Heritage Wind Project
Invasive Species Control Plan

Heritage Wind, LLC

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APPENDICES

1. PURPOSE AND GOAL

Heritage Wind, LLC (Heritage Wind or the Applicant) is proposing to construct a wind energy generating facility in the Town of Barre in Orleans County, New York (the Facility). The purpose of this Invasive Species Control Plan (ISCP) is to facilitate the identification, control, and monitoring of invasive species within areas where vegetation or soil is disturbed during construction of the Facility (i.e., the limits of disturbance or the Study Area).

This ISCP describes specific measures that will be implemented to minimize the introduction of New York State designated invasive species and control the spread of existing invasive species during construction within the Study Area. In addition, this ISCP describes a post-construction monitoring plan to evaluate the success of these measures and implement corrective action if needed.

2. LAWS AND REGULATIONS

The Environmental Conservation Law and the Agriculture and Markets Law authorize the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Agriculture and Markets (NYSDAM) to regulate invasive species. Under the Environmental Conservation Law, the NYSDEC has regulatory authority regarding Lands and Forests (Article 9) and Fish and Wildlife (Article 11). Under the Agriculture and Markets Law, NYSDAM has 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).

The official New York State listing of *Prohibited and Regulated Invasive Species* was last updated on September 10, 2014 (Appendix A). Part 575 of 6 NYCRR includes: (1) a list of prohibited species which are unlawful to knowingly possess with the intent to sell, import, purchase, transport, or introduce; (2) 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; and (3) requirements for a permit for research, education, and other approved activities involving prohibited species and release of regulated species into a free-living state.

Species listed as prohibited and regulated under 6 NYCRR Part 575 will be the focus of identification, treatment, and control for the Facility.

3. EXISTING CONDITIONS BASED ON 2019 FIELD SURVEY

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) ecologists surveyed the Study Area during the spring, summer, and fall of 2019 to identify NYSDEC-listed Prohibited and Regulated Invasive Plant Species (NYSDEC, 2014). All invasive species observed within the Study Area (as defined by NYSDEC) were recorded (see Table 1) and a GPS-enabled mobile device was used to record the center point, or create a polygon encompassing any invasive species population with an absolute cover value above 25%.

The Study Area is primarily composed of active agricultural land, with rural residences and forested areas separating agricultural fields. Existing invasive species within the Study Area are primarily associated with disturbed areas, including roadsides, forest edges, agricultural fields, hedgerows, and forest trails. Twelve different plants listed as New York State prohibited or regulated invasive species were identified by EDR within the Study Area. These species are

listed below in Table 1 (see Figure 22-1 in the Heritage Wind Project Article 10 Application for mapped locations of invasive species).

Table 1: Prohibited and Regulated Invasive Species Identified Within Study Area

Common Name	Scientific Name
Garlic mustard	*Alliaria petiolata*
Mugwort	*Artemisia vulgaris*
Oriental bittersweet	*Celastrus orbiculatus*
Spotted knapweed	*Centaurea stoebe*
Creeping thistle	*Cirsium arvense*
Autumn olive	*Elaeagnus umbellata*
Morrow's honeysuckle	*Lonicera morrowii*
Common reed	*Phragmites australis*
Common buckthorn	*Rhamnus cathartica*
Black locust	*Robinia pseudoacacia*
Multiflora rose	*Rosa multiflora*
Swallow-wort[1]	*Vincetoxicum* sp.

[1] Due to the phenology of this species and the time of the survey, it was not possible to determine whether the observed plants were *V. rossicum* or *V. nigrum.* However, both are listed as prohibited invasive species under 6 NYCRR Part 575.

Distribution and density of invasive species within the Study Area varies by species. Common buckthorn and Morrow's honeysuckle were prevalent throughout the Study Area, frequently together, and were particularly concentrated in hedgerows, along forest edges, and within forest understories. Multiflora rose typically accompanied the former two species but was not quite as widespread. Garlic mustard and mugwort were also quite common, especially near edges of agricultural fields and often pushing into the boundaries of forests. Creeping thistle, and to a lesser extent spotted knapweed, were encountered along the edges of roads and successional locations bordering active agricultural fields. Black locust was found sporadically throughout the site, often on the edge of forests that bordered fields, while autumn olive was observed in a small number of locations with high concentrations across the Study Area. Common reed dominated certain farm ditches and was also present in some emergent wetland areas. Swallow-wort and oriental bittersweet were irregularly dispersed, occurring only in a handful of locations.

4. PRE-CONSTRUCTION MONITORING FOR INVASIVE SPECIES

During the growing season immediately prior to the start of construction-related activities, a Pre-Construction Invasive Species Survey will be conducted to document the location and map existing absolute cover of invasive species within the Study Area. The data collected in the course of this survey will serve as the comparative baseline for all post-construction invasive species surveys. Though a preliminary field survey of invasive species has been completed for the Facility's Article 10 Application, the Pre-Construction Invasive Species Survey will account for any changes to the Facility layout and/or invasive species presence/cover that may occur between the time of Application filing and the date when a Certificate is granted by the New York State Board on Electric Generation Siting and the Environment.

The Pre-Construction Invasive Species Survey methodology will consist of qualified ecologists systematically surveying the Study Area and visually estimating the areal cover of all identified NYSDEC-listed Prohibited and Regulated Invasive Plant Species (NYSDEC, 2014). A GPS-enabled device will be used to record the boundaries of any invasive species populations with an area exceeding 0.1 acre and percent cover greater than 1%. Invasive species encountered with an area less than 0.1 acre or less than 1% cover will be recorded with a GPS center point. All recorded populations of invasive species will be assigned an area code for infestation level and a density code for absolute cover, as defined in Table 2.

Table 2: Invasive Species Cover Classification Codes

Area Code	Area Description	Density Code	Density Description/Absolute Cover
1	Early detection - Under 0.1 acre	1	Sparse: 5% or less absolute cover
2	Small infestation – Over 0.1 but under 1 acre	2	Patchy: 5-40% absolute cover
3	Medium infestation – Over 1 but under 2.5 acres	3	Dense: 40-70% absolute cover
4	Large infestation – Over 2.5 acres	4	Monoculture: 70-100% absolute cover

Species data will be recorded using the plant "symbols" or codes promulgated by the USDA PLANTS Database (USDA NRCS, 2019). Each symbol is composed of the first two letters of the genus and the first two letters of the species, followed by the first letter of the terminal infraspecific name and a tiebreaking number (if needed where multiple species would otherwise have identical codes). Collected data will then be used to produce a map series of invasive plant coverage throughout the Study Area. Photographs will be taken to document pre-construction conditions throughout the Study Area, and representative photographs will be taken of each invasive species detected.

The survey methods employed in this baseline survey will allow for a post-construction evaluation of the goals established in this ISCP. During post-construction surveys, an appropriately qualified ecologist(s) will return to the Study Area and employ the same methodology used for this baseline survey to generate results that will allow for a comparison between pre- and post-construction conditions.

5. PROPOSED CONTROL METHODS

Proposed control methods will ultimately be compliant with the issued Site Engineering and Environmental Plan (SEEP) for the Facility. During construction, it is anticipated that all Facility-affiliated workers will be trained in the measures for controlling the spread of invasive species. This educational effort may be accomplished through various training sessions provided by an independent, third-party environmental monitor hired by the Applicant (Environmental Monitor). In addition, the following control measures may be implemented and documented by the Environmental Monitor, as applicable:

5.1 Construction Materials Inspection

Where applicable based on governing laws and regulations, all imported construction materials (e.g., seed mixes, mulch, topsoil, sand, gravel, crushed stone, rock, packing materials, etc.) will be free of invasive plant materials and other deleterious material before entering the Facility.

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 to limit opportunities for proliferation of non-native flora and other invasive species. In addition, at the earliest practicable time following construction activities, temporarily stockpiled soil and/or spoil materials will be spread and graded to reasonably match original contours. Soil and/or spoils excavated from areas free of invasive species will be stockpiled in designated staging areas with no invasive species. Excess excavated material should be disposed of at a Regulated Waste Facility or treated by a process that destroys seeds or propagules to prevent the spread of invasive species. Appropriate sediment and erosion control measures outlined in the Facility-specific Stormwater Pollution Prevention Plan (SWPPP) will also be implemented to limit the spread of invasive species from one area to another.

5.2 Target Species Treatment and Removal

The results of the Pre-Construction Invasive Species Survey will be used to identify specific populations of invasive species that may require treatment and removal. Target populations will be identified based on the species and the location and extent of the population relative to populations of the same species within the Study Area. Specific invasive species treatment and disposal methods will be determined through a review of enacted governing regulations and laws and consultation with regulatory agencies, and will be documented by the on-site Environmental Monitor. These treatment methods may include: herbicide applications, placement in an interim designated secure container, transport in a sealed contained and proper offsite disposal in a designated secure container, or leaving infested vegetative materials in the area that is already infested, provided that no filing of wetlands or adjacent areas will occur as a result. Any herbicide spot treatments would be applied by individuals that meet the requirements set forth in 6 NYCRR Part 325, Application of Pesticides and in accordance with NYSDEC-approved herbicide and treatment measures.

Species-specific treatment and removal recommendations established by the NYSDEC for common invasive species that are known to occur within the regional Facility area are summarized below (see also Appendix B). Any treatment or removal recommendations will be applied by the Applicant in coordination with the landowner(s), where applicable. Additional species-specific treatment and removal methods may be included

in the Final Invasive Species Control Plan and/or the Site Engineering and Environmental Plan (SEEP), and/or may be incorporated into training efforts conducted by the Environmental Monitor.

Emerald Ash Borer

The emerald ash borer (*Agrilus planipennis*) is an invasive insect that has caused widespread die-offs of ash (*Fraxinus* spp.) trees in much of New York State. Orleans County is included in the NYSDEC and NYSDAM emerald ash borer restricted zone (NYSDEC, 2019a; see Appendix C). In order to prevent further infestations, any ash trees (*Fraxinus* spp.*)* removed during Facility construction should be treated according to NYSDEC and NYSDAM regulations.

Hemlock Wooly Adelgid

To prevent the spread of the hemlock woolly adelgid (*Adelges tsugae*), an invasive insect that has been documented in the northern portion of Orleans County (NYSDEC, 2020), the above treatment and removal methods should also be implemented where clearing of eastern hemlock (*Tsuga canadensis*) trees occurs. In addition, incidences of infected trees should be reported to the NYSDEC to aid in documenting the spread of this species in New York State.

Giant Hogweed

Giant hogweed (*Heracleum mantegazzianum*) is an invasive plant species found throughout Orleans County that poses a significant safety concern to personnel involved in Facility construction and operation (NYSDEC, 2019b). Detailed control methods provided by the NYSDEC, along with Health Hazards and Safety Instructions are presented in Appendix B. This species has not been observed within the Study Area to date. However, should it be identified during the pre-construction survey, all site personnel responsible for invasive species control and/or handling of the specific species should be prepared to wear the following: long waterproof gloves, long sleeves, pants, boots, and eye protection.

5.3 Construction Equipment and Personnel Sanitation

The Environmental Energy Alliance of New York Best Management Practices (BMPs) for Preventing the Transportation of Invasive Plant Species has issued a guidance document to minimize the spread of invasive species (Appendix D). The construction contractor may implement these BMPs or other similar industry standard practices to control the spread of invasive species by assuring that all construction equipment and personnel are clean (free of mud, debris, vegetation, roots, debris, etc.) upon arrival and that equipment utilized in areas with invasive species is cleaned prior to moving out of the infested area.

Other BMPs may include:

- Ensuring equipment arrives at the site clean and leave the site clean;
- Establishing equipment/personnel cleaning stations at locations proximal to areas currently infested with invasive species;

- Ensuring that invasive species seeds and other viable plant parts cannot spread through runoff or other means at and in the vicinity of cleaning stations; and
- Cleaning equipment by power-washing with clean water (no soaps or chemicals) or using compressed air. If conditions do not allow the use of power washing or compressed air, the equipment shall be cleaned of visible signs of plant material prior to exiting infested areas. Water used for cleaning equipment shall not come from surface waters that could contain invasive species. Any wash water (including spray) shall not be discharged within 100 feet of any stream, wetland, wetland adjacent area, or storm-water conveyance (e.g., ditch, catch basin).

5.4 Restoration

Areas where soil has been temporarily disturbed during construction will be graded, stabilized and restored in accordance with the Facility-specific SWPPP and SEEP. If needed for restoration, all fill material brought to the Facility will be free of non-native invasive plant species. To minimize the chance of invasive species spreading or increasing in abundance, all disturbed soils within and adjacent to areas with invasive species should be stabilized with a native seed mix and weed-free mulch as soon as possible following construction.

6. POST-CONSTRUCTION MONITORING FOR INVASIVE SPECIES

The goal of the post-construction monitoring is to document and prevent expansion of invasive species within all areas that were disturbed during construction of the Facility relative to the baseline survey. The ISCP will be considered successful if no new invasive species colonize the Study Area and invasive species currently within the Study Area do not establish new populations, in comparison to pre-construction data.

6.1 Term

Post-construction monitoring for invasive species will be conducted one, three, and five years following the completion of construction (the MP Term).

6.2 Monitoring

During the MP Term, the Applicant will monitor the Study Area to identify increases in known invasive species. This monitoring will be conducted one, three, and five years following construction and will occur during the growing season of each monitoring year.

6.3 Reports

On or before December 31 of the respective monitoring year during the MP Term, the Applicant will submit a post-construction monitoring report to the NYSDEC detailing the monitoring and the status of known invasive species in the Study Area.

6.4 Remedial Action

If consecutive monitoring reports demonstrate no new invasive species in the Study Area and no new locations of existing invasive species in the Study Area, then the goals of this plan will have been deemed to have been met and the MP Term shall end.

If, at the end of the MP Term, the Applicant identifies new invasive species and/or increases in the invasive species cover above what was documented in the Pre-Construction Invasive Species Survey, the Applicant will engage in consultation with NYSDEC staff in order to evaluate why the measures implemented may have been ineffective, discuss the remedial actions necessary to correct the situation, and define an appropriate schedule for conducting the remedial work. An Invasive Species Remedial Plan will then be prepared based on this consultation and implemented according to an approved schedule.

7. REFERENCES

New York State Department of Environmental Conservation (NYSDEC). 2014. *New York State Prohibited and Regulated Invasive Plants*. September 10, 2014. Available at: https://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf (Accessed February 2020).

NYSDEC. 2019a. *Emerald Ash Borer (EAB)*. Available at: https://www.dec.ny.gov/animals/7253.html (Accessed February 2020).

NYSDEC. 2019b. *Giant Hogweed*. Available at: https://www.dec.ny.gov/animals/39809.html (Accessed February 2020).

NYSDEC. 2020. *Hemlock Woolly Adelgid.* Available at: https://www.dec.ny.gov/animals/7250.html (Accessed February 2020).

Appendix A

NYSDEC Prohibited and Regulated Invasive 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:
Bellamya chinensis (Cipangopaludina chinensis),Chinese Mystery Snail
Bellamya japonica, Japanese Mystery Snail
Bithynia tentaculata, Faucet Snail
Bythotrephese 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
Amynthas 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.

Appendix B

Control Methods for Select Invasive Plant Species

CONTROL METHODS FOR JAPANESE, GIANT AND BOHEMIAN KNOTWEED
(*Fallopia japonica ssp. japonica, F. sachalinensis, and F. x. bohemica*)

PLANT DESCRIPTION

The knotweeds are herbaceous perennials which forms dense clumps 1-3 meters (3-10 feet) high. Its broad leaves are somewhat triangular and pointed at the tip. Clusters of tiny greenish-white flowers are borne in upper leaf axils during August and September. The fruit is a small, brown triangular achene. Knotweed reproduces via seed and by vegetative growth through stout, aggressive rhizomes. It spreads rapidly to form dense thickets that can alter natural ecosystems. Japanese knotweed can tolerate a variety of adverse conditions including full shade, high temperatures, high salinity, and drought. It is found near water sources, in low-lying areas, waste places, and utility rights of way. It poses a significant threat to riparian areas, where it can survive severe floods.

MANAGEMENT OPTIONS

1. Digging

Effectiveness: This method is appropriate for very small populations.

Methods: Remove the entire plant including all roots and runners using a digging tool. Juvenile plants can be hand-pulled depending on soil conditions and root development.

Cautions: Care must be taken not to spread rhizome or stem fragments. Any portions of the root system or the plant stem not removed will potentially re-sprout.

Disposal: All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation: Clean all clothing, boots, and equipment to prevent spread of seed. See item #7 “Sanitation” in the General Practices section.

2. Cutting

Effectiveness: Repeated cutting may be effective in eliminating Japanese knotweed. Manual control is labor intensive, but is a good option where populations are small and isolated or in environmentally sensitive areas.

Methods: Cut the knotweed close to the ground at least 3 times a year. Plant native plant species as an alternative to continued treatment.

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* Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

Cautions: This strategy must be carried out for several years to obtain success. Both mechanical and herbicidal control methods require continued treatment to prevent reestablishment of knotweed.

Disposal: Bag and remove all plant parts from site (dispose of in an approved landfill or incinerate with appropriate permits).

Sanitation: Clean all clothing, boots, and equipment to prevent spread of seed. See item #7 “Sanitation” in the General Practices section.

3. Herbicide

Effectiveness: Glyphosate treatments in late summer or early fall are much more effective in preventing re-growth of Japanese knotweed the following year.

Methods: Use glyphosate formulations only. In late June/early July cleanly cut or mow down existing stalks/canes. Allow the knotweed to re-grow. After August 1, spray knotweed all re-growth with ROUNDUP®, RODEO®.

A cut-stem treatment utilizing glyphosate formulations can be an effective control for smaller colonies of knotweed. In early to mid-July cut the existing stems just below the 2nd or 3rd node above the soil surface. Immediately after cutting apply by swab or small spray bottle a 50% solution of glyphosate to the freshly-cut cross section and into the internodal cavity of each stalk/cane. Monitor treatment area by early to mid-August and repeat cut-stem treatment to any residual stems.

Stem injection is another promising control method for smaller colonies of knotweeds. Currently, a supplemental label for AQUAMASTER® (glyphosate) herbicide exists for this stem injection method. In late June/early July inject 5 mLs of AQUAMASTER® below the 2nd node above the ground of each stem in the clump. Use suitable equipment that must penetrate into the internodal region. JKInternational manufactures a stem injection tool that is suitable and recommended for this control method.

Cautions: Established stands of Japanese knotweed are difficult to eradicate even with repeated herbicide treatments. However, herbicide treatments will greatly weaken the plant and prevent it from dominating a site. Adequate control is usually not possible unless the entire stand of knotweed is treated (otherwise, it will re-invade via creeping rootstocks from untreated areas).

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

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* Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act. Choose Rodeo® formulation for applications in standing water or along a shoreline.

CONTROL METHODS FOR JAPANESE, MORROW'S, TATARIAN,
AMUR AND BELL'S HONEYSUCKLES
(*Lonicera morrowii, L. tatarica, L. japonica, L. maackii, L. x. bella*)

PLANT DESCRIPTION – JAPANESE HONEYSUCKLE

Japanese honeysuckle (*Lonicera japonica*) is a perennial trailing or climbing woody vine of the honeysuckle family (Caprifoliaceae) that spreads by seeds, underground rhizomes, and aboveground runners. It has opposite leaves that are ovate, entire (young leaves often lobed), 4-8 cm long, with a short petiole, and variable pubescence. In the southern part of the range the leaves are evergreen, while in more northern locales the leaves are semi-evergreen and fall off in midwinter. Young stems are reddish brown to light brown, usually pubescent, and about 3 mm in diameter. Older stems are glabrous, hollow, with brownish bark that peels in long strips. The woody stems are usually 2-3 m long, (less often to 10 m). *Lonicera japonica* creates dense tangled thickets by a combination of stem branching, nodal rooting, and vegetative spread from rhizomes.

Lonicera japonica (including the varieties) is easily distinguished from native honeysuckle vines by its upper leaves and by its berries. The uppermost pairs of leaves of *Lonicera japonica* are distinctly separate, while those of native honeysuckle vines are connate, or fused to form a single leaf through which the stem grows. *Lonicera japonica* has black berries, in contrast to the red to orange berries of native honeysuckle vines. The fruits are produced September through November. Each contains 2-3 ovate to oblong seeds that are 2-3 mm long, dark-brown to black, ridged on one side and flat to concave on the other.

The fragrant white (fading to yellow) flowers of *Lonicera japonica* are borne in pairs on solitary, axillary peduncles 5-10 mm long, supported by leaflike bracts. The species has white flowers tinged with pink and purple. Individual flowers are tubular, with a fused two-lipped corolla 3-4(-5) cm long, pubescent on the outside. Flowers are produced late April through July, and sometimes through October.

MANAGEMENT OPTIONS

1. Mowing and Pulling

Effectiveness: Removing the above-ground portion of *Lonicera japonica* reduces current-year growth but does not kill the plant, and generally stimulates dense regrowth. Cut material can take root and should therefore be removed from the site (not practical with most infestations).

Methods: Hand pulling is highly effective. Pull out Japanese honeysuckle by the roots in winter wherever it climbs, aim the roots upward and tie them in place. The absence of light energy causes the trailing vines to decline precipitously next year. This method greatly reduces spraying requirements.

Disposal: All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (dispose of in an approved landfill or incinerate with appropriate permits).

Cautions: Mowing is an ineffective control method, stimulating growth and encouraging formation of dense, albeit shorter, mats. Bush-hogging is an ineffective control, as *Lonicera japonica* re-invades within one growing season.

2. Herbicide

Effectiveness: In northern states, *Lonicera japonica* retains some leaves through all or most of the winter (semi-evergreen or evergreen), when most native plants have dropped their leaves. This provides a window of opportunity from mid-autumn through early spring when it is easier to spot and treat with herbicides, fire or other methods without damaging native species.

Controls: A foliar application of 1.5% glyphosate shortly after the first frost appears to be the most effective treatment, applied after native vegetation is dormant and when temperatures are near and preferably above freezing. Applications within 2 days of the first killing frost are more effective than applications later in the winter. *Lonicera japonica* is less susceptible to herbicides after the first hard frost (-4^{o}C).

Cautions: Soil disturbance should be avoided in infested areas to minimize germination of seed in the seedbank. Treated plants should be re-examined at the end of the second growing season, as plants can recover from herbicide application.

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

PLANT DESCRIPTIONS – BUSH HONEYSUCKLES

Exotic bush honeysuckles (Morrow's, Bell's, Amur and Tatarian) are upright, multi-stemmed, oppositely branched, deciduous shrubs that range in height from 2 m to 6 m. The opposite leaves are simple and entire, and paired; axillary flowers are showy with white, pink, or yellow corollas. The fruits of *Lonicera spp.* are red, or rarely yellow, fleshy berries.

[*] Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

In flower, exotic bush honeysuckles can be distinguished from all native bush honeysuckles except swamp fly-honeysuckle (*L. oblongifolia*) by their hirsute (hairy) styles. In fruit, the red or rarely yellow berries of the exotics separate them from the blue- or black-berried native waterberry (*L. caerulea*) and bearberry honeysuckle (*L. involucrata*). The exotic bush honeysuckles also generally leaf-out earlier and retain their leaves longer than the native shrub honeysuckles.

Within the exotic bush honeysuckles, *L. maackii* alone has acuminate, lightly pubescent leaves that range in size from 3.5 to 8.5 cm long and peduncles generally shorter than 6 mm. Its flowers are white to pink, fading to yellow, 15-20 mm long. Its berries are red or with an orange cast. Height ranges to 6 m.

In North America, there has been considerable confusion regarding the correct identification of *L. morrowii*, *L. tatarica*, and *L. x bella*, their hybrid. The literature contains a number of references to plants called by the name of one of the parents, but described as having characters more like those of the hybrid, *L. x bella*. The hybrid therefore, may be more common than the literature would indicate, and accurate field identification may be similarly problematic.

The two parent species of *L. x bella*, however, are dissimilar. *L. morrowii* has leaves that are elliptic to oblong gray-green, soft-pubescent beneath, and are 3-6 cm long. Its flowers are pubescent, white fading to yellow, 1.5-2 cm long, on densely hairy peduncles 5-15 mm long. The fruits are red. The height ranges to 2 m. *L. tatarica* has leaves that are ovate to oblong, glabrous, and are 3-6 cm long. Its flowers are glabrous, white to pink, 1.5-2 cm long, on peduncles 15-25 mm long. The fruits are red or rarely yellow. Height ranges to 3 m.

L. x bella has intermediate characteristics. The leaves are slightly hairy beneath. Flowers are pink fading to yellow, on sparsely hairy peduncles 5-15 mm. long. Fruits are red or rarely yellow. Height ranges to 6 m.

MANAGEMENT OPTIONS

1. Grubbing, Pulling, Cutting

Effectiveness: Mechanical controls include grubbing or pulling seedlings and mature shrubs, and repeated clipping of shrubs. Effective mechanical management requires a commitment to cut or pull plants at least once a year for a period of three to five years.

Methods: Grubbing or pulling by hand (using a Weed Wrench or a similar tool) is appropriate for small populations or where herbicides cannot be used. Mature *L. maackii* shrubs growing in shaded forest settings can be eradicated by clipping once a year, during the growing season, until control is achieved. Other bush honeysuckles growing in more open settings can be managed by clipping twice yearly, once in early spring and again in late summer or early autumn.

Disposal: All plant parts, including mature fruit, should be bagged and disposed of in the trash to prevent re-establishment (dispose of in an approved landfill or incinerate with appropriate permits).

Cautions: Any portions of the root system not removed can resprout. Because open soil can support rapid re-invasion, managers must monitor their efforts at least once per year and repeat control measures as needed. Winter clipping should be avoided as it encourages vigorous re-sprouting.

2. Herbicides

Effectiveness: Most managers report that treatment with herbicides is necessary for the control of *L. maackii* populations growing in full sun and may be necessary for all large bush honeysuckle populations.

Controls: Use formulations of glyphosate (brand names Roundup, and for use near water bodies, Rodeo) as foliar sprays or cut stump sprays and paints with varying degrees of success. Glyphosate is a non-selective herbicide which kills both grasses and broad-leaved plants. For cut stump treatments, 20-25% solutions of glyphosate can be applied to the outer ring (phloem) of the cut stem. A 2% solutions of glyphosate can be used for foliar treatments. Glyphosate should be applied to the foliage late in the growing season, and to the cut stumps from late summer through the dormant season.

Cautions: The subsequent flush of seedlings following all herbicide treatments must also be controlled.

These herbicides are not selective (kills both monocots and dicots), thus should be applied carefully to prevent killing of non-target species. All tank mixes should be mixed with clean (ideally distilled) water because glyphosate binds tightly to sediments, which reduces toxicity to plants.

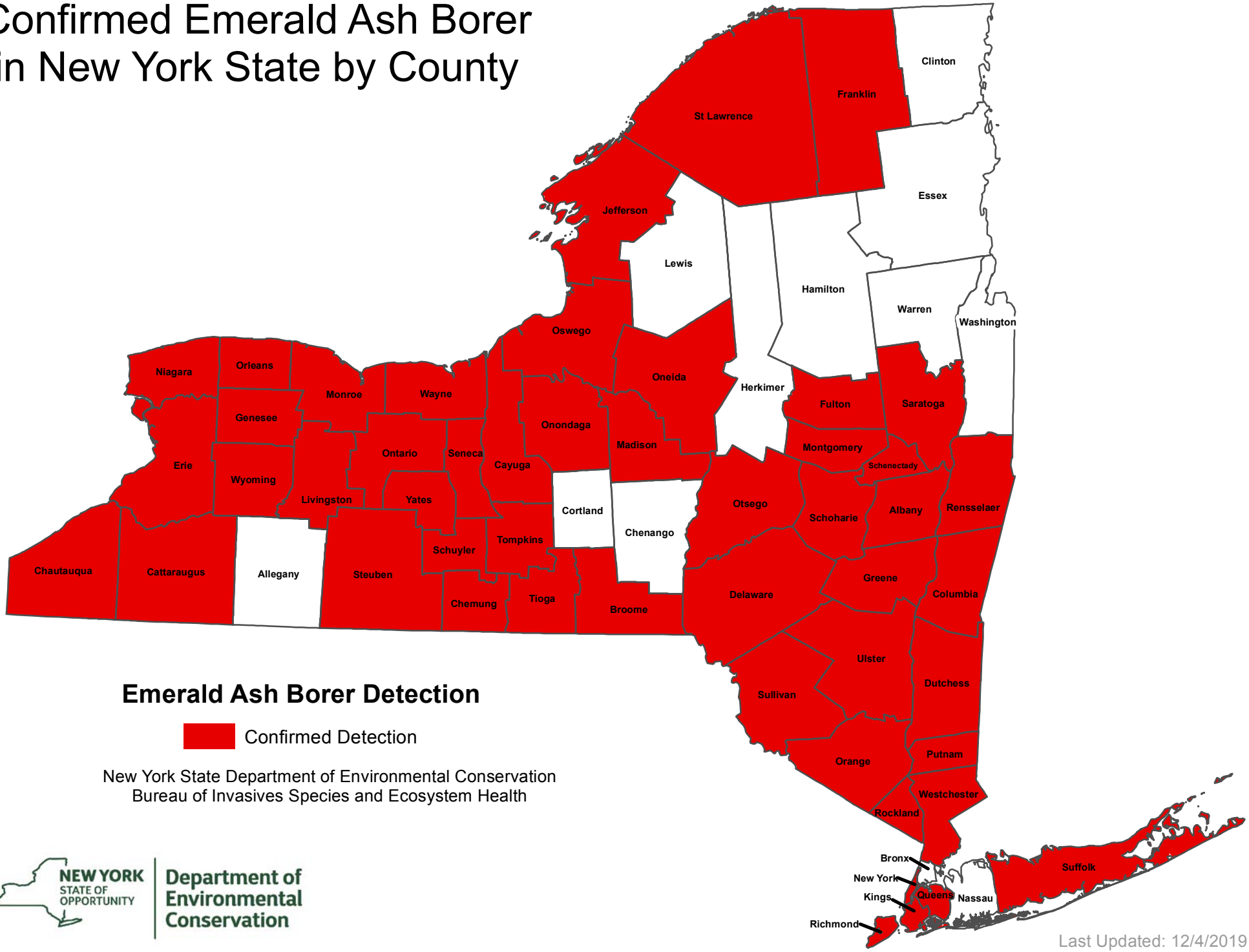
Do not apply in windy conditions because spray will drift and kill other plants. Do not apply if rain is forecast within 12 hours because herbicide will be washed away before it can act.

[*] Stockpiling implies temporary storage prior to transfer to a permanent treatment facility.

Appendix C

NYSDEC Emerald Ash Borer Restricted Zone Map

Confirmed Emerald Ash Borer in New York State by County



Emerald Ash Borer Detection

Confirmed Detection

New York State Department of Environmental Conservation
Bureau of Invasives Species and Ecosystem Health

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Last Updated: 12/4/2019

Appendix D

Environmental Energy Alliance of New York

Best Management Practices for Preventing the Transportation

of Invasive Plant Species

New York Utility Company Best Management Practices for Preventing the Transportation of Invasive Species

Environmental Energy Alliance of New York

Revisions January 2015

Table of Contents

Appendices

1.0 Introduction

Invasive species are non-native plant, animal, or microbial species that cause, or are likely to cause, economic or ecological harm or harm to human health (Presidential Executive Order 13112). Invasive species means, "A species that is nonnative to the ecosystem under consideration; and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Harm must significantly outweigh benefit" [New York Environmental Conservation Law §9-1703(10)(a)] Invasive species have been introduced by human action into a region outside their natural geographic range. Introductions occur along a variety of pathways or vectors, either intentionally such as intentional transport of a species for trade, or by accidental means, as in the case of stowaway species found in the ballast-water of ocean-going vessels.

Most scientists regard invasive species as second only to habitat loss as a threat to biodiversity. The presence of invasive species in a given region is one of the leading causes of endangerment to species native to that region. On a nationwide basis, about half of plant and animal species listed as federally Endangered or Threatened are at risk because of invasive species.

Annual economic losses due to invasive species in the U.S. have been estimated at over $138 billion (Pimentel et al. 2000). These losses include damage to crops and pasture, forest losses, damage from insect and other invertebrate pests, human diseases, and associated control costs.

In an effort, where feasible, to limit the introduction and spread of *invasive species*, this Best Management Practice ("BMP") will be employed when performing activities that occur in *jurisdictional areas* as authorized by the DEC. The BMP identifies procedures that will be incorporated into routine work practices to prevent the introduction and spread of *invasive species*.

2.0 Definitions

The following definitions are applicable to this BMP.

Environmental Energy Alliance of New York (EEANY) – is an association of electric and gas Transmission and Distribution (T&D) companies and electric generating companies that provide energy services in the State of New York. This BMP was prepared by the Land Use Subcommittee of the T&D Committee, which currently represents the following members: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Long Island Power Authority, National Grid USA Service Company, Inc., New York Power Authority, New York State Electric & Gas Corporation, Orange and Rockland Utilities, and Rochester Gas & Electric Corporation.

Invasive species – species that are 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 (Management Plan National Invasive Species Council, 2001). For purposes of this document, *invasive species* are those contained on the list contained within 6 NYCRR Part 575 Prohibited and Regulated Invasive Species (Appendix – 2).

Invasive species plant material – seeds, roots, or pieces of plant material that could germinate into live plants.

Jurisdictional Area – lands under the statutory jurisdiction of the NYSDEC such as certain freshwater wetlands and adjacent areas, tidal wetlands, certain water bodies, and any protected and species habitat areas specified by natural resource supervisors.

NYSDEC General Permit – a NYSDEC permit authorizing certain utility line activities under Articles 15, 24, and 25 of NYS Environmental Conservation Law. These activities include: inspection, maintenance, repair, restoration, reconstruction of pre-existing structures, vegetation cutting and trimming, and emergency actions affecting tidal wetlands, protected waters, regulated freshwater wetlands, adjacent areas, and protected habitat areas.

Regulated Activity – an activity taking place within a *jurisdictional area* that requires authorization from the NYSDEC.

Utility Rights-of-Way - is an easement-acquired or fee-owned corridor in which gas or electric transmission facilities are located.

3.0 Purpose

This BMP provides guidance for inspecting and cleaning vehicles and equipment to help prevent the spread of invasive species. The procedures identified within this manual outline cost-effective and realistic practices that *Environmental Energy Alliance of New York (EEANY)* utility members will implement when conducting a *regulated activity* within a *jurisdictional area*.

4.0 Applicability

This management practice applies to all *EEANY* utility members performing NYSDEC *regulated activities* within *jurisdictional areas* with populations of *invasive species*.

5.0 Procedures

There are two procedural options for EEANY companies to follow; one is to conduct the BMPs as detailed in the following sections of this plan or to conduct vegetation surveys for invasive species as outlined in Section 5.6. Field crews will be provided a flowchart to assist with determining when to implement these best management practices (Appendix 1).

The following detailed practices will apply where feasible when invasive species are present and when the work is covered by a GP or individual wetland permit.

5.1 Equipment

a. Equipment must arrive clean without visible soil clumps, plant or animal material.
b. Equipment includes, but is not limited to, vehicles, trailers, machinery, matting, boats, barges, and other watercraft, tools, and other materials.
c. Transporting equipment will be cleaned before accepting a new load.
d. Consider tracking pads as a means to remove soil from equipment. If tracking pads are used they must be cleaned after each use in a specific area.
e. Equipment will be cleaned using one of the methods listed below (use the most effective method that is practical):
    - Brush, broom, shovel or other similar hand tools (used without water)
    - High pressure air (when feasible)
f. Equipment must be cleaned within one of the below areas:
    - the infested work area
    - an area immediately adjacent to the work area that is itself currently infested with *invasive species*
g. Do not clean equipment in or near waterways as it may promote the spread of *invasive species* downstream.
h. Where possible, staging areas will be established in locations that are free of *invasive species*. Otherwise, all equipment will be cleaned using the techniques described in 5.3 before leaving the area.
i. When wetland matting is required, it will arrive on site visibly clean, be installed prior to any activities, and will be appropriately cleaned before leaving the area.

5.2 Inspection and Cleaning

a. Inspections and cleaning should be conducted especially when moving from an infested area to an un-infested area.
b. Prior to exiting work area clothing, footwear, and gear should be cleaned of visible signs of plant material.
c. Carry appropriate cleaning equipment (e.g. wire brush, small screwdriver, boot brush) to help remove soils, seeds, and plant material.
d. Preferred locations for cleaning are those where:
    - Work activities are taking place;
    - *Invasive species* are already established; or
    - An area immediately adjacent to the work site that is itself currently infested with *invasive species*.
e. No cleaning of clothing, footwear, gear in or adjacent to waterways – it may promote the spread of *invasive species* downstream.
f. Cleaning will include brushing or self "pat down" of clothing, footwear, and other personal gear within the infested work area.

5.3 Disposal of Impacted Material

a. Preferred locations for equipment cleaning are those areas where work activities are taking place or immediately adjacent areas currently impacted with *invasive species*.
b. Do not clean equipment, vehicles or trailers in or near waterways.
c. Do not dispose of soil, seeds, or plant material in storm drains.
d. Any plant materials that are incidentally removed after completion of steps a-c from site will be properly disposed of in a manner that prevents viable plant parts and propagules from being spread

5.4 Other Prevention Measures

a. Reasonable steps to avoid transportation of *invasive species,* including small, isolated, populations, will be taken.
b. As an alternative to cleaning, ancillary equipment such as spare tires and winches when feasible will be covered when entering *jurisdictional areas* containing populations of *invasive species*.
c. Vehicular access into areas containing populations of *invasive species* will be reduced or minimized to the maximum extent practical. When practical vehicles will be parked outside of the impacted area and crews will enter on foot.

5.5 Site Restoration

a. Minimize soil disturbances by reducing work areas and reducing activities that may result in soil disturbances.

b. Re-vegetate bare soils as soon as feasible to minimize the possible establishment of *invasive species*. When seeding, non-invasive or local native species must be used (seed mixes will vary from region to region). Seed will be broadcasted over all bare soil areas and covered with a mulch layer such as straw. Choose appropriate seed mixes based on site conditions.

c. On steep sloping areas (i.e. slopes exceeding 20 percent), soil erosion control matting (i.e. jute mesh or straw blankets) must be installed over the seeded area. The matting should be secured with biodegradable tacks.

d. Stabilize disturbed soils using appropriate erosion and sediment control procedures as soon as possible. Use invasive free materials such as straw or wood chips; avoid using hay.

5.6 Vegetation Survey (Optional)

If the above BMPS are not followed, then vegetation surveys of site(s) to detect populations of invasive species should be made in advance prior to any activities. If the optional vegetation survey is performed and no invasive species are found, then the procedures outlined above in section 5.1 through 5.5 will not be followed. Survey inspections can be integrated with other activities such as ROW inspections and should be kept as simple as possible to meet invasive species management objectives. If significant populations of invasive species are detected on surveys, then Sections 5.1 to 5.5 apply.

a. Prior to implementing activities scout for, locate and document significant invasive species infestations.
b. Consider the need for actions based on: 1) the degree of invasiveness; 2) severity of the current infestation; 3) amount of additional habitat or host at risk for invasion; and 4) feasibility of managing the spread.
c. Plan activities to limit the potential for introduction and spread of invasive species, prior to construction.
d. Provide appropriate resources in identification of known invasive species for corridor workers.

6.0 Training

A flowchart (Appendix 1) to assist field crews on when to implement the above procedures will be distributed to all field crews.

All transmission vegetation management planners, foresters, and ROW maintenance personnel will be trained in the procedures outlined in Section 5.0 above. Additionally, training sessions focused on the identification of *invasive species* identified in Appendix 2 will be conducted by the individual utility companies. This may take the form of hard copy materials, tail gate briefings and/or presentations during regular staff meetings.

7.0 Emergency Work

During emergencies, *EEANY* utility members will strictly comply with the Emergency Action condition protocol outlined in the *NYSDEC General Permit*. Appropriate site-specific *invasive species* controls and restoration efforts will be determined on an individual basis in conjunction with the regional NYSDEC office.

8.0 References

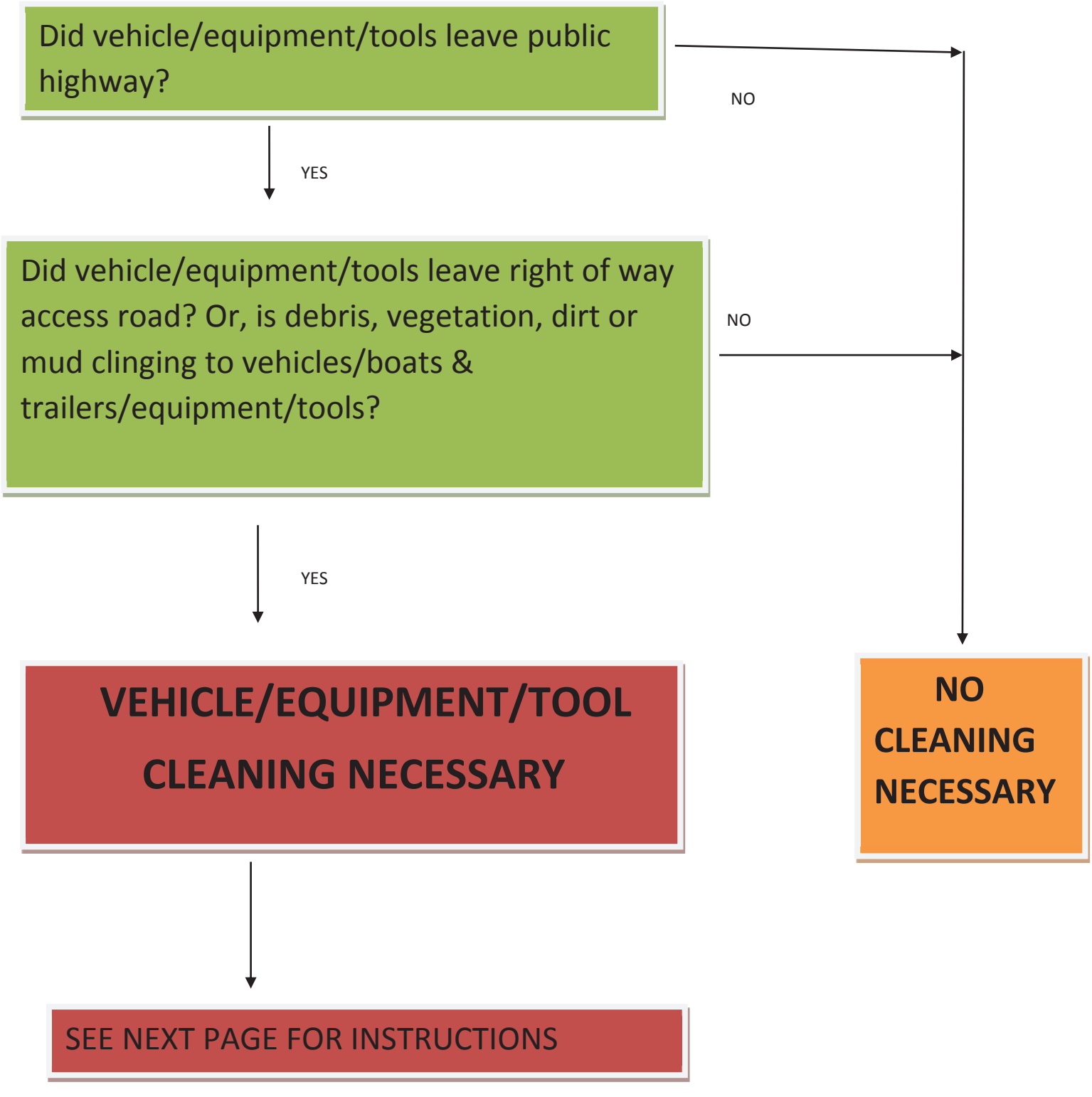
- Electric Power Research Institute, 2008. "Invasive Species and Utility Rights of Way: A Review of the Science". EPRI Publication number 1014032, Palo Alto, CA

- Pimentel, D., Lach, L., Zuniga, R. & Morrison, D**.** 2000. Environmental and economic costs of nonindigenous species in the United States. Bioscience, 50(1): 53-65.

- Presidential Executive Order 13112. Volume 64, Federal Register 1999. Invasive Species.

- Wisconsin Council on Forestry. 2010. *Invasive Species Best Management Practice for Transportation and Utility Rights-of-Way*.

BEST MANAGEMENT PRACTICES (BMP'S) for INVASIVE SPECIES TRANSPORT PREVENTION



PRIOR TO LEAVING THE RIGHT-OF-WAY

- Prior to loading vehicle/equipment/tools remove as much debris, vegetation, dirt and mud clinging to the equipment as feasible using a brush, broom, shovel or other similar hand tool.

- High pressure air can be used on site for cleaning debris, vegetation, dirt and mud off vehicles/equipment/tools.

- Pick-ups and other small road vehicles shall remove on the right-of-way, as much debris, vegetation, dirt and mud clinging to vehicle as feasible prior to entering the highway.

- Small equipment/tools/boots shall be cleaned on site before removal or storage.

- Arrangements can be made for onsite cleaning or washing of vehicles/equipment/tools if deemed necessary.

PRIOR TO LEAVING A BOAT LAUNCH:

CLEAN, DRAIN, DRY -- Prior to leaving a boat launch, **Clean** any visible mud, plants, fish or animals before transporting equipment; **Drain** all water holding compartments including live wells, bait wells and bilge areas; **Dry** the boat, trailer and all equipment before use in another water body

APPENDIX - 2

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:
Bellamya chinensis (Cipangopaludina chinensis),Chinese Mystery Snail
Bellamya japonica, Japanese Mystery Snail
Bithynia tentaculata, Faucet Snail
Bythotrephese 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
Amynthas 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