



# Environmental Monitoring Plan





# DRAFT

## DRAFT ENVIRONMENTAL MONITORING PLAN

**The Draft Environmental Monitoring Plan is a document that has been required for other Noble Windparks by the New York State Department of Environmental Conservation through a condition of the Wetland Permit for Windparks. This document is the compilation of all environmental monitoring of conditions and commitments of all the permits issued. Once all the permits are issued, the document is then completed with the inclusion of a summary of the monitoring requirements and the Permits themselves as listed in the Appendices.**





# **Environmental Monitoring Plan Noble Ball Hill Windpark LLC**

**7294 Centerville Road**

**Bliss, NY 14024**

**September 2008**





## **Table of Contents**

### **1.0 Introduction**

1.1 Mission Statement

1.2 Project Description

1.3 Purpose of Environmental Monitoring Plan

### **2.0 Organization and Reporting**

2.1 Reporting Structure

2.1.1 Daily Site Environmental Quality Control/Quality Assurance

2.1.2 Environmental Quality Assurance Auditing

2.1.3 Corporate Environmental Oversight

2.2 Authority and Responsibilities of the Environmental Monitor

2.3 Contact List

### **3.0 Environmental Monitoring Program**

3.1 General Activities

3.2 Daily Activities

3.3 Incident Investigation

### **4.0 Project Documentation**

4.1 Daily Report

4.2 Monthly Report

4.3 Post Construction Report

### **5.0 Permit Conditions**



## Appendices

- A. United States Army Corp of Engineers Permit
- B. New York State Department of Environmental Conservation Permit
- C. Public Service Commission - Certificate of Public Convenience and Necessity
- D. Town of Villenova SEQRA Statement of Findings
- E. Town of Villenova Special Use Permit Conditions
- F. Town of Hanover Special Use Permit Conditions
- G. Noble Ball Hill Windpark Wetland and Stream Location Maps
- H. NYSDAM Guidelines for the Construction of Wind Farms
- I. SWPPP Monitoring Requirements
- J. Plan for Unanticipated Discoveries
- K. Noble Ball Hill Windpark Invasive Species Management Plan



## 1.0 Introduction

### 1.1 Mission Statement

Noble Environmental Power is a leading renewable energy company with approximately 3,850 megawatts (MW) of windparks under development in eight states, including New York, New Hampshire, Vermont, Maine, Michigan, Minnesota, Texas, and Wyoming. Noble is majority-owned by JPMorgan Partners Fund, which is managed by CCMP Capital.

Noble was founded in 2004 in response to growing demand for clean, renewable sources of energy. We have assembled a team of talented and seasoned professionals to design and build state-of-the-art windparks. Our vision is to be a leading supplier of clean, renewable energy from environmentally responsible facilities that will be a source of pride and benefits to the communities in which they are located.

### 1.2 Project Description

Noble Ball Hill Windpark, LLC (Noble) is proposing to construct and operate a wind energy facility (the Project) in the Towns of Villenova and Hanover, Chautauqua County, located in western New York State. The Project consists of generation and transmission components. More specifically, the Project will include the following:

- Installation and operation of 60 wind turbines (49 in the Town of Villenova and 11 in the Town of Hanover) with a capacity of 90 MW within an approximate 13,658-acre Project Area in the Towns of Villenova and Hanover.
- Construction and use of approximately 16 miles of access roads (13 miles in the Town of Villenova and 3 miles in the Town of Hanover) that will connect each wind turbine to a town or county roadway to allow equipment and vehicle access for construction and subsequent maintenance of the facilities as well as emergency services, if needed. After construction, the 35-foot access road will be scaled back to 16 feet, allowing Noble to use the existing roadway for maintenance and operational purposes.
- Construction and use of an electrical collection system that will allow delivery of electricity to a new substation to be constructed in the Town of Hanover. Where practical, the electrical collection system will be installed underground along the same right-of-way (ROW) corridor as the access roads. A total of 23.8 miles of collection lines (including underground collection lines co-located with access roads) will be installed (18.7 miles in the Town of Villenova and 5.1 miles in the Town of Hanover). Approximately 8.5 miles will be installed within new ROWs over private lands between turbines (7.3 miles in the Town of Villenova and 1.2 miles in the Town



of Hanover). As currently designed, nearly the entire the collection system will be installed underground. A total of 174 feet (0.03 miles) of overhead collection lines will be installed in the Town of Villenova. No overhead collection line will be required in the Town of Hanover.

- Construction and use of a new substation (Hanover substation) within the Project Area in the Town of Hanover that will tie into a new 115-kilovolt (kV) transmission line. The substation footprint will be approximately 200 by 300 feet. The substation will be located on and have direct access to Hurlbert Road.
- Construction and use of a switchyard within the Project Area in the Town of Hanover. The switchyard footprint will be approximately 300 by 500 feet. The switchyard will be located on and have direct access to Bennett State Road (County Route 85).
- Construction and use of a 6-mile overhead 115-kV transmission line, sited within the Town of Hanover, to transfer the energy from the new substation to the new switchyard. The proposed switchyard will provide a connection to the existing 230-kV National Grid transmission line that provides access to the grid.

The wind turbines that will be installed at the Noble Windparks will be General Electric 1.5 MW, SLE, 80-Meter, MTS, T-Flange wind turbine generators. The turbine is a three-bladed, upwind, horizontal-axis wind turbine with a rotor diameter of approximately 253 feet. The nacelle is located at the top of each tower and contains the electrical generating equipment. The turbine rotor and the nacelle are mounted on top of a tubular tower giving a rotor hub height of 262 feet. The maximum height for the turbine is 388 feet 9 inches when a rotor blade is at the top of its rotation. Once installed, each wind turbine will occupy a round, slightly exposed base approximately 18 feet in diameter.

### **1.3 Purpose of Environmental Monitoring Plan**

The purpose of the Environmental Monitoring Plan is to provide the Environmental Monitor(s) with a reference source to aid in managing the environmental issues that may be encountered during construction of the Noble Ball Hill Windpark (the Project). Environmental impacts may occur during the many phases of Windpark construction including roads, foundations, erosion control devices, electrical collection and transmission lines and equipment, electrical substation and switchyard, and erection of turbine equipment. This document contains the framework for the daily and long-term monitoring and reporting structure to ensure that the Project is completed within the parameters set forth in the permits issued for the Project. The Plan is intended to be a “living” document, which will evolve as the Project progresses and/or as unanticipated issues arise.

This Plan is organized into five sections. Section 2 discusses the organization and supervision of personnel during construction, including reporting structure, authorities,



and responsibilities. Section 3 discussed the monitor's role during construction and provides checklists to be followed during certain activities. Section 4 provides the necessary information to ensure proper documentation of all activities and potential incidents. Section 5 contains a synopsis of the various permit requirements and obligations that must be met during the construction and restoration phases of the Project. In addition, the appendices contain the actual permits that have been issued for the Project, as well as, various documents that will assist the monitors in their daily duties. These documents include specific plans created for the construction of the Project, wetland and stream mapping, and applicable agency guidelines. Documents, such as the Storm Water Pollution Prevention Plan (SWPPP), are included by reference, but not attached to the manual.





## 2.0 Organization and Reporting

The following sections describe the reporting structure and authorities during the construction of the Project. Also included is an organizational chart depicting the organizational structure for all of Noble (see Figure 2-1) and a contact list, to be used by the Environmental Monitor for reporting any incidents that may occur.

### 2.1 Reporting Structure

#### 2.1.1 Daily Site Environmental Quality Control/ Quality Assurance

##### **Environmental Monitors**

Construction will be monitored by Noble personnel, an independent Environmental Monitor, and the Towns' environmental inspectors to ensure that all construction is in accordance with federal, state, and local permits and conditions, agreements, and regulations. Noble will retain an independent Environmental Monitor whose duties will include coordination of monitoring activities, documentation and implementation of mitigation activities as they are conducted, and preparation of a final report for submission to the Towns as well as other involved and interested parties. Noble's independent Environmental Monitor will have complete authority to order the correction of activities in violation of any permits or obligation and to order the temporary cessation of work activities in violation of any permits or regulations until such time as corrective measures have been implemented and accepted by the appropriate agency(ies), as required.

Although an internal organizational structure needs to be in place for reporting, record keeping, and accountability; the Environmental Monitor acts as an independent oversight of the construction activities. The reporting structure is intentionally designed to be independent of any member of the construction staff at the project level and intentionally includes independent access to the Environmental Affairs Group to ensure that the monitor is able to maintain an independent voice and be free of any concern of retributive action for performing the duties of the job. The Environmental Monitor reports to the Manager of Environmental Compliance and concurrently to the local designated Environmental Affairs Group Representative. Minor issues (issues unrelated to permit compliance) will be reported to the Resident Site Construction Manager for prompt resolution/intervention as necessary. If practical at the time, the decision to issue a stop work order should be made in consultation with either the Manager of Environmental Compliance or with the representative of the Environmental Affairs Group. However, if they are unable to be reached in a timely fashion, the monitor shall have the authority to stop work to halt or prevent environmental permit non-compliance and shall be expected to exercise that right, when required.



### **2.1.2 Environmental Quality Assurance Auditing**

#### **Environmental Affairs Group**

The Environmental Affairs Group consists of the Environmental Project Manager and the Vice President of Environmental and Regulatory Affairs, to whom the environmental managers and field engineers report. They are responsible for communicating permit conditions to the Environmental Monitoring Personnel, the Engineering and Construction Group, and the Operations Group, and identifying potential environmental issues associated with a given project. The Environmental Affairs Group provides support to and technical oversight of the Environmental Monitor to ensure that the intent of all permit conditions of an environmental nature are known and adhered to. The Environmental Affairs Group has stop work authority, which shall be exercised through the Environmental Monitor or independently in an emergent situation. The Group reports to the Vice President of Asset Management.

#### **Manager of Environmental Compliance**

The Manager of Environmental Compliance manages the Quality Assurance and Quality Control (QA/QC) monitoring for all aspects of the construction of the Project. He is responsible for assigning competent persons to the monitoring positions to ensure compliance with regulations and permits. The Manager of Environmental Compliance has stop work authority for any non-compliance issues, including permit non-compliance. He reports to the Senior Vice President of the Construction and the Senior Vice President of Operations.

### **2.1.3 Corporate Environmental Oversight**

#### **Senior Vice President of Construction/Senior Vice President of Operations/Vice President of Asset Management**

These positions have the ultimate responsibility for compliance with all permits and regulations. The Vice President of Asset Management reports to the Executive Vice President of Development. The Senior Vice President of Construction and the Senior Vice President of Operations report directly to the Chief Executive Officer. They provide direction to the QA/QC and Environmental Affairs Groups.

### **Figure 2-1 Noble Environmental Power Organizational Chart**

**To Be Determined**



## 2.2 Authority and Responsibilities of the Environmental Monitor

The Environmental Monitor has the authority and responsibility to perform the following tasks:

- Ensure that all environmental permits have been received and that applicable agency notifications as required by all permits have been given prior to commencing work in a given area. This can be done in coordination with the Environmental Affairs Group.
- Conduct pre-construction meetings with contractors to review applicable permit conditions and requirements specific to the contractor's scope of work. This occurs a minimum of once during the general construction pre-bid and kickoff meetings held for each new contractor.
- Conduct contractor "tailgate" sessions, as necessary, to review applicable permit conditions and potential problem areas for a given area of construction. These will occur on a regular basis, typically concurrent with the safety meetings held at the construction site which would normally occur once a week.
- Monitor and document the contractors' adherence to all environmental specifications.
- Ensure the proper installation and maintenance of all sediment and erosion control structures as dictated by the SWPPP and any other structures or features required by permit, regulations, or company policy. This task includes determining whether the contractors' work and material are in conformance with the specifications and drawings.
- Prepare all required documentation, including, but not limited to, Daily Reports, Weekly Reports, Monthly Reports, and Non-Compliance Reports, as necessary.
- Make required internal and agency notifications when non-compliance or any reportable violations occur.
- Stop work if the contractor is conducting an activity in violation of the permits and regulations.
- Order remedial action for violations of environmental regulations.

The Environmental Monitor **does not** have the authority to:

- Change the requirements and specifications of the Project drawings without getting approval from the resident construction manager after engineering and permit compliance review.



- Allow the contractor to change their scope of work. Changes to work scopes must be approved by the resident construction manager after engineering and permit compliance review.
- Direct the contractor's work (except with respect to stop-work orders) as the contractor must preserve their independent contractor status.

### **2.3 Contact List**

Noble Ball Hill Windpark LLC  
7294 Centerville Road  
Bliss, NY 14024  
(585) 322-7675

#### Noble Contacts:

Chief Executive Officer  
Executive VP, Development  
Senior VP, Operations  
Senior VP, Construction  
VP, Asset Management  
VP, Environmental Management  
Manager of Environmental Compliance  
Environmental Project Manager

Walter Q. Howard  
John Quirke  
Daniel Mandli  
Jeffrey J. Taylor  
Daniel Nugent  
Sandy Sayyeau  
Patrick McCarthy  
Kristin Hawley



I-17

| <b>Agency Contact List</b>   |  |  |                |   |
|--|--|--|----------------|---|
| <b>Agency</b>  | <b>Contact Person</b>                                | <b>Responsibility</b>                                | <b>Phone</b>   | <b>Address</b>  |
| U.S. Army Corp of Engineers  | Steven Metivier<br>(Biologist)                       | Wetland issues                                       | (716) 879-4313 | Department of the Army<br>Buffalo District, Corps of Engineers<br>1776 Niagara Street<br>Buffalo, NY 14207-3199 |
| New York State Department of Environmental Conservation – Region 9 | Charles Rosenburg<br>(Biologist)                     | Wetland issues, wildlife issues                      | (716) 851-7000 | NYSDEC<br>270 Michigan Ave.<br>Buffalo, NY 14203-2999   |
|  | Daniel King (Spill Prevention & Response)            | Spills   | (716) 851-7220 | NYSDEC<br>270 Michigan Ave.<br>Buffalo, NY 14203-2999   |
| New York State Department of Environmental Conservation            |  | Permit compliance                                    |                | Chief Permit Administrator<br>NYSDEC Headquarters<br>625 Broadway<br>Albany, NY 12233-1750                      |
| New York State Spill Hotline                                       |  | Spills   | (800) 497-7362 | n/a   |
| U.S. Fish and Wildlife Service                                     | Timothy R. Sullivan                                  | Wildlife issues                                      | (607) 753-9334 | US Fish & Wildlife Service<br>3817 Luker Road<br>Cortland, NY 13045   |
| New York State Department of Agriculture and Markets               | Michael Saviola<br>(Associate Environmental Analyst) | Agricultural issues                                  | (585) 658-9854 | New York State Department of Agriculture and Markets<br>158 Main Street<br>Mt. Morris, NY 14510-1595            |
| Chautauqua County Soil and Water Conservation District             | Fred Croscut   | Agricultural issues, storm water control, drain tile | (716) 664-9502 | Chautauqua County SWCD<br>3542 Turner Road<br>Jamestown, NY 14701--9607   |



**Agency Contact List**

| <b>Agency</b>   | <b>Contact Person</b>              | <b>Responsibility</b>   | <b>Phone</b>                     | <b>Address</b>   |
|---|------------------------------------|---|----------------------------------|--|
| New York State<br>Department of Public<br>Service   | Andrew Davis                       | CPCN and Article<br>VII compliance.                             | (518) 474-7080                   | New York State Department of Public<br>Service<br>Empire State Plaza<br>Agency Building 3<br>Albany, NY 12223-1350   |
| New York State<br>Office of Parks<br>Recreation and<br>Historic Preservation,<br>State Historic<br>Preservation Office<br>(SHPO),<br>Field Services<br>Bureau | Nancy L. Herter<br>(Archaeologist) | Historic issues,<br>unanticipated remains<br>or cultural finds. | (518) 237-<br>8643, ext.<br>3280 | Address: P. O. Box 189, Waterford, NY<br>12188-0189<br><br>Express Address: Delaware Ave., Cohoes,<br>New York 12047 |

I-18



### 3.0 Environmental Monitoring Program

The Environmental Monitor will be responsible for representing Noble and enforcing the environmental permits and regulations pertaining to the Project. The monitor will work under the supervision of the Manager of Environmental Compliance in consultation with the Environmental Affairs Group, and will have peer status with the other QA/QC monitors on the Project site. For general non-compliance issues the monitor will work in conjunction with the Compliance and the Construction or Operations personnel responsible for the areas where the non-compliance exist to resolve the issue and rectify any problems. For non-compliance situations where substantial environmental damage is imminent, the monitor will immediately order the cessation of the activity or rectification of the problem. Any requisite agency notifications should then be made and the Manager of Environmental Compliance and/or the on-site Environmental Affairs Representative should be contacted.

#### 3.1 General Activities

The Environmental Monitor will ensure contractor compliance with Noble's environmental plans and programs as well as all federal, state, and local permits and approvals. To achieve this goal, the Environmental Monitor will have the following responsibilities:

- Observation and documentation of all construction activities to ensure that all work is completed in compliance with the requirements of all federal, state, and local permits and approvals. The monitor will also ensure that this work is in compliance with the environmental aspects of the drawings and specifications issued for the Project. Reports, photographs, and as-built information will be gathered to demonstrate compliance per permit requirements. The ability to order the cessation of work and rectification of violations will empower the monitor to ensure adherence to environmental permits and standards. In addition, the monitor has the ability to directly contact the applicable agencies representatives to resolve problems.
- Ensure that temporary and permanent stormwater and erosion controls are installed and maintained in accordance with the Project SWPPP.
- Identify any areas where the stormwater and erosion controls are deficient or ineffective and require such deficiencies to be corrected as per specifications or regulations.
- Ensure that all construction personnel and equipment stay within the designated construction ROW and use only approved access roads.
- Ensure that fuel handling and equipment maintenance operations are performed outside approved buffer areas for wetlands and water bodies. Also, ensure that the



contractor maintains the necessary spill response material as mandated by the SWPPP and Noble's spill control plan. General actions to be taken in the event of a chemical spill or release are outlined in the Emergency Response Plan.

- Recognize previously identified sensitive areas, such as wetlands, where special construction techniques will be required. Ensure that work in these areas is conducted as per the drawings and specifications approved for these areas and in accordance with all federal, state, and local permit conditions.
- Ensure that work within agricultural fields is conducted in accordance with the guidance document issued by the New York State Department of Agriculture and Markets (NYSDAM). This includes proper stockpiling of topsoil, segregation of subsoil and topsoil, and restoration methodologies. The guidance is provided as an appendix.
- Ensure that all environmental mitigation and restoration plans (e.g., stream and wetland crossings, seeding, erosion control, decompaction) are properly implemented in accordance with Noble's drawings and specifications and in accordance with all federal, state, and local permit conditions.
- Preparation of daily reports of inspection activities that document compliance and noncompliance situations where remedial action is required.
- Preparation of monthly and final reports, as required.

Applicable checklists and daily inspection logs will serve as a basis for the reporting structure.

### **3.2 Daily Activities**

The Environmental Monitor will conduct daily inspections of all areas of ongoing construction activities with an emphasis on those activities that occur within environmentally sensitive areas. The monitor will be responsible for establishing his/her daily inspection priorities, depending on the nature and location of ongoing activities and the sensitivity of a given area. In general, the schedule will include time in the morning to meet with construction staff and the Environmental Affairs staff to obtain schedule updates and priorities, in-field monitoring activities, and time in the evening for completion and filing of monitoring reports. Activities that will be focused on include initial grading activities in agricultural fields, crossings of wetlands or streams, and installation of SWPPP measures. As part of the environmental inspection routine, it is anticipated that several operations occurring throughout the Project Area will need to be spot-checked on a daily basis. For instance, clearing and grading activities may be prioritized over inspection of a less intensive activity. Should the construction work extend into nighttime hours or weekends, the environmental monitoring staff will adjust



their work schedules (e.g., one monitor may start early and one later so one can stay later) to cover work in environmentally sensitive areas

### **3.3 Incident Investigation**

An environmental incident is defined as an unplanned event with the potential for undesirable environmental consequences. These incidents can range from a “near miss” to an accident. A near miss is an action that had the potential to create an environmental incident, however, no adverse affect occurred. These incidents will be documented in the daily report, highlighted, and distributed to the Resident Construction Manager in order to ensure that the action does not occur in the future and result in an adverse affect on the environment. These incidents will be documented in the daily reports. An accident is a situation where an action occurs that results in an actual adverse affect on the environment. In this instance, a noncompliance report will be completed.

All environmental incidents, including near misses, should be verbally reported to the Manager of Environmental Compliance and the Environmental Affairs Group within one hour of the occurrence, or as soon as practical after the situation has been controlled by the Environmental Monitor. In situations where immediate regulatory notifications are required, such as spills that exceed the reportable quantities limitations, the notification will be made immediately by the monitor in the field. The Environmental Monitor will document the incident and provide the report to the Manager of Environmental Compliance by the end of the business day. The Manager of Environmental Compliance will be responsible for further coordination. Where immediate notification is not required, notification may be made by the Environmental Monitor. These notifications may include spills that do not exceed the reportable quantity threshold or situations where damage occurs to wetlands or streams outside of the permitted areas. In these cases, NYSDEC and the USACE will be notified so that the agencies have an opportunity to provide guidance toward remediation.

All of the following will be conducted by the Environmental Monitor, hence its inclusion in a section on the Environmental Monitor’s duties in Section 2.2. Incident investigation will involve determining, to the level of detail possible, the cause of the incident. A critical aspect of these investigations will be determining actions or policies that can be implemented to minimize the possibility of recurrence. If preventative actions are developed, they will be integrated into the tailgate meetings conducted with contractors, and a notice will be sent within the company to ensure integration on all of Noble’s project sites. These changes to policies will also be noted on the inspector’s daily/monthly reports.





## **4.0 Project Documentation**

Detailed documentation is vital to ensuring compliance with regulatory requirements and standards associated with sensitive environmental issues and areas. Project documentation also simplifies the Environmental Monitor's responsibilities by providing a framework for addressing all potential implications of a construction project on the environment.

Noble's environmental monitors will be responsible for preparing and submitting several reports; consisting of summaries of daily, monthly, and post-construction activities. The Environmental Monitor may also be required to prepare periodic and/or final reports for submittal to local, state, or federal agencies; depending on conditions attached to permits received from these agencies.

### **4.1 Daily Report**

A major responsibility of the Environmental Monitor is accurate and detailed documentation of their daily inspection activities. A great deal of the daily communication that occurs on a construction site is informal and verbal. It is also critical that the monitor is able to spend as much time as possible in the field. As such, it is critical to have an efficient, consistent, and accurate method of recording and reporting necessary observations for the project record. The vehicle used to record this information must be thorough, but avoid time consuming paperwork that would minimize the monitor's time spent actively observing activities.

Noble's independent Environmental Monitor will be required to maintain a log book, used to record daily activities and to maintain a log of photographic documentation. The log book will contain documentation of daily construction activities, weather conditions, construction progress, pertinent conversations, and compliance issues. The information collected in the log book will then be summarized into a daily report, which will serve as the permanent record of activities occurring on the site. In addition to the logbook, several checklists or forms may be used to provide a succinct reporting form for certain activities. These include SWPPP monitoring, wetland and waterbody crossings, and non-compliance reports.

### **4.2 Monthly Report**

In order to track progress of the individual projects, Noble requires a monthly status report from all departments within the company. The Environmental Monitor will be required to provide a monthly status update summarizing activities that occurred on the site including detailed description of any non-compliance issues that may have occurred. The information compiled in the daily reports will be used to compile this summary.



### **4.3 Post Construction Report**

Upon completion of the construction and restoration of the Project Site, the monitor will be required to complete a Post Construction Report. The report will summarize the restoration measures implemented on the Project Site including, but not limited to, the documentation of the permanent storm water controls, restoration activities in agricultural land (e.g., topsoil replacement, removal of geotextile fabric, removal of large rocks, repair of drain tile), restoration within wetlands and stream crossings, and documentation of any reseeded or planting that is undertaken for restoration in accordance with applicable permits and restrictions. The daily and monthly summaries will be used to compile this report. This report will be provided to all interested agencies including the Towns, NYSDEC, the USACE, and NYSDAM.



## **5.0 Permit Conditions**

This section summarizes the applicable permit conditions attached to state and federal permits obtained by Noble for construction of the Project. The conditions listed here are those specifically pertaining to environmental issues that may be encountered during construction. The complete permits, with all conditions, are attached to this document as appendices.

TO BE DEVELOPED





# APPENDICES





## **APPENDIX A**

# **UNITED STATES ARMY CORP of ENGINEERS PERMIT**





## **APPENDIX B**

# **NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PERMIT**





## **APPENDIX C**

# **PUBLIC SERVICE COMMISSION – CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY**





## **APPENDIX D**

# **TOWN OF VILLENova SEQRA STATEMENT OF FINDINGS**





## **APPENDIX E**

# **TOWN OF VILLENOVA and TOWN OF HANOVER SPECIAL USE PERMIT CONDITIONS**





## **APPENDIX F**

# **TOWN OF HANOVER SPECIAL USE PERMIT CONDITIONS**





## **APPENDIX G**

# **NOBLE BALL HILL WINDPARK WETLAND AND STREAM LOCATION MAPS**



# **APPENDIX H**

## **NYSDAM GUIDELINES FOR THE CONSTRUCTION OF WIND FARMS**





# **APPENDIX I**

  

## **SWPPP MONITORING REQUIREMENTS**





## **APPENDIX J**

# **PLAN FOR UNANTICIPATED DISCOVERIES**





## **APPENDIX K**

# **NOBLE BALL HILL WINDPARK INVASIVE SPECIES MANAGEMENT PLAN**



## Invasive Species Control Plan

The Noble Ball Hill Windpark Project will result in disturbance to wetlands and riparian areas during construction and operation of the Project. Wetland habitats and riparian zones are susceptible to a variety of biological stressors and direct impacts as the result of disturbance to existing hydrology, soils, and vegetation. A major threat to these systems following perturbations in the existing ecology are invasive species. Invasive plant species considered high risk of colonization within targeted windpark development areas are purple loosestrife (*Lythrum salicaria*), common reed or phragmites (*Phragmites australis*), Japanese knotweed (*Polygonum cuspidatum*), smooth buckthorn (*Rhamnus frangula*), garlic mustard (*Alliaria petiolata*) and Eurasian water milfoil (*Myriophyllum spicatum*). Based on observations during field surveys, Japanese knotweed, phragmites and garlic mustard were identified within the Project Area of the Noble Ball Hill Windpark. Inadvertent introduction of these species into an area through the movement of topsoil, fill, and construction equipment is possible.

Japanese knotweed was observed within the Transmission Line construction disturbance right-of-way (ROW) within and to the north of field-delineated wetland W105. This wetland is shown on wetland mapping as part of the Noble Ball Hill Wetlands and Waterbodies Report in Appendix G of the Draft Environmental Impact Statement (DEIS). Japanese knotweed was also observed in several locations throughout the Project Area that are not in the vicinity of construction disturbance.

Phragmites and garlic mustard were also observed in several locations throughout the Project Area along roadsides and disturbed areas. Neither of these species occur within the construction disturbance ROW.

This plan describes the best management practices (BMPs) Noble will implement to ensure that its activities do not increase the presence of the invasive species mentioned above, within federal and the New York State Department of Environmental Conservation (NYSDEC) regulated wetlands, riparian areas, and NYSDEC regulated adjacent areas falling within the Project Site. The Project Site contains all parcels of the Project Area that have the potential to be permanently or temporarily disturbed as a result of the construction or operation of Project facilities. The Project Area is defined as the outer boundary of the geographic area that includes all turbine sites, access roads, transmission line and collection system components, substation, and switchyard. For the purposes of this discussion, the term federal and NYSDEC-regulated area, or "FDRA" will be used to refer to those wetland, riparian, and NYSDEC regulated adjacent areas that are specifically covered by NYSDEC and United States Army Corps of Engineers (USACE) permits, and that will be temporarily or permanently impacted as a result of constructing and operating the Noble Ball Hill Windpark.

Ten wetlands delineated within the Project Site are assumed to be under jurisdiction of NYSDEC because they correspond to or were in proximity to mapped NYSDEC regulated wetlands, or they are at least 12.4 acres in size. Of these, field-delineated wetlands W110 and W111 correspond to mapped NYSDEC wetland SC-12, and W59, W60, W61, W62, W63, W64, and W65 correspond to mapped NYSDEC wetland SC-13. In addition, based on field surveys, wetland W104 is likely at least 12.4 acres in size. It is not currently mapped by NYSDEC but due to its size may fall under NYSDEC jurisdiction. This determination would be made by NYSDEC subsequent to field review.

The goal of all Noble invasive species management efforts will be to prevent the introduction and spread of invasive species listed above to new locations resulting from Project activities within the FDRA and a 0% net increase in the areal coverage of invasive species resulting from Project activities within the limits of the FDRA (“Baseline Survey”, as described below) for five years post construction. The implementation of these BMPs coupled with active monitoring and intensive management for five years post construction will help ensure the success of this Plan.

As the first step in implementing the Plan, during the siting studies and wetland delineation surveys for the Project, Noble conducted a comprehensive survey of the wetlands, riparian areas, and NYSDEC-regulated adjacent areas within the FDRA to document the presence of purple loosestrife, phragmites, Japanese knotweed, smooth buckthorn, and Eurasian water milfoil (collectively referred to as “Invasive Species”). This survey establishes a pre-construction measure of percentage areal coverage of invasive species.

## **Best Management Practices**

1. **Identification of Infected Areas.** The FDRA will be inspected for the presence of Invasive Species prior to disturbance. Areas containing an infestation within the limits of the FDRA will be clearly identified in the field using highly visible marking tape. A baseline survey report will be prepared and submitted to both NYSDEC and the USACE in advance of construction activities. Noble will request NYSDEC and the USACE to document receipt of, and concurrence with, the Baseline Survey.
2. **Inspection of Fill Sources.** NYSDEC has indicated that many gravel mines across the state contain infestations of invasive species. Prior to the initiation of construction, Noble will identify satisfactory locations for fill and/or construction material including top soil, sand, gravel, rock, and crushed stone, from commercial mines and other off-site locations. Identified locations shall be inspected by Noble environmental staff for the above-mentioned invasive species and measures will be taken to prevent the inadvertent transport of propagules or seeds to Noble’s FDRA. Preventive measures may include opting for different fill sources, or eliminating all invasives before using the fill source, if possible
3. **Invasive Plant Material Removal and Transportation.**
  - ***During Construction.*** Where populations of invasive species are encountered in the FDRA during project construction, these plants will be spot treated with herbicides using a NYSDEC-approved application method prior to removal of the plant material. All chemical treatments will be undertaken in strict accordance with all manufacturer guidelines and federal, state, and local laws. Noble will coordinate with NYSDEC regarding disposal options for specific species as they are identified. With most species, the dead plant material will be segregated from the soil by hand and transported to a designated off-site location in a truck with a cap or topper to securely fasten the load and prevent loss of the material during transport. A single off-site location will contain a disposal container or dumpster designated only for invasive plant material to prevent the spread of invasives throughout the Project Site (and throughout the disposal location). The dumpster will be in an open area and contain a black fitted cover to compost or liquefy the plant material. The dumpster will be monitored by Noble environmental staff to ensure the cover is secure and to monitor the progress of the composting. Once the

material is broken down to the satisfaction of Noble environmental staff, the material will be disposed of in an approved sanitary landfill based on consultation with NYSDEC.

If the areal coverage of the invasive species within the FDRA is greater than 75%, removal of the topsoil to a depth of 16 inches may be considered, depending on site conditions. This topsoil would be replaced with hydric soil or topsoil with a high organic content from a source inspected and deemed free of invasive species. Pre-construction contours will be restored. The infected soil will be removed from the site and disposed of in a suitable upland location (an acceptable distance away from another wetland) or in an approved sanitary landfill based on consultation with NYSDEC. Stripping of topsoil will not be the preferred method of invasive species removal when the species can be counted as individuals and do not dominate an area since this method of control could potentially create a greater disturbance to adjacent unaltered wetland or riparian areas, inadvertently creating conditions more favorable for invasive species or for the establishment of an undesirable plant community.

If Eurasian water milfoil, a submerged aquatic plant, is found within the FDRA, it will be removed by hand and placed into 3-millimeter (mm) thick black plastic contractor bags or in a dumpster depending on quantity for composting or landfill disposal depending on the time of year. This disposal method will prevent alteration of the bed of shallow aquatic habitats and excessive suspended sediments.

- **Post Construction.** If invasive species are found post-construction in the FDRA after restoration of these areas, herbicides will be used to spot treat the area of infection. All chemical treatments will be undertaken in strict accordance with all manufacturer guidelines and federal, state and local laws, and will be coordinated with regional NYSDEC staff. The dead plant material will be removed by hand and disposed of by placing the material in 3-mm-thick black plastic contractor bags. The bags will be sealed and hauled off site in a truck with a cap or topper to securely fasten the load and prevent loss of the material during transport. The bags will be disposed of in an approved sanitary landfill. This area will then be reseeded using the mix or equivalent described in Section 5. A cover crop such as annual rye may be used as a temporary stabilizing agent depending on site conditions and time of year.

4. **Equipment Sanitation.** Per Noble's Environmental Monitoring Program, all earth moving machinery and excavation equipment (motorized or hand powered) will be inspected and cleaned of extraneous soil and debris prior to entry to the Project Site.

Earth moving and excavation equipment used in an FDRA where Invasive Species are present will be cleaned free of debris and soil within an upland area near the infected area prior to the removal of the equipment from the FDRA. Equipment cleaning will consist of a combination of mechanical removal of excess dirt and washing with a mobile pressure washer. This will help prevent the transport of invasive plant seeds or plant propagules to unaffected areas within the FDRA. Erosion and sediment control measures will be implemented to prevent degradation of water quality during this process.

5. **Restoration.** Portions of the FDRA temporarily impacted during the construction of the Project will be restored to pre-construction contours and revegetated immediately following the completion of regulated activities at each site. An appropriate native seed mixture shall

be selected based on pre-disturbance surveys. All seed will be from local sources, to the extent possible dependant upon seed availability, and applied at recommended rates.

An FACW (Wet Meadow Mix) seed mixture, available from *Ernst Conservation Seed* (ERNMX-122) (Ernst Conservation Seeds, 9006 Mercer Pike in Meadville, Pennsylvania 16335, 1-800-873-3321), or an equivalent approved seed mix, will be used in the restoration of all wetland areas and riparian zones impacted by construction activities. This seed mixture contains the following plant makeup:

| Percentage | Botanical Name                 | Common Name                      |
|------------|--------------------------------|----------------------------------|
| 20.00      | <i>Elymus virginicus</i>       | Virginia Wild Rye                |
| 19.00      | <i>Carex vulpinoidea</i>       | Fox Sedge                        |
| 6.00       | <i>Scirpus atrovirens</i>      | Green Bulrush                    |
| 5.50       | <i>Verbena hastata</i>         | Blue Vervain                     |
| 5.00       | <i>Heliopsis helianthoides</i> | Ox-Eye Sunflower                 |
| 3.50       | <i>Glyceria striata</i>        | Fowl Mannagrass                  |
| 3.00       | <i>Carex lurida</i>            | Lurid/Shallow Sedge              |
| 3.00       | <i>Glyceria grandis</i>        | American Mannagrass              |
| 3.00       | <i>Juncus effuses</i>          | Soft Rush                        |
| 2.50       | <i>Carex scoparia</i>          | Blunt Broom Grass                |
| 2.50       | <i>Mimulus ringens</i>         | Square Stemmed Monkey Flower     |
| 2.50       | <i>Onoclea sensibilis</i>      | Sensitive Fern                   |
| 2.50       | <i>Vernonia gigantea</i>       | Giant Ironweed                   |
| 2.00       | <i>Carex comosa</i>            | Cosmos/Bristly Sedge             |
| 2.00       | <i>Eupatorium fistulosum</i>   | Joe Pye Weed                     |
| 2.00       | <i>Eupatorium maculatum</i>    | Spotted Joe Pye Weed             |
| 2.00       | <i>Helenium autumnale</i>      | Common Sneezeweed                |
| 2.00       | <i>Iris versicolor</i>         | Blue Flag                        |
| 2.00       | <i>Scirpus polyphyllus</i>     | Many Leaved Bulrush              |
| 1.50       | <i>Carex lupulina</i>          | Hop Sedge                        |
| 1.50       | <i>Juncus tenuis</i>           | PA Ecotype Path Rush, PA Ecotype |
| 1.00       | <i>Carex stipata</i>           | Awl Sedge                        |
| 1.00       | <i>Geum laciniatum</i>         | Rough Avens                      |
| 1.00       | <i>Glyceria canadensis</i>     | Rattlesnake Grass                |
| 1.00       | <i>Senna hebecarpa</i>         | Wild Senna                       |
| 1.00       | <i>Solidago patula</i>         | Rough Leaved Goldenrod           |
| 0.50       | <i>Carex tribuloides</i>       | Bristlebract Sedge               |
| 0.50       | <i>Lilium superbum</i>         | Turk's Cap Lilly                 |
| 0.50       | <i>Penthorum sedoides</i>      | Ditch Stonecrop                  |
| 0.50       | <i>Thalictrum pubescens</i>    | Tall Meadow Rue                  |

- Restoration Monitoring.** Restoration monitoring of the FDRA for invasive species will be integrated into the wetland mitigation site monitoring program for the first five years post-construction. This monitoring will be conducted through routine inspections conducted by Noble environmental staff, and biannually during the growing season.

Noble will update the baseline survey report as necessary to document any increased areal coverage of invasive species in the FDRA, and provide any such updates to NYSDEC and the USACE.

If areal coverage of the invasive species in the FDRA increases over the Baseline Survey level, on an areal percentage basis, Noble will coordinate with NYSDEC and the USACE to confirm whether it is the result of Project or non-Project related activities. If such increase is determined to be the result of Project activities, remedial actions will be undertaken immediately.

This Invasive Species Control Plan shall be considered successful when a 0% net increase in the areal coverage of Invasive Species in the FDRA compared to the Baseline Survey is achieved.

Noble will provide NYSDEC and the USACE with a restoration monitoring report detailing the status of invasive plant species within the FDRA and all measures taken to meet the success standards by December 31 of the monitoring year. This report will be submitted as an attachment to the Wetland Mitigation Monitoring Report, which documents the success of the wetland mitigation area development. If the restoration monitoring report demonstrates a 0% increase areal coverage of invasive species in the FDRA prior to the end of the five-year monitoring period, Noble will formally request NYSDEC and the USACE to concur and deem this condition of the permit to be met and allow invasive species monitoring to cease. If the goal of this Invasive Species Control Plan is not met within the first five years post-construction, Noble will review its control efforts with NYSDEC and USACE, submit a revised control plan, and implement applicable control actions for an additional monitoring term.

