

INVASIVE SPECIES CONTROL PLAN

FOR CONSTRUCTION ACTIVITIES AND POST CONSTRUCTION MONITORING

INTRODUCTION

Jericho Rise Wind Farm, LLC is constructing a wind energy generation facility (the Project) in the Towns of Chateaugay and Belmont in Franklin County, New York. The Project will include 37 wind turbines, each with a nameplate capacity of 2.1 megawatts (MW), for a total anticipated nameplate capacity of 77.7 MW. The Project will also involve construction of approximately 10.6 miles of gravel access roads, approximately 17.6 miles of 34.5 kV electrical collection lines, a substation/switchyard, one permanent 93-meter (328 feet) tall meteorological tower, and a temporary laydown area.

Land use within the Project Site is dominated by active and reverting agricultural land and forest. With the exception of the Villages of Chateaugay and Burke, the area surrounding the Project is primarily undeveloped, with farms, forest, and rural residences interspersed along area roadways.

Construction of the Project will result in soil disturbance and vegetation clearing in the vicinity of Project components and workspaces. A total of approximately 138 acres of soil will be disturbed during construction, and approximately 483 acres of vegetation will be cleared. Within these areas of disturbance, approximately 49 acres will be converted to built facilities, while the rest will be disturbed on only a temporary basis and will ultimately be allowed to return to a natural state. The spread of invasive species into these temporarily disturbed areas is a risk that is introduced through the movement of topsoil, fill, gravel, and construction equipment. These activities will occur during both Project construction and restoration.

An invasive species is an organism that has been purposefully or accidentally introduced outside its original geographic range, and is able to proliferate and aggressively alter its new environment, potentially causing harm to the economy, environment, or human health. Invasive plant species spread in a number of different ways. Dispersal mechanisms include wind, water, wildlife, vegetative reproduction, and human activity. Populations of invasive species typically establish most readily in places where the ground has been disturbed, thereby exposing the soil. The Jericho Rise Wind Farm will utilize this Invasive Species Control Plan (ISCP) to minimize the spread of invasive species within areas disturbed by Project construction.

PURPOSE AND GOAL

The purpose of the ISCP is to facilitate the identification, control, and monitoring of invasive vegetation within areas disturbed during construction. The goal of the ISCP is to prevent expansion of invasive species, and this plan will be

considered successful when 0% net increase in the aerial coverage of invasive species compared to a baseline survey of the target area is realized. For the purposes of the ISCP, the target area shall consist of those areas where soil was disturbed during Project construction.

LAWS AND REGULATIONS

There are numerous federal laws that contain provisions for the control of invasive species, such as the Endangered Species Act, the Federal Plant Pest Act, the Federal Noxious Weed Act, and the Nonindigenous Aquatic Nuisance Prevention Act. However, specific to the Jericho Rise Wind Farm, the most likely Federal law applicable to the management of invasive species is Section 404 of the Clean Water Act.

The Environmental Conservation Law and the Agriculture & Markets Law both authorize the New York State Department of Environmental Conservation (NYSDEC) and the NYS Department of Agriculture and Markets (NYSDAM) to regulate invasive species. Under the Agriculture & Markets Law, NYSDAM has the regulatory authority regarding the Inspection and Sale of Seeds (Article 9); Integrated Pest Management Program (Article 11); and Prevention and Control of Disease in Trees and Plants (Article 14). Under the Environmental Conservation Law, the NYSDEC has regulatory authority regarding Lands and Forests (Article 9) and Fish and Wildlife (Article 11). In addition, as an Interested Agency under SEQRA, NYSDEC has provided guidance to the Co-Lead Agencies (the Towns of Chateaugay and Belmont) regarding invasive species control measures recommended for the Project.

The official State listing of *Prohibited and Regulated Invasive Species* was updated as of September 10, 2014 (see Attachment A). Part 575 of 6 NYCRR includes a list of “prohibited” species which are unlawful to knowingly possess with the intent to sell, import, purchase, transport or introduce, as well as a list of “regulated” species which are legal to possess, sell, purchase, propagate and transport but may not be knowingly introduced into a free-living state. These regulations are expected to help control invasive species by reducing the introduction of new and spread of existing populations.

Invasive species known to occur on the Project site include the following:

- garlic mustard,
- Japanese knotweed,
- common buckthorn,
- spotted knapweed,
- Canada thistle,
- Morrow's honeysuckle,
- purple loosestrife, and

- common reed.

Spotted knapweed, Canada thistle, and Morrow's honeysuckle are well established and widely distributed throughout the Project Site. The other invasive plant species are less abundant. Invasive insect species have not been observed on the Project site.

BASELINE SURVEY

All areas to be disturbed during construction will be surveyed during the growing season to document invasive plant species present on the construction site. If construction activities initiate prior to the growing season, then an initial survey will be conducted for those species that are persistent and easily identifiable during the winter (e.g., Japanese knotweed, common reed). Data collected during the baseline survey will inform a post construction monitoring goal of no net increase of invasive species. For each population documented, the surveyor will note the location and estimate absolute cover. In those areas where populations occur in discrete patches with clear boundaries, the boundaries will be identified with flagging and GPS coordinates. For more widespread invasive species where identifying discrete population boundaries is not practicable, the approximate absolute cover will be documented with photos and field notes.

PROPOSED CONTROL MEASURES

A central theme of the ISCP will be educating construction workers about invasive species and how to prevent their spread. This education will be accomplished through the various contractor-training sessions provided by the Environmental Monitor, which will occur as part of the Project's Environmental Compliance and Monitoring Program. The ISCP consists of the following control measures: 1) construction materials inspection; 2) target species treatment and removal; 3) construction equipment sanitation; and 4) restoration. Each of these measures is described in detail below:

1. Construction Materials Inspection: Construction material such as seed mixes, mulch, topsoil, sand, gravel, crushed stone, and rock brought to the Project Site from an outside source will be free of invasive plant materials. In addition, during all aspects of construction, soil and/or spoil materials will only be temporarily stockpiled (i.e., will be spread and graded to match original contours at the earliest practicable time following construction activities). Proper methods for segregating stockpiled and spoil material will be implemented, and excavated soil will be reused to the maximum extent possible on the site that it was excavated from, as a means to limit opportunities for proliferation of non-native flora and other invasive species. Appropriate sediment and erosion control measures will be implemented, which will also limit the spread of invasive species from one area to another.

2. **Target Species Treatment and Removal:** If unavoidable areas containing target invasive species are encountered, then appropriate treatment and removal methods will be conducted. Specific disposal and treatment methods for removed plant material will be determined (through consultation with the Environmental Monitor) based on the density and quantity of invasive species encountered, and may include herbicide treatment, placement in an interim designated secure container, transport in a sealed container and proper offsite disposal in a designated secure container, or leaving infested vegetative materials in the area that is already infested, provided that no filling of wetlands or adjacent areas will occur as a result. Any herbicide spot treatments would be applied by a Certified Commercial Pesticide Applicator, Commercial Pesticide Technician, or a Private Pesticide Applicator (i.e., individuals that meet the requirements set forth in 6 NYCRR Part 325, Application of Pesticides), in accordance with NYSDEC approved herbicide and treatment measures.

Reducing the spread of Japanese knotweed is of special concern because it is highly invasive and out-competes all native vegetation in areas where it is introduced. NYSDEC has identified specific control measures to be used when sites containing Japanese knotweed will be disturbed. Areas with Japanese knotweed will be identified and flagged prior to initiation of site work. If those areas with Japanese knotweed are to experience soil disturbance during construction, the entire root systems of the plants will be excavated and placed directly into a container or truck bed, rather than being stockpiled on site. The excavated material will be disposed of at a Regulated Waste Facility or treated by a process that destroys all Japanese knotweed propagules (roots, rhizomes, etc.).

3. **Construction Equipment Sanitation:** The introduction of non-native invasive plant species will be controlled by assuring that all construction equipment is clean upon arrival on site, and that equipment utilized in areas with an abundance of invasive species will be cleaned prior to moving to another site. The intent is that equipment should arrive at the site clean and leave the site clean. Equipment/clothing cleaning stations will be established to ensure that invasive species seeds and other viable plant parts cannot escape in runoff or through other means.
4. **Restoration:** Areas where soil is temporarily disturbed during construction will be stabilized and restored in accordance with the Project-specific Stormwater Pollution Prevention Plan. Following construction activities, temporarily disturbed areas will be seeded with a native seed mix to reestablish native vegetative cover in these areas.

CONSTRUCTION AND POST-CONSTRUCTION MONITORING

Monitoring of the control of invasive species for the Jericho Rise Wind Farm is proposed to have two phases: 1) monitoring the implementation of the ISCP during construction and 2) monitoring the success of the ISCP after construction for a two-year period, which will coincide with the monitoring of other project restoration activities (i.e., NYSDAM Guidelines). The ISCP will have a goal of no net increase in invasive plant species coverage within the area disturbed by Project construction. Success in meeting the no net increase goal will be evaluated upon completion of the two-year post construction monitoring program. Each of the monitoring phases are described in detail below:

1. Construction Monitoring: During construction, workers will be educated about the Best Management Practices for controlling the spread of invasive species as described above, and the Environmental Monitor will confirm and maintain records that all required practices are being implemented during construction activities.
2. Post-Construction Monitoring: The change in invasive species coverage from pre-construction to post-construction will be assessed by an experienced biologist conducting a visual inspection of disturbed areas during the growing season for two consecutive years following restoration. A report detailing the success of the ISCP will be prepared. In the event that the ISCP goals are not met, then a revised control plan containing additional control actions and an extended monitoring term will be developed.

ATTACHMENT A

PROHIBITED AND REGULATED INVASIVE PLANT SPECIES

6 NYCRR Part 575
Prohibited and Regulated Invasive Species
September 10, 2014

ALGAE AND CYANOBACTERIA

Prohibited:

Caulerpa taxifolia, Killer Green Algae
Didymosphenia geminata, Didymo
Prymnesium parvum, Golden Algae

Regulated:

Cylindrospermopsis raciborskii, Cylindro
Grateloupia turuturu, Red Algae

PLANTS

Prohibited:

Acer pseudoplatanus, Sycamore Maple
Achyranthes japonica, Japanese Chaff Flower
Alliaria petiolata, Garlic Mustard
Ampelopsis brevipedunculata, Porcelain Berry
Anthriscus sylvestris, Wild Chervil
Aralia elata, Japanese Angelica Tree
Artemisia vulgaris, Mugwort
Arthraxon hispidus, Small Carpet Grass
Berberis thunbergii, Japanese Barberry
Brachypodium sylvaticum, Slender False Brome
Cabomba caroliniana, Fanwort
Cardamine impatiens, Narrowleaf Bittercress
Celastrus orbiculatus, Oriental Bittersweet
Centaurea stoebe (*C. biebersteinii*, *C. diffusa*, *C. maculosa misapplied*, *C. xpsammogena*), Spotted Knapweed
Cirsium arvense (*C. setosum*, *C. incanum*, *Serratula arvensis*), Canada Thistle
Cynanchum louiseae (*C. nigrum*, *Vincetoxicum nigrum*), Black Swallow-wort
Cynanchum rossicum (*C. medium*, *Vincetoxicum medium*, *V. rossicum*), Pale Swallow-wort
Dioscorea polystachya (*D. batatas*), Chinese Yam
Dipsacus laciniatus, Cut-leaf Teasel
Egeria densa, Brazilian Waterweed
Elaeagnus umbellata, Autumn Olive
Euphorbia cyparissias, Cypress Spurge
Euphorbia esula, Leafy Spurge
Ficaria verna (*Ranunculus ficaria*), Lesser Celandine
Frangula alnus (*Rhamnus frangula*), Smooth Buckthorn
Glyceria maxima, Reed Manna Grass
Heracleum mantegazzianum, Giant Hogweed
Humulus japonicus, Japanese Hops
Hydrilla verticillata, Hydrilla/ Water Thyme
Hydrocharis morsus-ranae, European Frogbit
Imperata cylindrica (*I. arundinacea*, *Lagurus cylindricus*), Cogon Grass
Iris pseudacorus, Yellow Iris

Lepidium latifolium, Broad-leaved Pepper-grass
Lespedeza cuneata, Chinese Lespedeza
Ligustrum obtusifolium, Border Privet
Lonicera japonica, Japanese Honeysuckle
Lonicera maackii, Amur Honeysuckle
Lonicera morrowii, Morrow's Honeysuckle
Lonicera tatarica, Tartarian Honeysuckle
Lonicera x bella, Fly Honeysuckle
Ludwigia hexapetala (*L. grandiflora*), Uruguayan Primrose Willow
Ludwigia peploides, Floating Primrose Willow
Lysimachia vulgaris, Garden Loosestrife
Lythrum salicaria, Purple Loosestrife
Microstegium vimineum, Japanese Stilt Grass
Murdannia keisak, Marsh Dewflower
Myriophyllum aquaticum, Parrot-feather
Myriophyllum heterophyllum, Broadleaf Water-milfoil
Myriophyllum heterophyllum x M. laxum, Broadleaf Water-milfoil Hybrid
Myriophyllum spicatum, Eurasian Water-milfoil
Nymphoides peltata, Yellow Floating Heart
Oplismenus hirtellus, Wavyleaf Basketgrass
Persicaria perfoliata (*Polygonum perfoliatum*), Mile-a-minute Weed
Phellodendron amurense, Amur Cork Tree
Phragmites australis, Common Reed Grass
Phyllostachys aurea, Golden Bamboo
Phyllostachys aureosulcata, Yellow Groove Bamboo
Potamogeton crispus, Curly Pondweed
Pueraria montana, Kudzu
Reynoutria japonica (*Fallopia japonica*, *Polygonum cuspidatum*), Japanese Knotweed
Reynoutria sachalinensis (*Fallopia sachalinensis*, *Polygonum sachalinensis*), Giant Knotweed
Reynoutria x bohemica (*Fallopia x bohemica*, *Polygonum x bohemica*), Bohemian Knotweed
Rhamnus cathartica, Common Buckthorn
Rosa multiflora, Multiflora Rose
Rubus phoenicolasius, Wineberry
Salix atrocinerea, Gray Florist's Willow
Silphium perfoliatum, Cup-plant
Trapa natans, Water Chestnut
Vitex rotundifolia, Beach Vitex

Regulated:

Acer platanoides, Norway Maple
Clematis terniflora, Japanese Virgin's Bower
Euonymus alatus, Burning Bush
Euonymus fortunei, Winter Creeper
Miscanthus sinensis, Chinese Silver Grass
Robinia pseudoacacia, Black Locust

FISH

Prohibited:

Channa argus, Northern Snakehead

Channa marulius, Bullseye Snakehead
Channa micropeltes, Giant Snakehead
Clarias batrachus, Walking Catfish
Gambusia affinis, Western Mosquitofish
Gambusia holbrooki, Eastern Mosquitofish
Hypophthalmichthys harmandi, Largescale Silver Carp
Hypophthalmichthys molitrix, Silver Carp
Hypophthalmichthys nobilis, Bighead Carp
Misgurnus anguillicaudatus, Oriental Weatherfish
Mylopharyngodon piceus, Black Carp
Neogobius melanostomus, Round Goby
Petromyzon marinus, Sea Lamprey
Proterorhinus semilunaris (P. marmoratus), Tubenose Goby
Tinca tinca, Tench

Regulated:

Carassius auratus, Goldfish
Cyprinella lutrensis, Red Shiner
Cyprinus carpio, Common Carp/ Koi
Gymnocephalus cernuus, Ruffe
Monopterus albus, Asian Swamp Eel
Oreochromis aureus, Blue Tilapia
Oreochromis niloticus, Nile Tilapia
Pterois miles, Common Lionfish
Pterois volitans, Red Lionfish
Sander lucioperca (Stizostedion lucioperca), Zander
Scardinius erythrophthalmus, Rudd

AQUATIC INVERTEBRATES

Prohibited:

Bellamyia chinensis (Cipangopaludina chinensis), Chinese Mystery Snail
Bellamyia japonica, Japanese Mystery Snail
Bithynia tentaculata, Faucet Snail
Bythotrephes longimanus (B. cederstroemi), Spiny Water Flea
Cercopagis pengoi, Fishhook Water Flea
Corbicula fluminea, Asian Clam
Crassostrea ariakensis, Suminoe Oyster
Didemnum spp., Carpet Tunicate
Dreissena polymorpha, Zebra Mussel
Dreissena rostriformis bugensis, Quagga Mussel
Eriocheir sinensi, Chinese Mitten Crab
Hemigrapsus sanguineus, Asian Shore Crab
Hemimysis anomala, Bloody Red Shrimp
Orconectes rusticus, Rusty Crayfish
Potamopyrgus antipodarum, New Zealand Mud Snail
Rapana venosa, Veined Rapa Whelk
Styela plicata, Asian Sea Squirt

Regulated:

Carcinus maenas, European Green Crab
Daphnia lumholtzi, Water Flea
Hemigrapsus takanoi (H. penicillatus), Brush-clawed Shore Crab/ Grapsid Crab

TERRESTRIAL INVERTEBRATES

Prohibited:

Achatina achatina, Giant Ghana Snail
Achatina fulica (Lissachatina fulica), Giant African Land Snail
Adelges tsugae, Hemlock Woolly Adelgid
Agrilus planipennis, Emerald Ash Borer
Amyntas spp., Asian Earthworms
Anoplophora glabripennis, Asian Longhorn Beetle
Apis mellifera scutellata x A. mellifera ligustica/ A. mellifera iberiensis, Africanized Honey Bee
Archachatina marginata, Giant West African Snail
Cryptococcus fagisuga, Beech Scale
Lymantria dispar, Asian and European Gypsy Moth
Monochamus alternatus, Japanese Pine Sawyer
Pityophthorus juglandis, Walnut Twig Beetle
Sirex noctilio, Sirex Woodwasp

TERRESTRIAL AND AQUATIC VERTEBRATES

Prohibited:

Cygnus olor, Mute Swan
Lepus europaeus, European Hare
Myocastor coypus, Nutria
Nyctereutes procyonoides, Asian Raccoon Dog
Sus scrofa (excluding Sus scrofa domestica), Eurasian Boar

Regulated:

Alopochen aegyptiacus, Egyptian Goose
Cairina moschata, Muscovy Duck
Myiopsitta monachus, Monk Parakeet
Oryctolagus cuniculus, European Rabbit
Trachemys scripta elegans, Red-eared Slider
Xenopus laevis, African Clawed Frog

FUNGI

Prohibited:

Amylostereum areolatum, Sirex Wasp Fungus
Geomyces destructans, White-nose Syndrome
Geosmithia morbida, Thousand Canker Disease
Phytophthora ramorum, Sudden Oak Death

For the official regulations and species lists please see: <http://www.dec.ny.gov/regulations/265.html>.

**New York State Department of Environmental Conservation
Part 575 Invasive Species Regulations
Questions and Answers**

What are invasive species?

Invasive species means a species that is non-native to the ecosystem under consideration; and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Why are invasive species a problem?

Invasive species have a detrimental effect upon the State's natural communities and systems by out-competing native species, diminishing biological diversity, altering community structure and, in some cases, changing ecosystem processes. They can even harm human health.

How will these regulations help?

The regulations were developed by the Department of Environmental Conservation, in cooperation with the Department of Agriculture and Markets. These regulations, once implemented, are expected to help control invasive species by reducing the introduction and spread of invasive species populations by limiting commerce in such species, thereby having a positive impact on the environment.

How were the lists of species in the regulations developed?

The lists of prohibited and regulated species were developed using the standardized species assessment and listing process outlined in the 2010 report "A Regulatory System for Non-native Species". Lists of candidate non-native invasive species were compiled by reviewing other state regulations, reports, lists and consulting with agency experts. A rapid assessment was conducted to determine if the species warranted listing and was already federally regulated. Ecological invasiveness assessments were conducted on each potential invasive species followed by a socio-economic assessment for those ranking High or Very High. The assessment team then placed the species in the appropriate regulatory classification of Prohibited or Regulated. The initial recommendations were submitted to the Invasive Species Advisory Committee (25 Non-Government Organizations) and Council (9 State Agencies) for review and comment. The lists were then incorporated into the regulations.

Why isn't a particular species included on the prohibited or regulated lists?

Due to staffing limitations and time constraints, the initial list of prohibited and regulated species is not all-encompassing. We anticipate that the regulations will be updated on a regular basis. The regulations include language for petitioning for addition or removal of species from the prohibited and regulated lists. Some species were assessed, but do not meet the criteria for prohibition or regulation.

Aren't some of the species listed as either prohibited or regulated already established?

Yes, however, there are areas of the State in which they have not yet established populations and these regulations are intended to slow the spread by reducing the number of individuals of a species released into a region, to which they are not native, associated with the sale and introduction of such species.

When did the regulation become final?

The part 575 invasive species regulations were proposed, and a 60 day to public comment held between October and December 2013. During this time, four public hearings were scheduled across the State. All comments received were reviewed and a summary of public comments and agency responses was compiled. Required changes were made to the final regulations. A summary of the final regulations was published in the State Register September 10, 2014 and the full express terms were published on the Department's website.

Once finalized, when will the regulations become implemented?

A summary of the final regulations was published in the State Register September 10, 2014. The part 575 regulations take effect 6 months later (March 10, 2015).

What is the difference between prohibited and regulated invasive species?

Prohibited invasive species cannot be knowingly possessed with the intent to sell, import, purchase, transport or introduce. In addition, no person shall sell, import, purchase, transport, introduce or propagate prohibited invasive species. Regulated invasive species, on the other hand, are species which cannot be knowingly introduced into a free-living state, or introduced by a means that one should have known would lead to such an introduction, although such species shall be legal to possess, sell, buy, propagate and transport.

What is considered a free-living state?

A species is considered in a free-living state if it is introduced to public lands or lands connected to public lands, natural areas, and public waters or waters connected to public waters.

Are there any exceptions to the definition of a free-living state?

Yes, such exceptions include artificial ponds and water gardens with no outlet to public waters, waters entirely within private land not connected to public waters, and water-use facilities with outflows not providing access to public waters.

Do the regulations require existing populations of species on the prohibited and regulated lists be managed or destroyed by the land-owner?

No, existing populations of non-native invasive species listed as prohibited or regulated and established prior to the implementation of the final part 575 regulations do not require management by the owner. However, once implemented, the final regulations do prohibit commerce involving those species listed as prohibited species and the release of regulated species into a free-living state.

What species have grace periods established in the regulations?

A one year grace period is included in the regulations for Japanese Barberry (*Berberis thunbergii*), during which existing stock of this species may be sold. In addition, a person may possess, sell, offer for sale, distribute, transport, or otherwise market or trade live Eurasian boars (*Sus scrofa*) until September 1, 2015. No person shall knowingly import, propagate or introduce Eurasian boars into a free-living state.

Will there be a fee for permits? No fee is anticipated for permits issued for research, education or other approved activity.

Who will enforce the final regulations?

The regulations will be enforced by the Department of Environmental Conservation, with assistance from the Department of Agriculture and Markets.