivision approval which, if necessary, will be applied for from the host municipality.

(c) Identification of Municipal Agency Qualified to Review and Approve Building Permits

The Towns are responsible for reviewing and approving building plans, Inspecting construction work, and certifying compliance with the New York State Uniform Fire Prevention and Building Code, and the Energy Conservation Code of New York State to the extent that a municipal official is a qualified individual.

Due to the complex nature of the Facility, there is the potential that the Applicant will arrange with the Towns to pay for consultant services for the review, approval, inspection and compliance certification for work required to comply with the New York State Uniform Fire Prevention and Building Code, and the Energy Conservation Code of New York State, if necessary. For a wind powered electric generating facility, typically, this work is limited to turbine foundations and operations and maintenance buildings.[3] The Applicant will work with the Towns prior to submission of the Application to identify the appropriate individuals to conduct this review and the Application will include a description of any preliminary arrangements between the Applicant and the Towns and the process for review.

(d) List of Applicable Local Ordinances and Laws of Substantive Nature

The Application will include an updated list of applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a substantive nature required (at the time of Application submittal) for the construction

[3] The NYS DOS has stated that the Building Code of New York State does not regulate wind generators or free standing communication towers. See NYSDOS, Division of Code Enforcement and Administration, Technical Bulletin January 1, 2003, Communication Towers, Cellular Towers and Wind Generators.

or operation of the proposed Facility. Copies of special flood hazard area maps and other similar maps, tables, and/or documents related to local substantive requirements will be included in the Application.

The substantive local laws and ordinances potentially applicable to the Facility as currently proposed include the following:

Town of Prattsburgh

- 2008 Local Law 2, Flood Damage Prevention
    - Section 5 – Construction Standards
- 2012 Local Law 1, Land Use Administration law
    - Section 5.40(D)(4) – Conditions to every Approval

  2016 Local Law 3, Amendment to Land Use Administration Law
    - Section 5.00 – Site Plan Review
- 2012 Local Law 2, Wind Energy Facilities Law
    - Article 5, Section 3(C) – Sound
    - Article 5, Section 4 – Operational Considerations: Decommissioning
    - Article 5, Section 6 – Lighting

  2019 Local Law 2, Amendment to Wind Energy Facilities Law
    - Section 4 – Provisions, Amendment to Setback Requirements
- 2012 Local Law 5, Highway Preservation and Restoration Law
    - Section 3(A) – Use of Designated Roads by Developer
    - Section 3(D) – Warranties by Developer
- 2017 Local Law 8, Site Plan Review Law
    - Section 3.1 – Dimensional Standards

Town of Avoca

- 1989 Local Law 1, Zoning Law (as amended)
    - Section 6 – Supplemental Regulations
- 2009 Local Law 1, Wind Energy Facilities Law
    - Section 11 – Standards for Wind Energy Facilities
    - Section 14 – Sound Levels and WTG Setbacks
    - Section 15 – Noise and Setback Easements

  2017 Local Law 1, Amendment to Wind Energy Facilities Law
    - Amendment to Section 6 – Definition of Residence

    - Amendment to Section 11(B) – Maximum Height of Wind Turbine Generators
    - Amendment to Section 12(N) – Construction Times
- 2012 Local Law 2, Use and Repair of Roads
    - Section 3 – General Provisions

Town of Cohocton Article XI of the Zoning Law of the Town of Cohocton (Local Law 2 of 2006 Amending the Zoning Law of the Town of Cohocton, New York to Regulate Windmills and Windmill Facilities and as amended by Local Law 1 of 2011 and Local Law 4 of 2019)

- Article III Zoning Schedule of the Town of Cohocton
- Article XI Section 1130 Review Standards (2) Industrial Windmills

Town of Howard

- 1987 Local Law 1, Flood Damage Prevention
- 2007 Local Law 3, Wind Energy Facilities Law (superseding 2006 Local Law 1)
    - Article 5, Section 3 – Setback Standards; Measurements; Landscaping; Sound; Fall Zones; Roads
    - Article 5, Section 7 – Height
- 2012 Local Law 1, Land Use Site Planning Law (superseding 2010 Local Law 1 and 2011 Local Law 2)
    - Chapter 3 – Dimensional Standards
    - Chapter 4 – Supplemental Provisions
    - Section 4.5 – Signs
    - Section 4.6 – Strom Water and Erosion Control
    - Section 4.7 – Driveways
- 2015 Local Law 1, Subdivision Law (superseding 2003 Local Law 3)
    - Section 4 – Subdivision Development Standards

Town of Wheeler

- 2012 Local Law 1, Road Preservation Law
    - Section 5 – Permanent Weight Restriction and Truck Route

Steuben County

- 1976 Local Law 1, Protection, Preservation and Conservation of Wetlands

The Application will provide a summary table that has two columns, one consisting of applicable substantive requirements to the Facility and the second containing a description of how the Applicant plans to meet compliance or otherwise request a waiver and provide the basis for seeking the waiver.

APPENDIX B

Avian and Bat Work Plans

DRAFT

Pre-Construction Avian and Bat Work Plan for the Prattsburgh Wind Project

Steuben County, New York

August 8, 2019

Prepared for:
Terra-Gen Development Company, LLC

Prepared by:
Stantec Consulting Services Inc.

Table of Contents

LIST OF FIGURES

DRAFT

PRE-CONSTRUCTION AVIAN AND BAT WORK PLAN FOR THE PRATTSBURGH WIND PROJECT

August 8, 2019

1.0 INTRODUCTION AND BACKGROUND

Terra-Gen Development Company, LLC (Terra-Gen) is planning the development of the Prattsburgh Wind Project (Project) in Steuben County, New York. Terra-Gen is currently considering a 147-megawatt (MW) facility with 26 to 44 potential turbine locations (Figure 1). The proposed Project layout is currently under consideration; as such, the Project area is defined as the acquired and active target lease parcels and the potential southern expansion areas (Figure 1).

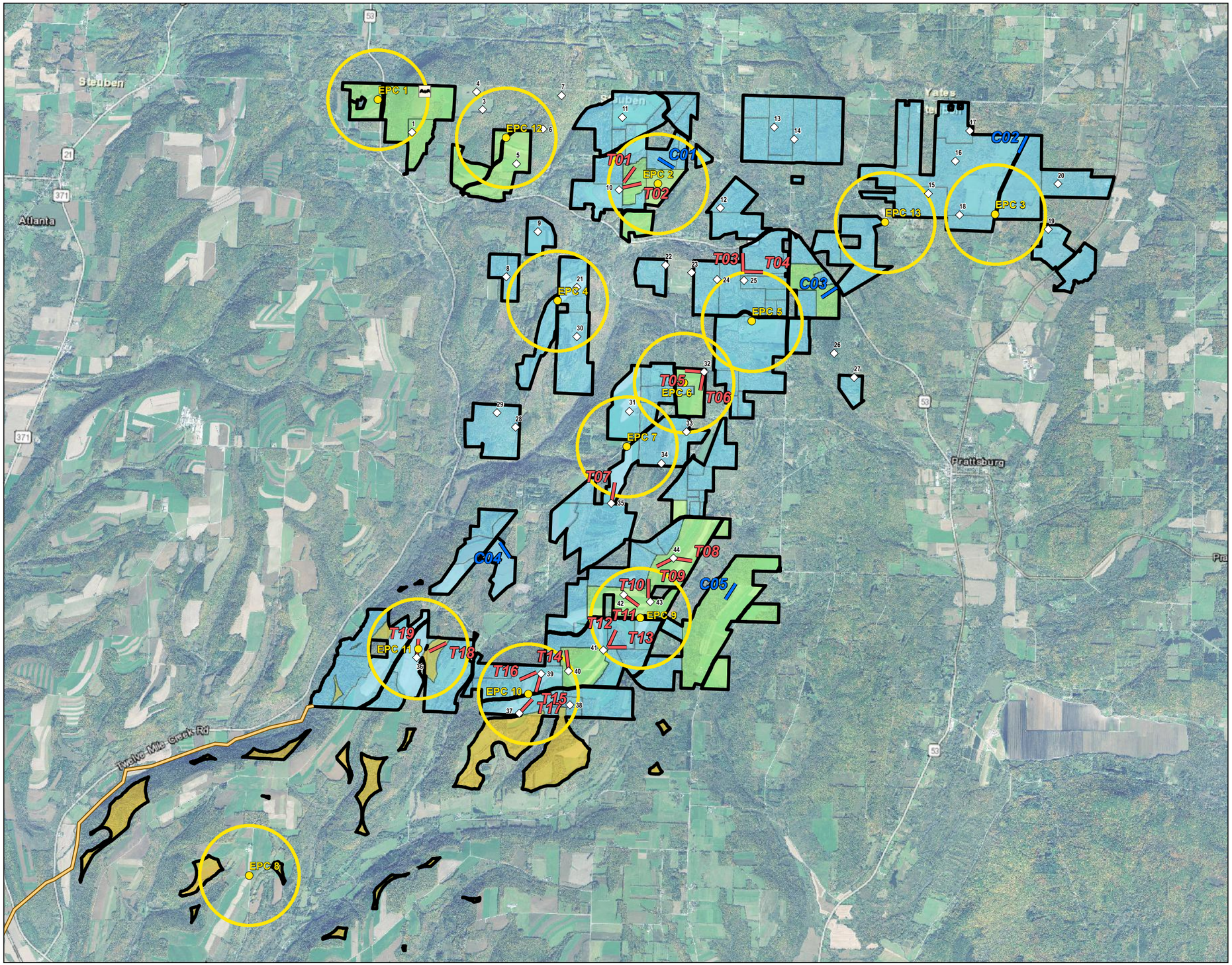
Terra-Gen has contracted Stantec Consulting Services Inc. (Stantec) to conduct a pre-construction site characterization/habitat assessment and avian and bat field surveys, consistent with the Standard Pre-Construction Studies detailed in the New York State Department of Environmental Conservation's (NYSDEC) Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects (NYSDEC Guidelines) (NYSDEC 2016), the U.S. Fish and Wildlife Service's (USFWS) Land-based Wind Energy Guidelines (WEG) (USFWS 2012), the USFWS Eagle Conservation Plan Guidance (ECPG) (USFWS 2013), and the December 2016 USFWS Final Rule 81 FR 91494 (Final Eagle Rule) (USFWS 2016). This pre-construction work plan was originally provided to the NYSDEC and USFWS on April 15, 2019; and has since been updated to incorporate comments received from the NYSDEC and USFWS during a May 22, 2019 Project introductory meeting.

2.0 PRE-CONSTRUCTION SURVEYS

2.1 SITE CHARACTERIZATION AND HABITAT ASSESSMENT

The Standard Pre-construction Studies described in the NYSDEC Guidelines recommend a habitat assessment survey to identify existing habitat for listed or conservation concern species. Similarly, the USFWS WEG Tier I includes a preliminary site evaluation, and Tier II includes a Site Characterization to assess the presence of species of concern or their habitats. Stantec will complete a Site Characterization and Habitat Assessment, to fulfill the objectives in the NYSDEC Guidelines and the USFWS WEG. The assessment will have with both desktop analysis and field reconnaissance components. Stantec will prepare a Site Characterization and Habitat Assessment Report based on the results of the desktop analysis and field reconnaissance.

The desktop habitat assessment will incorporate the results of publicly available land cover and wildlife databases (e.g., National Land Cover Database, National Wetlands Inventory, US Geological Survey Breeding Bird Survey database), as well as applicable wildlife and habitat information from the nearby wind projects in Steuben County. Stantec will submit inquiries to the New York Natural Heritage Program Database and the USFWS Information Planning and Consultation (IPaC) database for current records of rare or listed species or significant natural communities in the vicinity of the Project. These NYSDEC and USFWS database requests will inform available records of nesting bald eagles in the vicinity of the Project.



Stantec

Legend

- Turbine Layout (20190329)
- Bat Survey Location
- EPC Survey Point
- EPC 800m Buffer

Songbird Transect

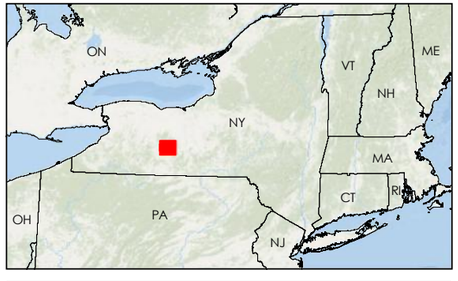
- Control Transect
- Turbine Transect
- Project Area
- Potential Southern Expansion Area
- Acquired Leased Parcel
- Active Target Lease Parcel
- Proposed Transmission Line

N

0 1 Miles
(At original document size of 11x17)
1:63,360

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Data Sources: Stantec, Terra-Gen
3. Background: NAIP 2017



Project Location
Prattsburgh
New York

Prepared by GAC on 2019-08-01
Reviewed by JLC on 2019-08-01

Client/Project 195601695
Prattsburgh Wind Project
Avian Surveys

Figure No.
1

Title
Project and Survey Location Map

V:\195\active\195601695\03_data\gis_cad\gis\MXDs\AvianBat\016\95_01_AvianSurveysAgency.mxd Revised: 2019-08-08 By: gcarpenter

Stantec will characterize habitats within the Project area by reviewing the results of the database inquiries and interpreting aerial photographs. The habitats will be reviewed for the potential to support federally or state-listed species or state species of special concern (e.g., grassland species such as Henslow's sparrow [*Ammodramus henslowii*], upland sandpiper [*Bartramia longicauda*], and northern harrier [*Circus cyaneus*] and wetland-associated species such as sedge wren [*Cistothorus platensis*]). Stantec will organize the desktop analysis results into a table listing the cover types in the Project area and summarizing any rare natural resources the habitats may host.

If habitat with the potential to support federally or state-listed species is found in the Project area, we will investigate if habitat exists during site reconnaissance visits. These visits will be coordinated with site visits for other wildlife surveys described below.

2.2 RAPTOR MIGRATION AND EAGLE POINT COUNT SURVEY

The Standard Pre-construction Studies described in NYSDEC's Guidelines include weekly spring and fall raptor migration surveys. The USFWS ECP Guidance includes a minimum effort of monthly eagle point counts. The raptor migration and eagle point count survey will be designed to address both the NYSDEC Guidelines and the ECPG: there will be weekly surveys during the spring and fall migratory periods and monthly surveys during the summer and winter, for a full year.

Point count surveys will consist of visual surveys at 13 plots[1],[2] within the Project area, each with an 800-meter (m) radius covering an area of 2 square kilometers per plot (Figure 1). These 13 800-m radius plots cover approximately 37.2% of the current Project area. Eagle and raptor point count (EPC) survey plots will be distributed throughout the Project area, where there are suitable viewsheds of the sky; plots will not be placed in densely forested areas unless suitable vantage points exist. Plot locations will be finalized after the first site visit and will consider viewsheds and access permissions. EPCs will be mapped using the Global Positioning System (GPS).

During the spring (March 1 to May 31) and fall (August 15 to December 15) migratory periods, weekly surveys will be conducted, with all plots generally surveyed twice each survey cycle (1 cycle = 1 month). Accordingly, 6 to 7 plots will be surveyed each week with 2 hours of survey per plot, with generally 12 to 14 survey hours per week. During the summer (June and July) and winter (January and February), surveys will be conducted once per month at each plot for 1 hour, for a total of 13 survey hours per month.

Surveys will occur in all weather conditions except when visibility is poor. Surveys will target the hours of 8 am to 5 pm, the daytime hours in which eagles and raptors tend to be more active. The starting plot will change each survey cycle to enable sampling of each plot during a range of daylight hours. Though the

[1] Per the ECPG, the total number of proposed point count locations was determined by calculating the area including a 1-kilometer buffer around the 44 proposed turbine locations, calculating 30% of the area, and dividing by 2 (to account for the 2 square-kilometer plots).

[2] Per a recommendation from the USFWS during the May 22, 2019 agency meeting to sample at least 30% of the Project area, we added 2 new plots in June 2019. Plot 12 was first sampled in June 2019; Plot 13 was first sampled in July 2019. Plot 8 was relocated after the potential southern expansion areas were incorporated in August 2019.

species targeted during point count surveys are eagles and raptors, Stantec will record incidental observations of species of conservation concern or any large flocks of birds during surveys, or while traveling between plots.

During surveys, hourly weather data will be recorded (wind direction and speed, cloud cover, precipitation, and temperature). For each eagle observation, the biologist will record the horizontal distance of each eagle from the observer and the duration of observation of each eagle flying within plot, recorded as the number of minutes within an 800-m radius and vertical height of 200 m (or 25 m above the proposed maximum turbine height, whichever is greater), per the ECPG. In addition to distance and flight height data, each eagle's flight path will be drawn on an aerial photo map of the 800-m-radius count circles. An eagle's flight height, distance from observer, and behavior (prevalent activity during each 1-minute interval) will be recorded per minute of observation. The number of individuals, species, and age class (as possible) will be recorded for each eagle or group of eagles observed. The species, number of individuals, distance from observer, flight height, and behavior for other raptor species observed will be recorded (however, 1-minute interval data is not required for other raptors). Raptor flight paths will also be drawn on plot maps.

After completion of seasonal point counts, data collected will be summarized by season. For raptors and eagles, the number of species and individuals will be summarized, as well as the flight behaviors. For eagles, the number of eagle minutes (eagles within the 800-m-radius, 200-m-tall plots) will be calculated, consistent with the ECPG. For the purposes of analysis, the number of minutes of observation within plots (eagle minutes) will be rounded to the next highest integer (e.g., an eagle seen for 30 seconds is rounded to 1 eagle minute). Results of the first year of survey data be incorporated into a report that will summarize methods and results, including eagle minutes per season, month, and per plot.

Per the Final Eagle Rule, we will conduct a second year of eagle point count surveys beginning in spring 2020. This second year of surveys will focus primarily on eagles (however, we will also record other raptors observed). Survey effort during the second year of surveys will be based on ECP Guidance and the Final Eagle Rule and will not include the increased effort during the raptor migration periods as was incorporated into the first year of surveys to meet the objectives in the NYSDEC Guidelines. As such, monthly surveys will be conducted at the 13 plots for one hour per month per plot. However, the second year of surveys will follow the data collection and analysis methods, as described above.

2.3 EAGLE AERIAL NEST SURVEY

In spring 2020, an aerial nest survey will be conducted in compliance with the ECPG to search suitable habitats for bald eagle nests out to 10 miles of the proposed turbine locations (survey area); all other species of raptor and their nests potentially observed within this survey area will be recorded. The survey will be timed to correspond with the spring period when eagles are likely incubating nests in the region, and prior to leaf out so that the nests are more visible (late-March or early April).

The survey will be conducted from a fixed-wing aircraft. Low altitude passes will be made approximately 500 feet above ground level. We anticipate flying 1-mile-spaced transects covering the Project area. We will also conduct meandering transects (with no set space between flight paths) over potential suitable

breeding habitat within 10 miles of turbine locations, including riparian areas with tall trees (lakes, marshes, and swamps [Wheeler 2003], as well as linear features such as rivers [USFWS 2013]). The transects covering the Project area and the 10-mile turbine buffer will be loaded into an iPad using the Collector for ArcGIS application prior to the flight.

During the flight, two Stantec biologists with experience identifying eagle and other raptor nests will scan the survey area for raptors and potential nest structures, from both sides of the plane. The GPS location of observations of eagles and other raptor species, and potential nests will be recorded. The presence and activity of any eagles seen on or near the nest (perched nearby, incubation position, flying, etc.) will be recorded on field forms. If any other species of interest (other raptors and great blue heron [*Ardea herodias*]), or their nests are observed, the locations will be recorded.

After the flight, the survey effort and results will be summarized into a brief report. The number of eagle and raptor observations and descriptions of any nests observed (e.g., intact, active, abandoned, etc.) will be summarized, and the locations of observations will be provided in maps of the survey area.

2.4 MIGRATORY SONGBIRD SURVEY

NYSDEC's Standard Pre-construction Survey Guidelines include weekly surveys during the spring and fall migration periods, with 300-m-long turbine and control transects, with points spaced 50 m apart, located throughout the Project area. Stantec will conduct weekly visits during spring (March 15 to May 15) and fall (August 15 to October 31) to document migratory songbirds (and other birds observed). A qualified biologist familiar with New York state birds by sight and sound will conduct transect surveys between sunrise and approximately 10 am. Surveys will be conducted on those days when weather conditions are conducive to auditory and visual detection and identification of birds.

Stantec proposes to survey 24 transects (the transects will be sampled during both the spring and fall migratory bird surveys, as well as the breeding bird surveys), each 300 m in length, including 19 turbine transects and 5 control transects (spaced at least 800 m from turbine locations) (there are no transect proposed for the transmission line at this time due to lack of access permissions) (Figure 1). Instead of 50-m-spaced transects, Stantec proposes to sample 100-m-spaced transects in an effort to reduce opportunities for double counting birds. As such, there will be 4 point count locations, established by GPS, at 100-m intervals along each transect (0 m, 100 m, 200 m, and 300 m). Survey points along transects will be sited generally proportionate to available forested and non-forested habitat within the Project area, as currently proposed, where landowner permission has been granted.

Six transects will be sampled per week (on a rotating basis), so that there are weekly visits to the Project area, and each transect will be sampled approximately 2 times during the spring and 3 times during the fall survey periods. Point counts along transects will be surveyed for 10 minutes to record all avian species heard and/or seen. The following data will be recorded during 10-minute surveys:

- Start and end time of the survey period
- Weather including temperature, wind speed, wind direction, and cloud cover

- Species identification and number of individuals
- Distance from observer
- Mode of species detection (visual or auditory)
- Behavior (nesting, flying, perching, singing, etc.)
- Possible distractions to the observer (e.g., tree-cutting, mowing, vehicle) that may have limited the detection of birds during the survey period

The spring and fall migratory bird survey results will be compiled into a report summarizing the methods, species observed, species richness, number of individuals, relative abundance, and frequency of occurrence.

2.5 BREEDING BIRD SURVEY

NYSDEC's Standard Pre-construction Survey Guidelines include weekly surveys during the breeding period, with 300-m-long turbine and control transects, with points spaced 50 m apart, located throughout the Project area. Stantec will conduct weekly visits for a breeding bird survey between May 15 to June 30. A qualified biologist familiar with New York state birds by sight and sound will conduct transect surveys between first light and approximately 10 am. Surveys will be conducted on those days when weather conditions are conducive to auditory and visual detection and identification of birds.

Stantec proposes to survey 24 transects (the same as those sampled during migratory songbird survey), each 300 m in length, including 19 turbine transects and 5 control transects (spaced at least 800 m from turbine locations) (Figure 1). Instead of 50-m spaced transects, Stantec proposes to sample 100-m spaced transects in an effort to reduce opportunities for double counting birds. As such, there will be 4 point count locations, established by GPS, at 100-m intervals along each transect (0 m, 100 m, 200 m, and 300 m). Survey points along transects will be sited generally proportionate to available forested and non-forested habitat within the Project area, as currently proposed, where landowner permission has been granted.

Six to 18 transects will be sampled per week (on a rotating basis), so that there are weekly visits to the Project area, and – based on feedback from NYSDEC during the May 22, 2019 agency meeting – each transect will be sampled approximately three times during the survey period. Point counts along transects will be surveyed for 10 minutes to record all avian species heard and/or seen. The following data will be recorded during 10-minute surveys:

- Start and end time of the survey period
- Weather including temperature, wind speed, wind direction, and cloud cover
- Species identification and number of individuals
- Distance from observer
- Mode of species detection (visual or auditory)
- Behavior (nesting, flying, perching, singing, etc.)
- Possible distractions to the observer (e.g., tree-cutting, mowing, vehicle) that may have limited the detection of birds during the survey period

The breeding bird survey results will be compiled into a report summarizing the methods, species observed, species richness, number of individuals, relative abundance, and frequency of occurrence.

2.6 PASSIVE BAT ACOUSTIC SURVEY

Consistent with Tier 3 of the WEGs, passive acoustic monitoring will be conducted from April through November to document seasonal and temporal patterns in bat activity and to characterize relationships between bat activity, temperature, and wind speed. Acoustic data will also provide information on species composition of bat activity at heights approaching the rotor-swept zone of proposed turbines.

Surveys will target the full season in which bats are expected to be active (April–November) however seasons will be split between 2019 and 2020 based on when the meteorological (met) tower was installed (June 2019). Collectively, Stantec will monitor bat activity during spring migration, summer residency, and fall migration seasons.

Stantec will use full-spectrum bat detectors (e.g., Wildlife Acoustics© SM4), with two detectors deployed in one tower (Figure 1). The cable-mounted microphones of the detectors will be deployed as high as possible in the tower at heights of 40 m (131 feet) and 20 m (66 ft). Stantec will program detectors to record nightly bat activity from 30 minutes before sunset until 30 minutes after sunrise. We will visit the site approximately once every two weeks to inspect detectors, download data, and replace any detector components that may have malfunctioned. Detectors will be powered either by internal alkaline batteries or by external 12-volt batteries charged by small solar panels. Data will be stored locally on the detectors on removable SD cards.

We will use Kaleidoscope Pro Software version 3.1.7 (classifier version 3.1.0; Kaleidoscope) and Bat Call Identification (BCID) Software version 2.7d, which have been approved (as of May 2017) by the USFWS as suitable for analyzing full-spectrum bat data collected by SM4 units once the data have been converted to zero-crossing format. Analysis using two software programs is consistent with the NYSDEC Guidelines. Stantec will perform a thorough visual QA/QC to check accuracy of differentiation of bat activity from ultrasonic “static” or interference. We will also view files classified as noise to manually identify any bat activity that may have been overlooked by the identification software. Stantec will determine conditions associated with bat activity by determining the time past sunset, wind speed, and temperature (as measured at the corresponding met tower) during the 10-minute period in which bat passes occurred.

After the conclusion of the acoustic monitoring period, Stantec will prepare a report summarizing methods and results of the acoustic surveys. The report will include a discussion of the results, noting any trends observed between weather patterns and bat activity.

3.0 REFERENCES

New York State Department of Environmental Conservation (NYSDEC). 2016. Guidelines for conducting bird and bat studies at commercial wind energy projects. <https://www.dec.ny.gov/docs/wildlife_pdf/winguide16.pdf> Accessed April 5, 2019.

U.S. Fish and Wildlife Service (USFWS). 2012. U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines. Prepared by the US Fish and Wildlife Service, Washington, D.C. 58 pages + appendices.

_____. 2013. Eagle conservation plan guidance: Module 1 – land-based wind energy: version 2. Prepared by U.S. Fish and Wildlife Service Division of Migratory Bird Management, Washington, D.C. 43 pages + appendices.

_____. 2016. Federal Register Rules and Regulations: Eagle Permits; Revisions to Regulations for Eagle Incidental Take and Take of Eagle Nests, December 16, 2016. Prepared by USFWS, Washington, D.C. Vol. 81, No. 242. Pages 91494 − 91554.

Wheeler, B. K. 2003. Raptors of Eastern North America. Princeton University Press, Princeton, New Jersey.