

**Appendix F**  
**Environmental Protection Measures**

## **Environmental Guidance      Cultural, Historic and Other Natural Resources**

### **1.0 SCOPE**

The New York service territory includes numerous sites and properties that have been designated by authorities to have significant natural, archaeological, historical, scenic, aesthetic or recreational values. Many of these locations are protected by the National Historic Preservation Act of 1966 and by implementing regulations of New York State's Office of Parks, Recreation and Historic Preservation (OPRHP).

Some of these sites include properties or structures that have been placed on or nominated for New York State and National Registers of Historic Places. Other locations have been protected by designation as national, state or local parks, preserves, refuges, sanctuaries, coastal zones, scenic vistas, or agricultural areas.

The United States Department of Interior's National Park Service has jurisdiction over federally-designated historic and park sites. The U.S. Fish and Wildlife Service has jurisdiction over federally-designated refuges. The NYSDEC and OPRHP provide protection to other unique and/or sensitive resource areas.

### **2.0 RESPONSIBILITIES**

To protect these sensitive areas and comply with applicable regulations, all personnel who plan and perform work are responsible for:

- Identifying if proposed work may involve designated sites by checking with a qualified Environmental Engineer and/or environmental consultant; and
- Implementing appropriate design, work site selection, scheduling, and practices to avoid or minimize disturbances to identified sensitive resource sites.

Environmental Engineers and/or environmental consultants will assist Project Engineers, field operations, and other personnel with work planning and regulatory compliance support. Such support will include:

- Checking available regulatory agency information, such as GIS databases and mapping sources to help identify any designated sites;
- Coordinating communications with federal, state and local authorities, as applicable;
- Obtaining any necessary permits or approvals; and
- Providing guidance on work site selection, scheduling, and practices to avoid or minimize disturbances to such resources.

In some cases, work restrictions may be imposed and a regulatory agency permit or permission may be required before proposed work is allowed to be performed.

### **3.0 HISTORIC RESOURCES**

The New York State Historic Preservation Office (SHPO) has advised that consultation with the SHPO is mandatory for projects that involve state or federal permitting or involvement.

The SHPO has requested that project screening for the general presence or absence of cultural resources be performed by checking with their On Line Resource Center.

An Environmental Engineer and/or environmental consultant can check SHPO's On Line Resource Center and submit a project review request to the SHPO, for an official determination of project effect on any known resources and any related requirements for further studies or surveys.

In some cases, the SHPO may require performance of Phase 1A/B Archaeological Surveys. Should important historical or cultural resources be discovered at a proposed work site, the SHPO may require that the work be relocated or that special protective measures be applied to the work.

National Historic Park sites, such as the Saratoga Battlefield, and National Monuments, such as Fort Stanwix (Rome, NY) are regulated by Federal agencies and any work involving such sites must be permitted or otherwise approved, before work can begin. The New York State Department of Parks, Recreation and Historic Preservation regulates use and activities at State Historic Sites, where work activities must also be permitted or otherwise approved.

### **4.0 COASTAL ZONE MANAGEMENT AREAS**

Projects that require a federal permit and that lie within the Coastal Zone (primarily the shorelines of Lake Erie, Niagara River, Lake Ontario, St. Lawrence River, estuary portions of the Hudson River, Long Island Sound, Atlantic Ocean, and the various bays, harbors and inlets around New York City and Long Island), require a Federal Consistency Assessment, to be reviewed and acted upon by the New York Department of State. Coastal zone projects directly undertaken by a state agency or authority require consistency concurrence, as well, regardless of federal agency involvement. Accordingly, Long Island Power Authority (LIPA) projects in the coastal zone require a consistency review ~~completed by LIPA, National Grid (on behalf of LIPA), or another party as agent for LIPA.~~

Environmental Engineers and/or environmental consultants will support Project Engineers with completion and submittal of a Federal Consistency Assessment Form, intended to assist applicants in certifying that a proposed activity is consistent with New York State's Coastal Management Program (CMP), as required by the U.S. Department of Commerce regulations.

### **5.0 AGRICULTURAL AREAS**

For major projects that require new construction or reconstruction activities in active agricultural lands, an Environmental Engineer and/or environmental consultant will contact and consult with the State of New York Department of Agriculture and Markets. As appropriate, special mitigation measures may be applied to some work activities to avoid or minimize impacts to agricultural lands and uses.

In general, impacts to agricultural soils and uses can be minimized during construction or reconstruction projects through use of the following practices:

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- Consulting with affected farmers prior to performing the work, to determine appropriate access routes, work areas, any sensitive sites (such as drainage tiles or lines), any potential for invasive agricultural pests, and planting/harvesting schedules;
- Strategic scheduling of daily activities to avoid wet, unstable soils and cultivated fields;
- Use of a single access route to reduce soil disturbances and compaction;
- Framing structures in the air, where appropriate, to reduce ground impacts;
- Restoration of fields, fencing and gates, including regrading and seeding, in consultation with affected farmers; and,
- Decontamination of equipment used in invasive pests quarantine areas. \*

## **1.0 SCOPE**

Pesticides and herbicides are typically used for the purposes of effectively controlling:

- Undesirable vegetation along electric and natural gas line rights-of-way;
- Undesirable vegetation at substations, gas regulator stations, and other facilities; and
- Pests that may pose threats to worker safety and/or facility integrity and reliability.

Integrated Vegetation Management (IVM) techniques are used to target individual trees or clumps of tall-growing tree species that pose line interference and outage risks.

IVM employs a variety of techniques including biological controls, hand cutting and selective application of herbicides to control tall-growing trees. Biological control involves promoting the establishment of low-growing plant species that help prevent the growth of tall tree species on the rights-of-way.

Selective use of herbicides applied directly to individual tall-growing trees allows low-growing shrubs, grasses, ferns and herbaceous plants to thrive and resist re-growth of trees. These targeted IVM techniques minimize the quantity of herbicides required, which in turn minimizes their impact on stable, low-growing communities of grasses, herbs and shrubs that pose no threat to electric conductors.

Pesticide uses are regulated by the New York State Department of Environmental Conservation (NYSDEC) as set forth in the applicable parts of Title 6, NYCRR including Part 320 – Pesticides – General, Part 325 – Application of Pesticides, and Part 326 – Registration and Classification of Pesticides.

## **2.0 RESPONSIBILITIES**

Use of herbicides must be in compliance with federal and NYSDEC-specific requirements for use of herbicides, including associated regulatory reporting and registrations, applicator training, spill reporting and response, and product/container disposal. Field operators are responsible for complying with federal and NYSDEC-specific requirements for use of other pesticides needed to maintain worker safety and facility integrity and reliability.

Environmental Engineers and/or environmental consultants are responsible for supporting field operations with information about protected natural resources, as requested, and helping to obtain any required permits or regulatory approval associated with site-specific use of herbicides or pesticides in protected natural resource areas, such as in New York State-regulated wetlands and/or wetland adjacent areas.

### **3.0 PROTECTION OF NATURAL RESOURCES**

Strategies aimed at protecting natural resources, particularly sensitive aquatic resources, from herbicide applications and other right-of-way maintenance activities include:

- Maintain buffer zones of compatible, low-growing vegetation at sensitive aquatic sites;
- Utilize highly selective, stem-specific treatments within these buffers, together with herbicide products that are specifically approved for ditch bank, stream bank, or aquatic use;
- Employ non-herbicide management methods within buffer zones when a risk of contamination exists;
- Obtain any required permits for herbicide applications in protected wetlands and buffer zone areas;
- Identify private drinking water supplies within or immediately adjacent to the right-of-way through the field inventory process, and establish appropriate buffer zones to maintain and protect water quality;
- Identify and protect any known populations of threatened, endangered or other species of special regulatory concern; and
- Conduct all treatment activities adjacent to sensitive aquatic resources to maximize retention of compatible shrub and herbaceous communities, to help reduce or avoid erosion impacts.

### **4.0 WHAT IS A PESTICIDE?**

As defined by NYSDEC, a “pesticide” is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, fungi, weeds, or other forms of plant or animal life or viruses and any substance or mixture of substances intended as a plant regulator, defoliant, or desiccant. Pesticides include such things as herbicides, biocides, etc.

#### **4.1 HOW IS NATIONAL GRID LIPA REGULATED?**

Those regulated as an “agency” and not as a commercial lawn applicator are subject to NYSDEC regulations regarding the use of pesticides, disposal of pesticides and pesticide containers, employee training and safety, pesticide applicator certification, business registration, reporting of pesticide use, pesticide product registration, and pesticide spill response and clean up.

#### **4.2 REQUIREMENTS FOR THE USE OF PESTICIDES**

Pesticides are to be used only in accordance with label and labeling directions and must be used in such a manner and under such wind and other conditions as to prevent contamination of people, pets, fish, wildlife, crops, property, structures, lands, pasturage or waters adjacent to the area of use. During pesticide use, the certified applicator, certified technician or commercial pesticide apprentice must have access to a copy of the label for each pesticide being used and must make each label available for inspection upon request of the NYSDEC.

#### **4.3 CLEANSING AND DISPOSAL OF PESTICIDES AND CONTAINERS**

Generally, empty pesticide containers may be disposed of in an approved sanitary landfill after they are properly rinsed and cleansed. Returnable containers must be tightly closed to prevent leakage, the exterior cleaned, and the containers returned to the supplier.

Unwanted or unusable pesticides may be subject to more stringent disposal requirements including Environmental Protection Agency (EPA) and NYSDEC hazardous waste disposal regulations.

#### **4.4 TRAINING AND SAFETY**

Prior to any pesticide application, a certified pesticide applicator must provide safety information and training to individuals using pesticides.

#### **4.5 APPLICATOR CERTIFICATION REQUIREMENTS**

The application of pesticides must be accomplished by, or under the supervision of, a certified commercial pesticide applicator certified pursuant to NYSDEC requirements. The certified commercial pesticide applicator must possess a valid identification card issued by the NYSDEC and make such card available upon request. Full certification is not required for “technicians” and “apprentices” who meet the requirements set forth in 6 NYCRR, Part 325 and are using pesticides under the on-site or off-site direct supervision of a certified commercial pesticide applicator as defined in the Part 325 regulations.

#### **4.6 BUSINESS REGISTRATION**

An agency that applies pesticides is required to register locations that apply pesticides with the NYSDEC. In addition, NYSDEC regulations require that an agency have at least one employee who is a certified commercial pesticide applicator or technician in the appropriate certification category.

#### **4.7 REPORTS**

Annual reports, listing the quantities of each pesticide used during the previous calendar year, are to be filed with the NYSDEC by February 1 of each year by the responsible organization. Contractors hired to apply pesticides are required to file their own reports. Copies of reports and appropriate pesticide use records shall be maintained by the organization responsible for overseeing the contractor for a period not less than three years.

#### **4.8 PESTICIDE PRODUCT REGISTRATION**

All pesticides used must be registered by both the EPA and the NYSDEC. Any such pesticide will contain the EPA registration number on the label.

#### **4.9 SPILLS**

Pesticide spills of any quantity should be reported immediately to determine if a reportable quantity spill threshold has been exceeded. Depending on the specific pesticide spilled, regulatory agency notification may also be required.

#### **4.10 PUBLIC SERVICE COMMISSION REQUIREMENTS**

The management of rights-of-way and related facilities is subject to Public Service Commission (PSC) regulation, set forth in 16 NYCRR, Part 84, which requires preparation of a detailed right-of-way management plan for PSC review and approval. The PSC also requires that annual reports, summarizing right-of-way management activities for the past year and right-of-way

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management plans for the current year be submitted to the PSC on or about March 31 of each year.

### **4.11 NYSDEC PERMIT REQUIREMENTS**

In addition to the requirements noted above, the NYSDEC regulates the application of pesticides within state-regulated wetlands and the 100-foot buffer zone surrounding such wetlands (300 feet for tidal wetlands). Any such application of pesticides to wetland and wetland buffer zone areas requires a Freshwater or Tidal Wetlands Permit from the NYSDEC and pesticide applications must conform to the conditions of the NYSDEC permit. A copy of a valid permit must be maintained in the field by the supervising certified applicator and must be available for inspection if requested. An Environmental Engineer and/or environmental consultant is responsible for obtaining such permits and should be consulted with any questions relating to the need for permits.

### **5.0 REFERENCE**

6 NYCRR, Parts 320, 325, 326

6 NYCRR, Part 663

16 NYCRR, Part 84

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## **1.0 SCOPE AND RESPONSIBILITIES**

Personnel who plan and perform work involving protected water resources are responsible for:

- Identifying if proposed work may involve protected water resources;
- Obtaining any required regulatory agency permits or approvals;
- Notifying environmental or regulatory agencies of emergency work activities that involve protected water resources; and,
- Implementing appropriate design, work site selection, scheduling, and practices to avoid or minimize disturbances to such water resources.

## **2.0 REGULATED WETLANDS**

The New York State Department of Environmental Conservation (NYSDEC) regulates freshwater wetlands that are 12.4 acres or greater in size. Wetlands smaller than this may be protected if they are considered of unusual local importance. The NYSDEC also regulates a 100 foot adjacent area around such freshwater wetlands. All such wetlands are depicted on official NYSDEC wetland maps. In addition to freshwater wetlands, the NYSDEC regulates tidal wetlands and a 300 feet (150 feet in New York City) adjacent area around such tidal wetlands.

The U.S. Army Corps of Engineers (ACOE) also has jurisdiction over all NYSDEC, as well as over smaller wetlands. Federal wetlands have no minimum size but must meet eligibility criteria for vegetation types, soils types, and connection to other waters of the U.S. Some federal wetlands are mapped by the National Wetlands Inventory (NWI); however, some are not mapped and may require formal delineation by an ACOE representative or a qualified wetland consultant. The ACOE does not regulate a wetland adjacent area.

Regulated work activities in state and federal wetlands include excavating, trenching, auguring, backfilling, grading, digging, structure erection and removal, and other activities that may disturb the ground surface or water levels, flows, and functions of wetlands. Regulated work activities can also include driving or operating equipment within protected wetland areas, particularly if such equipment uses causes rutting of wetland soils.

## **3.0 PROTECTED STREAMS AND OTHER SURFACE WATERS**

The NYSDEC regulates activities that impact the beds, banks, and water quality of streams and other surface water bodies that have sufficient water quality to support trout and/or higher uses of water, such as cooking and drinking. Simply driving equipment across a regulated water body is a regulated activity that requires a permit. The NYSDEC typically regulates activities within 50 feet of protected waters.

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The ACOE regulates activities conducted under, in, and over navigable waters of the U.S. The installation of natural gas or electric facilities across major streams, rivers, and lakes is regulated by the ACOE.

### 4.0 NYSDEC PERMITTING

A General Permit with the NYSDEC authorizes the following activities involving NYSDEC wetlands and their 100 foot adjacent areas, as well as protected waters:

- Vehicular and equipment crossings
- Maintenance of in-kind existing facilities
- Small excavations and fills
- New minor construction to install new single family residential live service across a freshwater wetland, 100 feet adjacent area or protected stream
- Vegetation management

The NYSDEC General Permit (~~0-0000-01147/000011-9901-00011/00017~~), held by PSEG Long Island (PSEGLI), LIPA's agent, who provides the day-to-day management and operation of LIPA's electrical transmission and distribution system, requires notification of the proposed activity to the NYSDEC, no later than 45 days prior to project commencement. If no response is received from the NYSDEC, the work may proceed in accordance with the General Permit conditions and Best Management Practices (BMPs). Below are the applicable BMPs to be followed:

~~NYSDEC General Permit 0-0000-01147/00001 includes 26 Natural Resource Permit Conditions that apply to Articles 15 and 24 of the Environmental Conservation Law (ECL) and to Water Quality Certification. Although compliance with all 26 permit conditions is required, the following selected conditions are cited or summarized, herein, simply to highlight their applicability to work involving these NYSDEC protected wetland and water resources:~~

- ~~• Prohibition Period for In-stream Work: The general period which prohibits stream work is as follows:
  - for cold water trout fisheries, beginning October 1 and ending May 31
  - for warm water fisheries, beginning March 1 and ending July 15~~
- Erosion Control Devices: To prevent environmental degradation, practicable measures and devices (such as silt fences, straw bales, check dams, catchment basins, sediment retention basins, water bars, diversion culverts, and other appropriate measures) shall be employed wherever necessary to prevent erodible soils from entering the wetland or water body.
- Maintain Water Flow and Water Clarity: During periods of work activity, flow immediately downstream of the worksite shall equal flow immediately upstream of the worksite, unless specifically permitted by the NYSDEC. There shall be no discernible difference in clarity between waters upstream and downstream of the work site.
- Preventing Transport of Invasive Species: ~~National Grid~~ LIPA has conservatively assumed that one or more species of NYSDEC-listed invasive plants occurs within or otherwise "infests" all NYSDEC wetlands and their 100 foot adjacent areas, as well as protected waters. To prevent the spread of invasive plant species seeds, roots or other viable plant parts, equipment used in NYSDEC wetlands and their 100 foot adjacent areas, as well as protected waters, shall be cleaned with brush and broom or high pressure air before leaving

these protected areas. Soil material generated from cleaning will be placed in plastic bags and properly disposed of off-site or used within the same construction area that is infested, provided that no filling of any wetlands or adjacent areas will occur as a result. Loose plant and soil material that has been removed from personnel clothing and boots may also be placed in plastic bags or remain within these areas provided that no filling of a wetland shall occur.

- Wetland Resource Protection: Construction or vehicular activities within such 100 feet adjacent areas should be minimized during the breeding period of any protected species present. Erosion control measures shall be utilized as needed to prevent potential erosion of sediments into the wetland or the 100 feet adjacent area.
- Emergency Actions: The appropriate NYSDEC Regional Natural Resources Supervisor must be notified by telephone (see the General Permit's Attachment C for contact information) before starting an emergency action and such telephone notification must include a description and location of the situation and of the action that will be taken. If the Natural Resources Supervisor cannot be reached, a telephone or electronic mail notification must be made within 24 hours of commencing the emergency action and must include the same information, to be provided on the General Permit's Attachment A – Notification of General Permit Project form.

A General Permit (1-9901-00011/00013~~7~~) with NYSDEC–Region 1 (Nassau and Suffolk Counties) authorizes certain "...minor utility installation, repair, and maintenance activities in the adjacent areas of state regulated freshwater and tidal wetlands, and scenic/recreational rivers throughout Nassau and Suffolk Counties." This General Permit requires notification of the proposed activity to the NYSDEC, no later than 14 days prior to project commencement. The notification package must include a detailed description of the project, design drawings, applicable wetlands maps, and recent project site photographs. If no response is received from the NYSDEC, the work may proceed in accordance with the General Permit conditions and BMPs. ~~NYSDEC General Permit 1-9901-00011/00013 is provided on National Grid's Infonet, Environmental site.~~ Larger scale projects or major work activities involving NYSDEC or NYSDEC-protected waters may require an individual NYSDEC permit and a Section 401 Water Quality Certification (a determination by the NYSDEC that the proposed activity will not violate New York Water Quality Standards). The NYSDEC may, as a result of its review, assign special conditions to ensure that water quality is protected, and environmental damage is minimized.

The NYSDEC's Stormwater Pollution Prevention Plan (SWPPP) requirements may also apply to work activities if more than 1 acre of soils will be disturbed. If so, work will need to conform to the NYSDEC's State Pollution Discharge Elimination System (SPDES) General Permit GP-0-10-001 and associated erosion and sediment control requirements. ~~The NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP 0-10-001) is provided on National Grid's Infonet (see the Environmental site).~~

## 5.0 U.S. ARMY CORPS OF ENGINEERS PERMITTING

For certain maintenance and minor work activities involving federal wetlands, the ACOE also provides for a general type of permitting. In general, activities involving less than 0.1 acre of wetland impacts are eligible for the ACOE's Nationwide Permitting, on a self-authorized basis, as long as permit conditions and BMPs are adhered to (a blanket 401 Water Quality Certification is included).

Activities involving from 0.1 to 0.5 acres of wetland impacts may still be eligible for ACOE Nationwide Permitting, but require a Pre-Construction Notice (PCN) to be made to the ACOE, require an individual 401 Water Quality Certification, and normally require mitigation of impacts. Activities involving greater than 0.5 acres of wetland impacts typically require an individual Section 404 permit and mitigation of impacts.

For work over, in, or under navigable waters of the U.S., an ACOE Section 10 (Rivers and Harbors Act) permit is required. For projects that are either in or affecting the coastal zone and that require a federal permit or approval, a Coastal Zone Management (CZM) consistency concurrence is required from the New York State Department of State (NYS DOS). Coastal zone projects directly undertaken by a state agency or authority require consistency concurrence, as well, regardless of federal agency involvement. Accordingly, ~~Long Island Power Authority (LIPA) projects in the coastal zone require a consistency review completed by LIPA, National Grid (on behalf of LIPA), or another party as agent for LIPA. That review was not required for the instant Project.~~

## **6.0 EMERGENCY SITUATIONS AFFECTING REGULATED WETLANDS AND PROTECTED WATERS**

In a natural disaster, accident or other emergency situations where electric or gas facilities are damaged or threatened and must be promptly repaired, there may not be the time to follow normal permitting procedures, especially when public health and safety may be affected. Should such an event occur that impacts critical gas or electric facilities, it is fully expected every effort would be made to repair the damaged facilities as soon as possible.

In such emergency situations that involve wetlands or other protected waters, call an Environmental Engineer as soon as possible to explain the emergency and the required work. Be prepared to provide a name and telephone number of a local operations contact. An Environmental Engineer will assume the responsibility to interface with the appropriate regulatory agency personnel, prepare all required reports, and will keep your local contact person informed.

If an emergency situation occurs requiring an unavoidable impact to wetlands or other protected waters, the NYSDEC and/or ACOE must be notified prior to the commencement of the work. Examples of unavoidable impacts to wetlands and protected waters include changes to preconstruction contours, mechanical clearing, underground utility lines greater than 500 feet, work site discharges resulting in the loss of greater than 1/10 acre of wetland, and permanent access roads installed above preconstruction contours or greater than 500 feet.

If regulatory agency notification prior to commencement of work is not possible, then these agencies must be notified within 24 hours after the commencement of the work. Notification must be provided in writing by certified mail, facsimile, or other similar means. The information provided in this notification should include:

1. A description of the proposed (or ongoing) work;
2. A location map and plan sketch or drawing of the project;
3. Reasons why the situation is an emergency;
4. An estimate of the type and volume of any material to be placed in or adjacent to a wetland or water body; and

5. A description of any measures taken to minimize impacts to the affected wetland or water body (i.e., hay bales, silt curtains, etc.).

Upon receipt of this information, the agency will determine whether an emergency really exists and review the project's environmental impacts and, if satisfied, issue an emergency authorization. Emergency activities must be performed in a manner that avoids or minimizes disturbances to protected waters.

If for some reason, an Environmental Engineer cannot be contacted within the prescribed 24-hour initial notification time period, the NYSDEC and/or ACOE should be called directly to explain the job action and seek assistance.

## **7.0 BEST MANAGEMENT PRACTICES**

BMPs and conditions of any required permits shall be applied to work involving protected waters.

In general, the following restrictions shall be applied to work involving protected waters:

- No deposition of slash or debris within stream channels;
- No accumulation of construction materials or debris within a typical 50 to 100 feet wide buffer area, depending upon terrain and vegetation conditions;
- No degradation of stream banks;
- No equipment washing or refueling within the resource or buffer area;
- No storage of any petroleum or chemical materials within the resource or buffer area; and,
- Maintain herbicide application buffer zones (as specified in ROW management plans) and use of herbicide products labeled for aquatic areas. \*

## **1.0 SCOPE**

Some parts of the New York service territory provide habitats for wildlife species that federal and/or New York State regulatory agencies consider to be endangered, threatened or species of special concern. Such wildlife includes listed species of amphibians, reptiles, birds, mammals, insects, mollusks, and plants.

The Federal Endangered Species Act and New York State Environmental Conservation Law provide for the protection of many of these species and their habitats. The New York State Department of Environmental Conservation (NYSDEC) provides some protections of other rare species of plants and animals, as well as of significant natural communities and habitats.

The Peregrine Falcon and Bald Eagle are examples of listed endangered and threatened species, respectively, that are known to occur within portions of the New York service territory.

## **2.0 RESPONSIBILITIES**

All personnel who plan and perform work are responsible for:

- Identifying if proposed work may involve such listed species and/or their habitats by checking with a qualified Environmental Engineer and/or environmental consultant; and
- Implementing appropriate design, work site selection, scheduling, and practices to avoid or minimize disturbances to listed species and their habitats.

An Environmental Engineer and/or environmental consultant will assist in identifying the potential for such species and/or their habitats by checking available regulatory agency information, such as GIS databases and mapping sources. An Environmental Engineer and/or environmental consultant will notify and coordinate with regulatory agencies, as required, and will provide direction on work site selection, scheduling, and practices to avoid or minimize disturbances to listed species and their habitats. In some cases, work restrictions may be imposed and a regulatory agency permit or permission may be required before proposed work is allowed to be performed.

## **3.0 AGENCY INFORMATION**

The U.S. Fish and Wildlife Service's New York Field Office provides endangered and threatened species listings and contact information at <http://www.fws.gov/northeast/nyfo/es/section7.htm>.

The NYSDEC's Division of Fish, Wildlife and Marine Resources provides endangered and threatened species listings and contact information at their Endangered Species Program website, at <http://www.dec.ny.gov/animals/7494.html>.

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The NYSDEC's New York Natural Heritage Program provides information on rare plants and animals and significant ecological communities at <http://www.dec.ny.gov/animals/29338.html>. \*

## **Environmental Guidance      ROW Access, Maintenance and Construction**

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### **1.0 SCOPE**

This guidance document provides Best Management Practices (BMPs) for work on electric and natural gas transmission and distribution rights-of-way.

### **2.0 GENERAL**

The purpose of this guidance document is to provide personnel, consultants and contractors with BMPs for working on rights-of-way (ROW), both fee-owned and easement, and on customer owned projects, to support work that is protective of the environment and that complies with all applicable environmental laws, regulations and company policies and procedures.

These BMPs are to be effectively and consistently followed by all personnel accessing Company substations, ROW, and customer projects for inspection, maintenance and construction work purposes. These BMPs do not apply to Company employees and contractors performing routine vegetation management activities that are not a part of construction or re-construction project.

### **3.0 DEFINITIONS**

Backfill, Common – Unless defined differently in project-specific specifications, common backfill is defined as soil suitable for use as backfill consisting of any mixture of sand and gravel. Rocks less than 6" in diameter and silt may also be included in the mixture.

Backfill, Select – Unless defined differently in project-specific specifications, select backfill is defined as well-graded gravel, well-graded sandy gravel, or a mixture of these materials for use as backfill. Also called Select Borrow.

BMP – Best Management Practices.

Clearing – The cutting of trees and large bushes by hand and/or mechanical means.

Environmental Monitoring Records – Examples of checklists and/or monitoring reports suggested for use by an Environmental Engineer to document conformance of the project with this Environmental Guidance and or permit/license conditions.

Environmentally Sensitive Areas – Examples of environmentally sensitive areas are rivers, streams, ponds, lakes, wetlands, bogs, swamps, salt marshes, parks, preserves, schools and as otherwise defined by federal, state or local regulations.

Person in Charge – A Project Engineer, Manager, Supervisor, Field Construction Coordinator or other personnel assigned to oversee and coordinate work activities.

Regulated Wetland Area – Those areas that are subject to federal, state or local wetland regulation, including certain buffer or adjacent areas.

Route, Access – An improved or unimproved path utilized to move personnel and equipment from an existing public way to and along a right-of-way or into a substation.

Right-of-Way – A corridor of land where legal rights (either fee ownership or easement) exist to construct, operate, and maintain an electric power line and/or natural gas pipeline and may include work on customer owned properties.

Swamp Mats – Components of a temporary wood, plastic or other suitable material used as an access road.

Work Site – An area where work is performed.

## **4.0 BEST MANAGEMENT PRACTICES**

### **4.1 BACKGROUND**

Access is needed to substations, ROW, and customer property, for inspection, maintenance and construction activities. Many of the ROW and structures are located in or near environmentally sensitive areas, such as rivers, streams, or wetlands, etc., which are protected from activities that may disturb these ecosystems.

Prior to the start of any new project, the Project Engineer or other project planner must determine whether any environmental permits or approvals are required. Any questions regarding which activities may be conducted in an environmentally sensitive area should be referred to an Environmental Engineer or environmental consultant.

This BMP section addresses ROW access, construction along ROW, structures in wetlands, clean-up and restoration standards, gates on ROW, field refueling and maintenance operations, management of spills/releases, and a summary of key construction best practices.

### **4.2 RIGHT-OF-WAY (ROW) ACCESS**

Whenever possible, access should be gained along existing access routes within the ROW. However, in some cases there are no existing access routes and other means of access, such as off-ROW access, are required. In many cases, temporary access can be utilized. The following practices provide general guidance on accessing a ROW. Check with an Environmental Engineer to determine if any environmental permitting is required before utilizing a temporary access.

#### *4.2.1 MAINTENANCE OF EXISTING ACCESS ROAD AND ROUTES*

In many cases, the existing access road may need to be improved to allow passage of the heavy equipment needed for scheduled maintenance work. Minor improvements may include adding gravel fill or crushed stone to fill depressions and washed-out areas. Major reconstruction projects may require permits. In all cases, the fill to be used should be clean and free of construction debris. Use of processed gravel, including reprocessed concrete (crushed concrete), may be approved by the Person in Charge or the Environmental Engineer, on a case-by-case basis.

#### *4.2.2 MAINTENANCE OF EXISTING ACCESS ROUTES*

Ruts and depressions along existing access routes and within the existing ROW can be leveled and graded, only.

#### *4.2.3 MAINTENANCE OF EXISTING GRAVEL ROADS*

Existing gravel roads can be restored or maintained at their pre-existing width and elevation, with clean gravel or crushed stone.

#### *4.2.4 MAINTENANCE OF EXISTING CULVERTS*

Damaged culverts can only be replaced after checking with an Environmental Engineer and determining if a permit may be required. Care must be taken to protect adjacent wetlands and watercourses by installing appropriate sedimentation controls, such as hay or straw bales, around the downstream end of the culvert. If at the time of anticipated replacement, there is heavy flow through the culvert, the Person in Charge should consult with the Environmental Engineer, to verify whether the culvert should be replaced at that time.

#### *4.2.5 ACCESS WHEN ROADS ARE NOT AVAILABLE*

If existing roads are not available, access via other methods described below should be explored. Consult with the Person in Charge or the Environmental Engineer.

##### *4.2.5.1. Upland Access*

Off ROW or other upland access should be used, if available.

##### *4.2.5.2. Low Bearing Pressure or Track Vehicles*

In some cases, access through shallow wetlands can be achieved with the use of Low Bearing Pressure or Track Vehicles. Use of this technique requires approval from the Environmental Engineer or Consultant.

##### *4.2.5.3. Frozen or Dry Conditions*

If schedules can accommodate deferral of wetland access until frozen or dry conditions, use of swamp mats or other mitigation measures may be avoided. It should be determined beforehand if the regulatory authority in question accepts this alternative.

##### *4.2.5.4. Swamp Mats*

In some cases, access through wet areas may require the installation of swamp mats, especially in the case of stream crossings.

##### *4.2.5.5. Other Methods*

Where the number of trips, nature of loads and work are suitable, the Person in Charge may determine that helicopter use is justified.

##### *4.2.5.6. Stream Crossings*

Stream crossings should be bridged with swamp mats or other temporary minimally-intrusive measures unless fording is acceptable for the site and is authorized by the Environmental Engineer. Care should be taken when installing a swamp mat bridge to ensure that the banks are not damaged during installation and removal and that stream flow is not unduly restricted. An environmental permit may be required to cross or disturb protected waters.

### **4.3 CONSTRUCTION ALONG ROWS**

During construction activities, efforts should be made to minimize impacts to the environment. Therefore, keep to a minimum the amount of ground cover and soil disturbed, and store materials needed for the project in upland areas. Utilize erosion and sediment controls, such as silt fencing or straw bales, to limit the impacts from soil erosion.

#### *4.3.1 EROSION AND SEDIMENT CONTROLS*

Appropriate erosion and sediment control devices shall be installed at work sites, in accordance with permit conditions and/or regulatory approvals, and otherwise, in order to prevent negative impacts to water resources and adjacent properties. The overall purpose of such controls is to prevent and control the movement of disturbed soil and sediments from work sites to adjacent, undisturbed areas, and particularly to water resources, public roads and adjacent properties. Appropriate erosion and sedimentation controls, including such materials as silt fencing and straw bales should be installed between the work area and such environmentally sensitive areas such as wetlands, streams, drainage courses, roads and adjacent property when work activities will disturb soils and result in a potential for causing erosion and sedimentation. Erosion and sedimentation controls should be properly maintained and inspected on a periodic basis, until work sites are properly stabilized and restored. Methods of documenting such inspections may include a written log.

#### *4.3.2 SITE GRADING*

The work site shall not be graded unless absolutely necessary to complete the work at the site. Grading outside of a regulated area shall be kept to the minimum extent necessary for safe and efficient operations. The work site shall be promptly re-graded, re-seeded (if adequate root and seed stock are absent), and mulched with hay or straw (use straw where the potential introduction of invasive plant species is of concern) to reduce erosion and visual impact, as soon as possible following completion of work at the site. Grading within a regulated area shall be subject to the review and approval of the Environmental Engineer or the Project Engineer.

#### *4.3.3 TOP SOIL*

When the work site requires excavation and grading, the top soil shall be stockpiled separately from the material excavated and this top soil shall be spread as a top dressing over the disturbed area during restoration of the site.

#### *4.3.4 ROCKS*

In active agricultural areas, rocks that were brought to the ground surface as a result of the work should be removed from the site, dependent upon consultation with the farmer.

#### *4.3.5 CONSTRUCTION MATERIAL ALONG ROW*

After preparing a site by clearing and/or installing any necessary erosion and sediment controls and prior to the start of construction, material such as poles, cross-arms, cable, and insulators may be placed along the ROW, as part of the project. Place construction material out of wetlands or other sensitive resource areas, unless authorized by the Environmental Engineer or Environmental Consultant.

As soon as the structure work has been completed, all used parts and trash are to be picked up and removed from the ROW. Retired poles and structures should be removed or cut 18 inches below the ground surface and backfilled to grade. In some cases, the used material from structure work may be temporarily stored at the work area by placing it out of the wetlands or other sensitive resource area until work in the adjacent areas has been completed. If work is discontinued for an extended period, all material must be removed from the ROW. Contact the Environmental Engineer for guidance on whether the work site must be restored.

#### **4.4 CONSTRUCTION ACTIVITIES IN WETLANDS**

##### *4.4.1 ACCESS TO STRUCTURES IN WETLANDS*

Access to structures should be obtained utilizing existing gravel roads whenever present. However, in cases where there are no existing gravel access routes, other means of access to structures are required as discussed below.

###### *4.4.1.1. Structures with Gravel Pads*

Many electric power line structures built in wetlands were constructed with gravel pads. A gravel pad is a deposit of fill material, generally gravel, that was placed in the wetland to support the structure. In most cases, the area around the structure was filled to a distance of 15 to 20 feet beyond the structure. This provided room for the construction crew to install and maintain the structures. In most cases, if the structure was built with a gravel pad, there would also be a gravel access road out to it.

###### *4.4.1.2. Structures without Gravel Pads (Deep Wetlands)*

In those cases where the structure is in a deep wetland without a pad, the structure was generally constructed on piles. In deep wetlands (generally greater than 7 feet), a pile would be driven down through the wetland into the hard material below the wetland. A pile would be driven for each leg of the structure. With the piles in place, the structure legs would be attached to the pile and erected on top. At those locations where piles were used, the wetland was generally too deep to construct a gravel access road.

Access to structures without access roads will be on swamp mats or similar weight-distributing materials. In a deep wetland, timber mats may have to be piled 3 or 4 high to support the construction equipment above the wetland surface.

###### *4.4.1.3. Structures without Gravel Pads (Shallow Wetlands)*

There are cases where structures were built in a wetland and not on piles. This case would be a shallow wetland with a hard bottom. The wetland will probably be one or two feet deep. In this case, there may or may not be an access road out to it. Access for maintenance of the structure will be by driving through the wetland on the hard bottom, under frozen or completely dry conditions such that there is no rutting, or by installing swamp mats or similar weight-distributing bedding. The use of low-bearing or tracked vehicles may also be appropriate. The method of access will depend on the time of year and the weather conditions. The Person in Charge should consult with the Environmental Engineer if he or she has any questions on what to use.

*4.4.2 TREATED WOOD STRUCTURES IN WETLANDS (NEW YORK NORTH)*

The New York State Department of Environmental Conservation's General Permit ~~0-0000-01147-1-9901-00011~~ prohibits the use of treated wood poles containing creosote, pentachlorophenol or chromated copper arsenate to be placed in their jurisdictional wetlands unless these poles have been air dried for at least 3 months prior to placement. In addition, poles placed in the buffer area of a jurisdictional wetland containing known NYSDEC Protected Species must also be air dried for 3 months. Proof of air dried time lapse can be determined from the date stamped on the pole or if necessary, through invoicing.

**4.5 CLEAN-UP AND RESTORATION STANDARDS**

The following steps should be taken after construction has been completed. Refer to the Order of Conditions or other applicable Permit Requirements if issued for the project in question, to determine if the site must be reviewed prior to removal of erosion controls.

*4.5.1 DISTURBED AREAS*

Unless otherwise specified in permits or prescribed by an Environmental Engineer or environmental consultant, all disturbed areas, including stream banks, wetlands and access routes, shall be returned to original grade, seeded with an appropriate, site-specific seed mix (if adequate root and natural seed stock are absent), and mulched with hay or straw (use straw in sensitive areas where potential introduction of invasive plant species is of concern). For some wetland areas, natural re-vegetation may be more appropriate than seeding disturbed sites.

*4.5.2 IMPROVED AREAS*

Yards, lawns, agricultural areas, and other improved areas shall be returned to a condition at least equal to that which existed at the start of the project. Alternately, if requested, the property owner may be reimbursed to perform their own restoration, after the site has been left in an environmentally sound manner. If this option is requested, it should be documented in a written release signed by the property owner.

*4.5.3 ACCESS ROUTES (CROSS COUNTRY ROUTES)*

Cross country access routes shall be returned to pre-construction grade, seeded (if adequate root and seed stock are absent) and mulched.

*4.5.4 ACCESS ROADS (CONSTRUCTED GRAVEL ROADS)*

Constructed gravel roads shall be returned to a condition at least equal to that which existed at the start of the project except that gravel roads shall, at a minimum, be serviceable for four-wheel drive vehicles. Seeding and/or mulching of gravel roads is generally not required, unless necessary to prevent erosion.

*4.5.5 PROPERTY DAMAGE*

All damage to property occurring as a result of a project shall be immediately repaired or replaced. In some locations, it may be desirable to document preexisting damage prior to the project in order to demonstrate afterwards that the damage did not result from the project.

*4.5.6 SWAMP MATS/TEMPORARY STRUCTURES*

After all work is completed, swamp mats and temporary bridges shall be removed and the site restored to pre-construction conditions.

*4.5.7 SILTATION CONTROLS*

After all work has been satisfactorily completed and vegetation has been re-established, and upon approval by the Environmental Engineer, siltation fence and stakes from straw bales shall be removed, and the strings on the bales cut in accordance with any pertinent Order of Conditions or similar permit requirements. Straw bales which were used for sedimentation or siltation control may be used to mulch disturbed areas (straw should be used in areas where invasive plant species are of concern). Remaining straw bales that do not block the flow of water may be left in place. Straw bales that block the flow of water must be removed. Removed siltation fence and straw bale stakes shall be disposed of properly, off-site.

*4.5.8 STONEWALLS*

Removal or alteration of stonewalls shall be avoided, whenever possible. As appropriate, some stonewalls removed or breached by construction activities shall be repaired or rebuilt. Rebuilt stone walls shall be placed on the same alignment that existed prior to temporary removal, to the extent that it will not interfere with operations.

*4.5.9 WORK SITE*

Upon satisfactory completion of work, the construction personnel shall remove all work-related trailers, buildings, rubbish, waste soil, temporary structures, and unused materials belonging to them or used under their direction during construction, or waste materials from previous construction and maintenance operations. All areas shall be left clean and restored to a stable condition and where feasible, as near as possible to its original condition.

*4.5.10 MATERIAL STORAGE/STAGING AREAS*

Upon completion of all work, all material storage yards and staging areas shall be completely cleared of all waste and debris. Unless otherwise directed or unless other arrangements have been made with an off right-of-way land owner, material storage yards and staging areas shall be returned to the condition that existed prior to the installation of the material storage yard or staging area. Whether or not arrangements have been made with a landowner, all areas shall be left in an environmentally sound condition. Also any temporary structures erected by the construction personnel, including fences, shall be removed by the construction personnel and the area restored as near as possible to its original condition, including possibly seeding and mulching.

**4.6 GATES ON RIGHTS-OF-WAY**

When not in use, gates shall be locked with a company-approved lock or double locked with the property owner's lock.

## **4.7 FIELD REFUELING AND MAINTENANCE OPERATIONS**

### *4.7.1 FIELD REFUELING*

When refueling vehicles, personnel or contractors at field locations are to bring vehicles or equipment to an access area away from environmentally sensitive areas (such as wetlands or drinking water sources). A paved area such as a parking lot or roadway is preferred, to minimize the possibility of spill or release to the environment. The driver is to take all usual and reasonable environmental and safety precautions during refueling, such as connecting a safety grounding strap between the fuel tank and vehicle or equipment being refueled. The driver is also to frequently check for fuel spills, drips, or seeps during the refueling operation.

Small equipment such as pumps and generators should be placed in small swimming pools or on absorbent blankets/pads, to contain any accidental fuel spills.

### *4.7.2 GREASE, OIL AND FILTER CHANGE*

When a routine maintenance lubrication or oil change is scheduled on vehicles or equipment in the field, personnel or contractors at field locations are to bring vehicles or equipment to an access area away from environmentally sensitive areas (such as wetlands or drinking water sources) if at all possible. A paved area such as a parking lot or roadway is preferred, to minimize the possibility of spill or release to the environment. The driver is to take all usual and reasonable environmental and safety precautions during routine lubrication and oil/filter changes. It is especially important to wipe up all minor drips or spills of grease and oil at field locations.

### *4.7.3 OTHER FIELD MAINTENANCE OPERATIONS*

When other vehicle or equipment maintenance operations (such as emergency repairs) occur, personnel or contractors at field locations are to bring vehicles or equipment to an access area away from environmentally sensitive areas (such as wetlands or drinking water sources) if at all possible. A paved area such as a parking lot or roadway is preferred, to minimize the possibility of spill or release to the environment.

Take all usual and reasonable environmental precautions during repair or maintenance operations. It is sometimes not feasible to move the affected vehicle or equipment from an environmentally sensitive area to a suitable access area. When this occurs, precautions should be employed to prevent oil or hazardous material release to the environment. These precautions include (but are not limited to) deployment of portable basins or similar secondary containment devices, use of ground covers, such as plastic tarpaulins, and precautionary placement of floating booms on nearby surface water bodies.

## **4.8 MANAGEMENT OF SPILLS/RELEASES**

Should a spill occur, it must be reported and cleaned-up in accordance with applicable guidelines and regulations.

## **4.9 SUMMARY OF KEY CONSTRUCTION BEST PRACTICES**

Environmental permits, approvals, or agency notifications may be required when working in or near a wetland resource area or other sensitive environmental area. If you have any questions as to whether these are required for your work activity, contact your Environmental Engineer.

Whenever working in and around wetlands or other sensitive environmental areas, certain construction practices should be implemented to minimize impact to the environment. The practices may vary according to the area and scope of the work, but generally, these BMPs include:

#### *4.9.1 MINIMIZING SOIL AND VEGETATION DISTURBANCE*

Soil disturbance should be limited only to that necessary to safely operate equipment, excavate for structures and anchors, temporarily stockpile soils, and conduct the necessary repair or maintenance work. It may be necessary to use low bearing pressure or track vehicles if access through a wetland is required. Wooden timber mats or similar load-distributing materials - "swamp mats" - are generally used to cross wetlands or streams and to provide an equipment work surface at structures in wetlands. As applicable, the swamp mats should be placed in locations where swamp mats had been previously placed. Removal of the swamp mats is required upon completion of the work. Most work conducted by distribution crews will not require the use of special vehicles or swamp mats as long as wetland contours are maintained, rutting is prevented, and protected stream banks and beds are not disturbed.

#### *4.9.2 EROSION AND SEDIMENTATION CONTROL*

The overall purpose of erosion and sedimentation control is to prevent and control the movement of disturbed soil and sediments from work sites to adjacent, undisturbed areas, and particularly to water resources, public road surfaces and adjacent property. Appropriate erosion and sedimentation controls, consisting of such materials as silt fencing and straw bales should be installed between the work area and environmentally sensitive areas such as wetlands, streams, drainage courses, roads and adjacent property when work activities will disturb soils and result in a potential for causing erosion and sedimentation. Erosion and sedimentation controls should be properly maintained and inspected on a periodic basis, until work sites are properly stabilized and restored. Methods of documenting such inspections may include a written log.

#### *4.9.3 RESTORING AND STABILIZING THE AREA*

When the work is completed, the disturbed vegetation and soil must be restored and stabilized by:

- Re-grading the area to pre-existing conditions;
- Seeding (if adequate root and seed stock are absent) and mulching the exposed soil;
- Removing strings and stakes from straw bales and using straw for the mulch; and
- Removing siltation fencing and stakes and returned to the operating facility for disposal as ordinary waste.

Be sure to consult any regulatory permit associated with the work in question to ensure compliance during and after the project construction.

### **4.10 NOTIFICATION**

Because it is sometimes difficult to identify wetlands and other sensitive environmental areas, an Environmental Engineer should be notified within 24 hours or by the next working day whenever emergency off-road repair work takes place. Planned off-road maintenance work should be reviewed with an Environmental Engineer before work begins. Although the routine

**Environmental Guidance: ROW Access, Maintenance and Construction**

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maintenance and emergency repair work is generally allowed, due to site conditions or the scope of the project, notification to the regulating agencies may be required. \*

# Best Management Practice for Preventing the Transportation of Invasive Plant Species



Environmental Energy Alliance of New York

4/26/12/2012

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## Appendices

Appendix 1 - Best Management Practices (BMP's) for Invasive Species Transportation Prevention

Appendix 2 - DEC Revised Interim List of Invasive Plants Species in New York State, January 23, 2012

## 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.

Currently, annual economic losses due to invasive species in the U.S. are 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 plant 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 plant 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 plant 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 plant species* are those contained on the “Revised Interim List of Invasive Plants Species in New York State” dated January 23, 2012 developed by NYS DEC (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 or Goal

This BMP provides guidance for inspecting and cleaning vehicles and equipment to help prevent the spread of invasive plant 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 plant 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 plant species*
- g. Do not clean equipment in or near waterways as it may promote the spread of *invasive plant species* downstream.
- h. Where possible, staging areas will be established in locations that are free of *invasive plant 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 plant species* are already established; or
  - An area immediately adjacent to the work site that is itself currently infested with *invasive plant species*.
- e. No cleaning of clothing, footwear, gear in or adjacent to waterways – it may promote the spread of *invasive plant 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 plant 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 plant 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 plant species*.
- c. Vehicular access into areas containing populations of *invasive plant 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 plant 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 plant species* identified in Appendix 3 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.

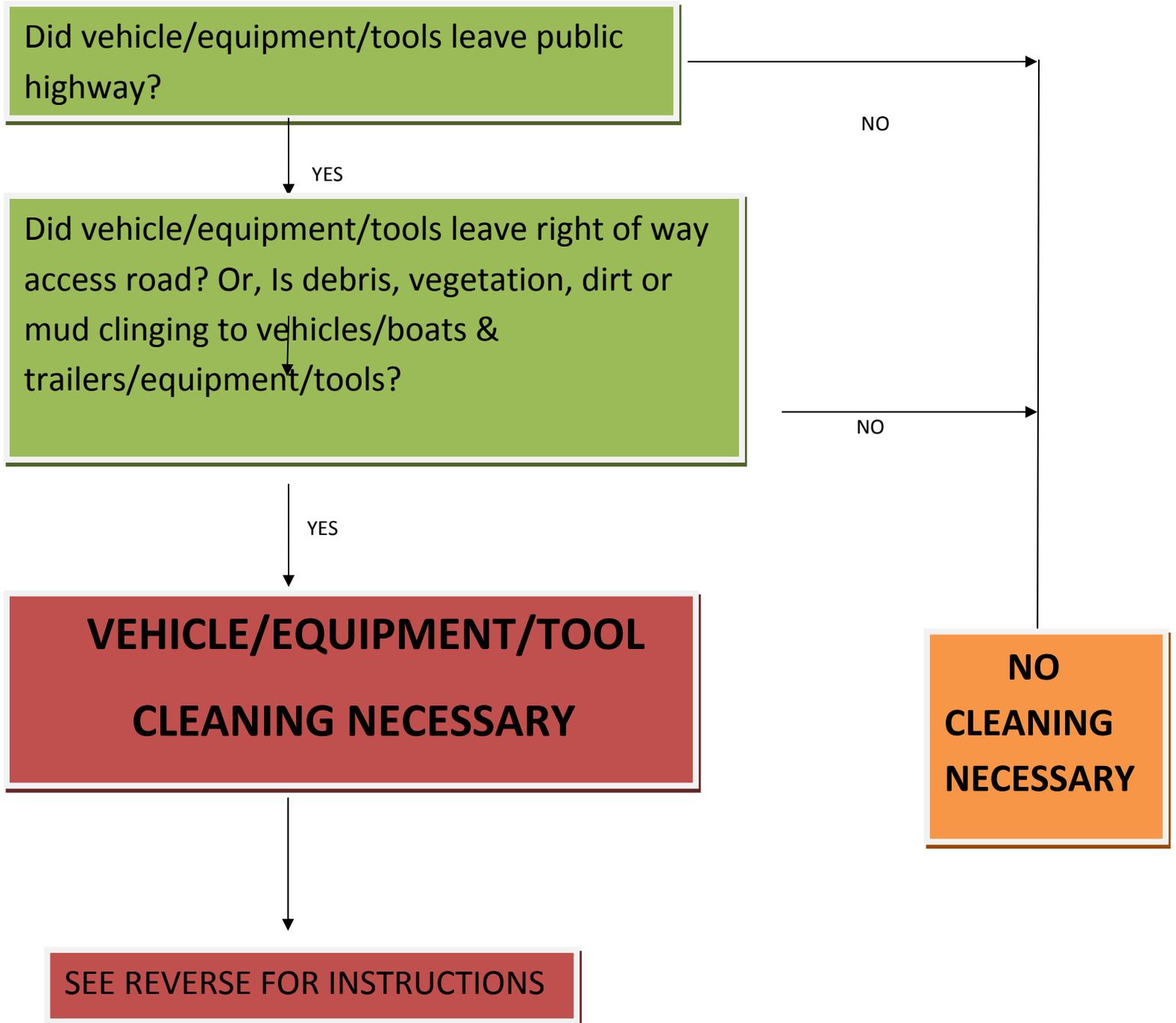
## 7.0 Emergency Work

During emergencies, *EEANY* utility members will strictly comply with the Emergency Action condition protocol outlined in the *NYSDEC General Permit*. Appropriate site-specific *invasive plant 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.

## APPENDIX - 2

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### REVISED INTERIM LIST OF INVASIVE PLANT SPECIES IN NEW YORK STATE

23 January 2012

#### Purpose

This list was not prepared pursuant to ECL 9-1705 (5) (h), the so-called “four-tier system”.

The primary purpose of this list to inform New York State agencies so they can incorporate invasive species management into their funding, regulatory and other activities pursuant to ECL 9-1705 (b) and especially ECL 9-1709 (2):

“...[DEC] in cooperation with [DAM] shall have the authority...to... coordinate state agency and public authority actions to do the following: (a) **phasing out uses of invasive species**; (b) **expanding use of native species**; (c) **promoting private and local government use of native species as alternatives to invasive species**; and (d) wherever practical and where consistent with watershed and/or regional invasive species management plans, **prohibiting and actively eliminating invasive species at project sites funded or regulated by the state;....”**

It is intended to inform regulatory actions pursuant to existing statutory authorities, e.g., protection of waters (ECL Article 15), wetlands (ECL Articles 24 and 25), State Environmental Quality Review (ECL Article 8), biocontrol (ECL Article 11), and pesticides (ECL Article 33). This list is also intended to inform non-regulatory management decisions and actions, such as for planning and priority-setting, prevention, early detection, monitoring, rapid response, control and eradication, restoration, research, and public education.

This list does not include *all* plant species that are invasive or potentially-invasive in New York State. Rather, it includes many of those plant species that are widely-recognized as invasive or potentially-invasive in New York State. ECL 9-1703 (10) defines “invasive species” as:

“...a species that is: (a) nonnative to the ecosystem under consideration; and (b) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. For the purposes of this paragraph, the harm must significantly outweigh any benefits.”

Thus, when complying with the provisions of 9-1709, agency staff use professional judgment in assessing the potential environmental harm (or harm to human health) when considering particular species in particular contexts.

*Invasive Plants Field and Reference Guide: An Ecological Perspective of Plant Invaders of Forests and Woodlands* [http://www.fs.fed.us/ne/newtown\\_square/publications/information\\_bulletins/NA-TP-05-04.pdf](http://www.fs.fed.us/ne/newtown_square/publications/information_bulletins/NA-TP-05-04.pdf)

*Mistaken Identity? Invasive Plants and their Native Look-alikes: an Identification Guide for the Mid-Atlantic*

[http://www.nybg.org/files/scientists/rnaczi/Mistaken\\_Identity\\_Final.pdf](http://www.nybg.org/files/scientists/rnaczi/Mistaken_Identity_Final.pdf)

REVISED INTERIM LIST OF INVASIVE PLANT SPECIES IN NEW YORK STATE

Floating & Submerged Aquatic		
Common Name	Scientific Name	Rank
Water thyme	<i>Hydrilla verticillata</i>	Very High
Frog Bit	<i>Hydrocharis morsus-ranae</i>	Very High
Floating Primrose Willow	<i>Ludwigia peploides</i>	Very High
Broadleaf Water-milfoil	<i>Myriophyllum heterophyllum</i>	Very High
Eurasian Water-milfoil	<i>Myriophyllum spicatum</i>	Very High
Water Chestnut	<i>Trapa natans</i>	Very High
Rock Snot (diatom)	<i>Didymosphenia geminata</i>	
Carolina Fanwort	<i>Cabomba caroliniana</i>	High
Brazilian Waterweed	<i>Egeria densa</i>	High
Parrot-feather	<i>Myriophyllum aquaticum</i>	High
Yellow Floating Heart	<i>Nymphoides peltata</i>	High
Curly Pondweed	<i>Potamogeton crispus</i>	High

Emergent Wetland & Littoral		
Common Name	Scientific Name	Rank
Japanese Knotweed	<i>Fallopia japonica</i>	Very High
Purple Loosestrife	<i>Lythrum salicaria</i>	Very High
European Common Reed Grass	<i>Phragmites australis</i>	Very High
Tall Glyceria	<i>Glyceria maxima</i>	High
Yellow Iris	<i>Iris pseudacorus</i>	High
Marsh Dewflower	<i>Murdannia keisak</i>	High
Reed Canary-grass	<i>Phalaris arundinacea</i>	High

Terrestrial - Herbaceous		
Common Name	Scientific Name	Rank
Garlic Mustard	<i>Alliaria petiolata</i>	Very High
Slender False Brome	<i>Brachypodium sylvaticum</i>	Very High
Oriental Bittersweet	<i>Celastrus orbiculatus</i>	Very High
Black swallow-wort	<i>Cynanchum louiseae</i>	Very High
Pale Swallow-wort	<i>Cynanchum rossicum</i>	Very High
Japanese Stilt Grass	<i>Microstegium vimineum</i>	Very High
Lesser Celandine	<i>Ranunculus ficaria</i>	Very High
Wild Chervil	<i>Anthriscus sylvestris</i>	High
Mugwort	<i>Artemisia vulgaris</i>	High
Small Carpgrass	<i>Arthraxon hispidus</i>	High
Narrowleaf Bittercress	<i>Cardamine impatiens</i>	High
Spotted Knapweed*	<i>Centaurea stoebe ssp. micranthos</i>	High
Canada Thistle	<i>Cirsium arvense</i>	High
Chinese Yam	<i>Dioscorea polystachya</i>	High
Cut-leaf Teasel	<i>Dipsacus laciniatus</i>	High
Winter Creeper	<i>Euonymus fortunei</i>	High
Cypress Spurge	<i>Euphorbia cyparissias</i>	High
Leafy Spurge	<i>Euphorbia esula</i>	High

Giant Hogweed	<i>Heracleum mantegazzianum</i>	High
Japanese Hops	<i>Humulus japonicus</i>	High
Cogon Grass	<i>Imperata cylindrica</i>	High
Broad-leaf Pepper-grass	<i>Lepidium latifolium</i>	High
Chinese Lespedeza	<i>Lespedeza cuneata</i>	High
Garden Loosestrife	<i>Lysimachia vulgaris</i>	High
Chinese Silver Grass	<i>Miscanthus sinensis</i>	High
Wavyleaf Basketgrass	<i>Oplismenus hirtellus</i>	High
Cup-plant	<i>Silphium perfoliatum</i>	High

Terrestrial - Vines		
Common Name	Scientific Name	Rank
Japanese Honeysuckle	<i>Lonicera japonica</i>	Very High
Mile-a-minute Weed	<i>Persicaria perfoliata</i>	Very High
Kudzu	<i>Pueraria montana</i>	Very High
Porcelain Berry	<i>Ampelopsis brevipedunculata</i>	High
Japanese Virgin's Bower	<i>Clematis terniflora</i>	High

Terrestrial - Shrubs & Trees		
Common Name	Scientific Name	Rank
Norway Maple	<i>Acer platanoides</i>	Very High
Japanese Angelica Tree	<i>Aralia elata</i>	Very High
Japanese Barberry	<i>Berberis thunbergii</i>	Very High
Autumn Olive	<i>Elaeagnus umbellata</i>	Very High
Winged Euonymus	<i>Euonymus alatus</i>	Very High
Amur Honeysuckle	<i>Lonicera maackii</i>	Very High
Morrow's Honeysuckle	<i>Lonicera morrowii</i>	Very High
Uruguayan primrose willow	<i>Ludwigia grandiflora</i>	Very High
Common Buckthorn	<i>Rhamnus cathartica</i>	Very High
Black Locust	<i>Robinia pseudoacacia</i>	Very High
Multiflora Rose	<i>Rosa multiflora</i>	Very High
Wineberry	<i>Rubus phoenicolasius</i>	Very High
Gray Florist's Willow	<i>Salix atrocinerea</i>	Very High
Sycamore Maple	<i>Acer pseudoplatanus</i>	High
Porcelain Berry	<i>Ampelopsis brevipedunculata</i>	High
Smooth Buckthorn	<i>Frangula alnus</i>	High
Border Privet	<i>Ligustrum obtusifolium</i>	High
Amur Cork Tree	<i>Phellodendron amurense</i>	High
Beach vitex	<i>Vitex rotundifolia</i>	High

\* Brown and Black Knapweed have also been known to be problematic in grassland habitats

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