

Volume I
Environmental Management & Construction Plan
for the
Central Hudson Gas & Electric Corporation
A and C Lines Rebuild Project
Dutchess County, New York

January 2015

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Attachment B	A and C Lines Stormwater Pollution Prevention Plan (SWPPP)
Attachment C	Section 404 Nationwide Permit 12
Attachment D	A and C Lines Wetland and Stream Delineation Report
Attachment E	Invasive Species Control Plan
Attachment F	Central Hudson Gas & Electric Long Range Vegetation Management Plan/Transmission Vegetation Management Plan
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Attachment H	NYSDOT Traffic Protection Standards and Road Intersection Photo Log
Attachment I	Central Hudson Gas & Electric Herbicide General Permit
Attachment J	Quality Assurance Plan

COMPANION DOCUMENT

EM&CP Volume II

LIST OF IMPORTANT CONTACTS

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1.0 INTRODUCTION

1.1 EM&CP Purpose and Intent

This Environmental Management and Construction Plan (EM&CP) identifies the locations and types of facilities to be utilized for the Central Hudson Gas & Electric Corporation (CHG&E or the Certificate Holder) A and C Electric Transmission Lines Rebuild Project (the Project). General procedures included within the EM&CP describe Project administration, consultations, construction, restoration, and environmental mitigation. The EM&CP incorporates the results of various surveys and studies, as well as conditions of the issued Certificate of Environmental Compatibility and Public Need (Certificate). A table that correlates specific Certificate Conditions with specific sections of the EM&CP is included as Attachment A. Plan and Profile Drawings and the Construction Details are included in EM&CP Volume II (hereafter referred to as the EM&CP Drawings).

This EM&CP is formatted to provide concise information about the different elements of the construction process, ranging from construction methods to specific procedures and key mitigation measures for use in environmentally sensitive areas. It is also intended to ensure compliance with relevant Environmental Conservation Law (ECL) and New York State (NYS) Water Quality Standards. The New York State Standards and Specifications for Erosion and Sediment Control (NYSSDESC, also known as the Blue Book) was used in the development of this EM&CP and should be used by all contractors as a reference for the practices to be used during construction.

1.2 Facility Location and Description

The Project is located within an existing right-of-way that in most areas is approximately 150 feet in width (ROW) (Project Area), and spans approximately 10.85 miles through four towns in Dutchess County: Pleasant Valley, LaGrange, Wappinger, and East Fishkill. The existing ROW has been held by CHG&E and used for transmission purposes since 1948. The existing A and C transmission lines (A and C Lines) connect the Pleasant Valley Substation in the Town of Pleasant Valley to the Todd Hill Substation in the Town of Lagrange, and the Todd Hill Substation to the Fishkill Plains Substation in the Town of East Fishkill. Both the A and C Lines currently operate at 115,000 volts (115 kilovolts [kV]), and the rebuild design voltage remains 115 kV. The majority of the existing transmission structures carrying the A and C Lines are H-frame wood pole structures. Significant portions of the corridor also include a CHG&E gas transmission line, two other CHG&E kV electric transmission lines (M Line - 115 kV and G Line - 69 kV), and two existing Consolidated Edison (ConEd) 345 kV electric transmission lines. The existing corridor is largely maintained in early successional vegetation (i.e., old field herbaceous and shrub species), and traverses a variety of landscapes from undeveloped forest land and agricultural fields, to areas of medium density residential development.

The proposed plan is to replace the majority of structures and conductor along the existing 10.85-mile long ROW. In locations where the transmission structures have been replaced within approximately the last five years, some of these existing structures will be retained and/or reframed to more closely match the new structures. There are currently 123 existing transmission structures (including a total of 262 individual poles) within the ROW, which will be replaced with 112 new structures (139 new poles). A total of 14 structures (29 poles and 1 steel lattice tower) from previous replacements will be retained, and five existing structures will have galvanized cross-

arms and cross-braces replaced with self-weathering steel cross-arms and cross-braces. Angle structures are currently swing angle suspension, three-pole structures and will be replaced with swing angle suspension, two pole structures. Existing strain insulator, three-pole deadend structures will be replaced with strain insulator, two-pole deadend structures. Except in limited circumstances where an H-frame structure is retained, the two static wires (0.461 inches dia.) associated with the existing A and C Lines will be replaced with one non-specular wire (0.7 inches dia.). The three existing conductors (0.783 inches) will be replaced with three new larger non-specular conductors (1.212 inches).

There will be up to 11 different structure types used for the Project (see EM&CP Drawing, Sheet 16 for each structure type) due to multiple constraints identified at various locations along the ROW. Each structure will consist of direct embedded self-weathering steel poles (see detail on EM&CP Drawings). The line will be constructed as specified on the EM&CP Plan and Profile Drawings. These drawings show existing and proposed structure locations, construction access routes, structure work areas, material laydown areas, and wire pulling sites. Several temporary off-ROW marshaling yards have been designated for the purposes of accommodating construction trailers, equipment, vehicles and materials. The marshaling yards will also include dumpsters, portable toilets, storage (Conex) boxes, and possible bulk fuel storage (with secondary containment). The location and extent of all temporary marshaling yards are illustrated in the EM&CP Drawings.

1.3 Schedule

A detailed construction schedule will not be finalized until final Project approval is granted and contracts have been awarded to all contractors. However, it is anticipated that the line will be rebuilt in phases or sections. It is likely that one section (either A or C Line) will be worked on at a time, although there may be overlap of multiple phases of construction in each section. Construction within each section will likely take 4 – 6 months. Construction will not commence on any segment of the Project until CHG&E has obtained the property rights necessary for construction of such segment. The typical work sequence within a section will be as follows:

1. Survey new pole locations;
2. Flag/stake access routes, structure work areas and laydown areas;
3. Clear woody vegetation, as necessary from access routes, structure work areas and laydown areas;
4. Install erosion- and sediment-control measures where soil disturbance is anticipated;
5. Improve temporary access routes and laydown areas, as necessary;
6. Mobilize equipment;
7. Drill pole holes;
8. Deliver new structures and hardware;
9. Take A or C line out of service and ground

10. Install structures, guys, and insulators;
11. Transfer conductors from old structures to new (to serve as lead lines);
12. Pull new conductors;
13. Remove old structures;
14. Secure new conductors;
15. Place new line in service; and
16. Final restoration and site demobilization.

A detailed construction schedule and location timeline identifying the construction segments will be provided to New York State Department of Public Service (DPS) staff, the New York State Department of Agriculture and Markets (NYSDAM) and the New York State Department of Environmental Conservation (NYSDEC) prior to construction. Weekly status updates will be submitted to DPS staff, the NYSDAM and NYSDEC. The weekly status reports will include the following information:

- Summary of recent construction activity;
- Outline of upcoming (two-week look ahead) work and locations;
- Identification of schedule modifications; and
- Copies of Stormwater Pollution Prevention Plan (SWPPP) Inspection Reports.

Additionally, CHG&E will provide DPS with periodic updates or audits in accordance with Certificate Conditions 32, 38, 43, 44, 71, 86, 135, 136, 137, 138 and 141.

Prior to the commencement of construction, both edges of the ROW will be delineated with flagging or stakes. In addition, other work areas, including unpaved roadways, laydown areas will be identified and flagged (or staked). Flagging (or staking) of these areas will occur at least two weeks prior to commencement of construction. Also, erosion and sediment controls will be installed early in the construction process at locations which may be subject to soil disturbance. Initial controls may include the installation of erosion and sediment control measures such as silt fences to prevent stormwater runoff from reaching adjacent properties or sensitive sites.

Vehicular access to the ROW during construction has been discussed with state, county and local transportation officials, and no concerns have been expressed by these officials. Maintenance and protection of traffic plans will be implemented, as described in Sections 18 and 19.

Upon completion of the construction activities, all disturbed areas will be restored and stabilized in accordance with the NYSSSESC. Temporary erosion control and stabilization practices will be installed as soon as practicable and appropriate, as indicated in the SWPPP, but in no event later than the end of the work day in which site disturbance occurs.

1.4 Other Permits and Approvals

CHG&E and its consultants conducted wetland and stream delineations within the Limit of Work Area in accordance with the U.S. Army Corps of Engineers (USACE) methodology (refer to Wetland and Stream Delineation Report in Attachment D). This information was integrated into the design in order to avoid and/or minimize temporary and long-term impacts to wetlands and watercourses. As such, an individual permit under Section 404 of the Federal Clean Water Act and Section 10 of the Rivers and Harbors Act from the USACE is not required for this Project. The project is considered a utility line under Nationwide Permit (NWP) No. 12 for utilities (see Attachment C). Under NWP No. 12, formal notification via a Pre-Construction Notification (PCN) is required if a project includes the following:

1. The activity involves mechanized land clearing in a forested wetland for the utility line right-of-way;
2. A Section 10 permit is required;
3. The utility line in waters of the United States, excluding overhead lines, exceeds 500 feet;
4. The utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area;
5. Discharges that result in the loss of greater than 1/10 acre of waters of the United States;
6. Permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or
7. Permanent access roads are constructed in waters of the United States with impervious materials

The Article VII Application and the EM&CP Drawings demonstrate that these conditions are not applicable to this Project. As such, this rebuild project is considered a non-reporting activity and is authorized for coverage under NWP No. 12. If the scope of the Project changes, such that the thresholds are surpassed, CHG&E will notify the DPS, the NYSDEC and the New York District of the USACE accordingly.

In addition, coverage under NYSDEC State Pollution Discharge Elimination System (SPDES) General Permit (GP) 0-10-001 for Stormwater Discharge Associated with Construction Activities is also required since the Project will result in a land disturbance greater than one acre. As such, a Project SWPPP is required. The SWPPP and associated erosion and sediment control details have been developed in accordance with the latest version of the NYSSDESC (Blue Book). The SWPPP has been reviewed and approved by the local MS4 communities affected by the Project, and is incorporated into this EM&CP (see Attachment B and EM&CP Drawings).

2.0 ENVIRONMENTAL SUPERVISION

Construction of the A and C Lines Rebuild Project will be managed by CHG&E. Specifications for assuring environmental compliance, both through pre-construction training and on-site monitoring of construction activities, have been developed for all phases of this Project. These procedures include environmental monitoring by one or more trained Environmental Inspectors

who will report to CHG&E; a detailed EM&CP, which will be strictly followed by CHG&E and contractor work forces; and stop/start work authority on the part of designated environmental personnel.

The following identifies the principal elements of the construction supervision and environmental compliance oversight program.

2.1 Central Hudson Project Management

CHG&E personnel will be directly involved in all construction work. All contract work will be closely supervised by CHG&E personnel, who may be supplemented by specialized consultants, including, as needed, firms with expertise in surveying, environmental services, engineering, and construction.

CHG&E management personnel will supervise this Project. A Construction Manager will direct all aspects of the Project for CHG&E, and will be responsible for overall compliance with the EM&CP. Other key personnel, including representatives of CHG&E's ROW department and the Environmental Inspector, will report to the Construction Manager. All CHG&E construction crews and contractors involved in the Project also will report to the Construction Manager.

2.2 Contractor Responsibilities

CHG&E anticipates that most of the construction-related work activities will be performed by contractors.

All Project contractors will be provided with a copy of the Certificate and EM&CP, including the EM&CP Drawings, prior to execution of contracts. Contractor personnel will receive environmental and safety training prior to starting work on the Project. Contractors will be responsible for complying with all portions of the EM&CP relevant to their work, in addition to relevant Environmental Conservation Laws and NYS Water Quality Standards. CHG&E personnel will audit the work of the contractors and will have the authority to direct the contractor to perform activities to maintain compliance, as necessary. CHG&E's Environmental Inspectors will review the environmental aspects of the contractors' work.

Contractors will report to CHG&E's Construction Manager and will be closely monitored during all phases of their work.

2.3 Environmental Compliance and Oversight

CHG&E is committed to the protection of environmental resources during all phases of construction. CHG&E has internal programs and procedures to address environmental compliance and oversight. CHG&E's environmental compliance program will focus on five key elements:

1. Environmental Provisions in Construction Specifications or Contracts, including incorporation of the EM&CP into contract documents.
2. Pre-Construction Environmental Training and EM&CP Awareness, to assure that all personnel involved in construction activities (or visitors to the Project) are aware of the environmental documents, permits, safety and Certificate conditions that will govern work on the Project, as well as of the role of the environmental personnel assigned to the Project.

3. Use of Qualified Personnel and Environmental Monitoring During Construction, to verify that construction is performed in accordance with environmental requirements.
4. Availability of CHG&E Construction Foreman as the Primary Point of Contact, to assure that regulatory authorities, law enforcement personnel, and municipal officials have direct access to company personnel (e.g., names and telephone numbers of personnel during and after normal work hours) to facilitate prompt coordination and follow-up in the event that concerns arise during the course of the construction (see Contact List on page v).
5. Emphasis on the Consequences of Non-Compliance, to assure that all construction personnel, including contractors, are aware of the penalties for not adhering to any environmental permit(s) and EM&CP/Certificate conditions.

CHG&E will organize and conduct compliance meetings with DPS staff, NYSDEC, and NYSDAM as needed, but not less frequently than once per month, during the site preparation, construction, and restoration phases of the Project. The monthly meeting will include a review of the status of compliance with all conditions contained in the Certificate and any other Order issued, other legal requirements and commitments, as well as field review of the Project site, if necessary. The meeting will also include:

1. Review of all complaints received, and their proposed or actual resolutions;
2. Review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies, and any proposed or actual resolutions;
3. Review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and
4. Other items CHG&E or DPS staff consider appropriate.

CHG&E will provide a written record of the results of the meeting, including resolution of issues and additional measures to be taken, to agencies involved in the compliance meeting.

As indicated above, compliance with the environmental protection provisions specified by the Commission will be assured through supervision of construction activities by at least one Environmental Inspector assigned to the Project. The Environmental Inspector reports to the CHG&E Construction Manager, and will serve as the primary individual responsible for overseeing and documenting day-to-day compliance activities.

CHG&E will also have the following inspectors on-site during construction:

- Agricultural Inspector;
- Blanding's Turtle Inspector (or assigned Agents);
- Construction Inspector;
- Safety Inspector;
- Quality Assurance Inspector; and
- Electrical Safety Inspector

CHG&E will provide the name(s) of the Qualified Inspector(s) to DPS staff at least two weeks prior to construction and will include the required contact information within the Project List of Contacts.

The Certificate Conditions require an Environmental Inspector, an Agricultural Inspector and a Blanding's Turtle Inspector that has a handlers permit issued by the NYSDEC. The NYSDEC SPDES General Permit (GP 0-10-001) also requires a SWPPP Inspector. CHG&E Construction Foreman assigned to the Project will act as the Construction, Electrical Safety, and Quality Assurance Inspector. The Line Foreman will monitor quality on a daily basis, and CHG&E's Engineering Department will provide periodic quality inspections and assist the Line Foreman, as needed.

CHG&E will provide DPS staff, NYSDAM, and NYSDEC with weekly status reports summarizing construction and indicating construction activities and locations scheduled for the next two weeks

Should there be a need for deviation from the EM&CP commitments, CHG&E will report any proposed changes to DPS staff (and the NYSDEC Central Office and Region 3 if the proposed change involves ECL jurisdictional areas) in accordance with the established procedure for dealing with minor changes to the approved EM&CP as described in Certificate Condition 31, and will coordinate subsequent communications as needed.

2.4 Environmental Inspector Responsibilities

The Environmental Inspector will have a degree in environmental science and experience in environmental compliance or management, and will be required to satisfy the "Qualified Inspector" criteria outlined in the SPDES General Permit 0-10-001. The Environmental Inspector(s) will be on the job full-time during all phases of the Project. The Environmental Inspector will coordinate with the Construction Manager, DPS staff, and contractor(s), during all phases of Project construction activity. Prior to the start of construction at any given section, the Environmental Inspector, CHG&E Construction Manager and the contractor will conduct a walk-over of areas to be affected, or potentially affected, by proposed construction activities. This pre-construction walk-over will focus on the previously identified sensitive resources to avoid (e.g., wetlands or agricultural resources), as well as the limits of clearing, proposed locations of wetland and stream crossings, location of drainage features (e.g., culverts, ditches), location of underground utilities and tile lines, and layout of sedimentation and erosion control measures. These features will be marked in the field (by staking, flagging, fencing, etc.) at least two weeks prior to the start of construction, and specific construction procedures will be reviewed during the pre-construction walk-over. Any modifications to construction methods or locations will be proposed before construction activities begin and submitted as proposed minor changes in accordance with Certificate Condition 31.

The Environmental Inspector will have the following responsibilities:

1. Providing environmental compliance training for all Project personnel;
2. "Stop work" authority over all aspects of the Project (Refer to Section 2.5);

3. Monitoring all construction activities, including clearing, access improvements/installations, structure removals, replacement structure installations, wire-stringing, installation and maintenance of temporary erosion controls, work involving wetlands, streams, agricultural lands, etc.;
4. Monitoring and supporting compliance with the environmental management and protection requirements specified by the EM&CP, Section 404 NWP No. 12, and the Project SWPPP;
5. Performing the role and responsibilities of the Agricultural Inspector (see Section 10) in order to address all EM&CP requirements for work involving affected agricultural lands, or coordinating with the Agricultural Inspector if a separate Agricultural Inspector is utilized;
6. Performing the role and responsibilities of the Blanding's Turtle Inspector or assigned Agent (see Section 9.2), or coordinating with the Blanding's Turtle Inspector if a separate Blanding's Turtle Inspector is utilized;
7. Organizing and conducting site compliance audit inspections for DPS staff, with the Construction Inspector, Agricultural Inspector (as applicable to affected agricultural lands), and other Project team personnel;
8. Preparing environmental-related EM&CP Notices of Change for review by CHG&E before submitting to DPS staff;
9. Coordinating DPS Staff, NYSDEC, and NYSDAM, inspections of the Project Site, in conjunction with CHG&E;
10. Monitoring and managing all environmental protection requirements of the EM&CP and closely coordinating same with the Construction Inspector and Contractor; and
11. Monitoring Contractor compliance with the provisions of the Certificate and permits, applicable sections of the Public Service Law, and the EM&CP.

During Project construction, the Environmental Inspector will conduct inspections of all areas requiring environmental compliance, with an emphasis on those activities that are occurring within jurisdictional/sensitive areas, including wetland and stream crossings, threatened and endangered species (Blanding's turtle) habitat, and active agricultural lands. The Inspector will keep a log of daily construction activities, and will issue regular periodic reporting and compliance audits.

2.5 Stop Work Orders

All contractors on the Project will be provided a copy of the Certificate and the EM&CP at the time of the pre-construction meeting. At this meeting, which will be attended by all key CHG&E Project personnel, the importance of strict compliance with all environmental provisions will be explained and emphasized. At that time all contractors will be notified that the Environmental Inspector has the authority to stop work and direct actions if such should become necessary in the environmental interest.

Along with the Environmental Inspector, CHG&E Construction Manager and DPS staff representatives also have the right to issue a "stop work" order because of safety or environmental

concerns observed during construction. When an environmental or safety concern arises, individuals should immediately notify the Environmental Inspector or the Safety Inspector, respectively, regarding their concern. The responsibility for ensuring that this takes place depends upon open communication between the contractor, subcontractors, and CHG&E employees. After the Environmental Inspector becomes aware of the concern, he or she will meet with the contractor's and/or subcontractor's employee to discuss and resolve the issues. Stop work authority will be exercised sparingly and with due regard to potential environmental impact, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is violated. Before exercising such authority, DPS Staff representatives will consult (wherever practicable) with the Certificate Holder's representatives possessing comparable authority. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the CHG&E's Project Manager and the DPS's Director of the Office of Energy Efficiency and the Environment (OEEE). In the event that a DPS staff representative issues a stop work order, neither CHG&E nor the contractor will be prevented from undertaking any safety-related activities as they deem necessary and appropriate under the circumstances. The issuance of a stop work order or the implementation of measures as described below may be directed at the sole discretion of the DPS staff representative during these discussions.

The Environmental Inspector will ensure that any "stop work" orders are delivered to the contractor's Construction Supervisor. If that person is not available, then the order will be issued to the next person in command. The Environmental Inspector, CHG&E Construction Manager and DPS staff representatives will not issue a Stop Work Order directly to any of the contractor's other employees or its subcontractors under any circumstance, with the exception as follows:

- If a specific activity is discovered that is, or immediately may become, a violation of the Certificate or any other permit condition, field crews will be directed to stop the specific potentially harmful activity immediately.
- If it is determined that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific corrective measures, the Environmental Inspector, CHG&E Construction Manager or DPS staff representative may direct the contractor to implement the corrective measures identified in the EM&CP. The field crews shall comply with the directive immediately. If this action is taken by the DPS staff representative, he/she will immediately thereafter inform the CHG&E's Construction Manager and/or Environmental Inspector of the action taken.

3.0 STORMWATER POLLUTION PREVENTION

CHG&E and its contractors will implement appropriate sediment and erosion control techniques throughout construction to reduce sediment loading from storm water runoff in accordance with the EM&CP and the Project SWPPP included as Attachment B. Temporary erosion control and stabilization practices will be installed as soon as practicable and appropriate, but in any event, no later than the end of the workday in which site disturbance occurs.

SWPPP “Qualified Inspections” will be conducted in accordance with the requirements of the SPDES General Permit and NYSSSESC, as described in the SWPPP. Reports will be coordinated with the weekly status reports required per this EM&CP. Following construction, stabilization will be considered final once at least 80% of a disturbed area has been vegetated and restored to its original condition and the area has received approval by a qualified inspector.

4.0 VEGETATION CLEARING AND DISPOSAL METHODS

The A and C Lines will be re-constructed on an existing ROW. CHG&E may use company employees or clearing contractor(s) to remove vegetation from the A and C Lines ROW. Any clearing required for the Project will be done in accordance with CHG&E’s Long Range Vegetation Management Plan (LRVMP) (Attachment F) and will be supervised by CHG&E’s Construction Manager. CHG&E and its contractors will comply with the provisions of 6 NYCRR Part 192, Forest Insect and Disease Control, and ECL Section 9-1303 and any quarantine orders issued thereunder.

Within the existing cleared ROW low growing (desirable) species are preserved to the extent practical. In selected cases, certain desirable trees may be kept on the ROW and only trimmed to provide operational and required clearance to wires and structures. Woody vegetation (shrubs and small trees) will be removed from the access routes and work areas depicted in the EM&CP Drawings. Currently, only two types of vegetation clearing and disposal are anticipated on the ROW.

Clearing types will be as follows:

- Type 1 clearing involves clearing designated access routes, structure work areas, pulling sites and laydown areas in upland locations of all woody plants by mechanical means, such as brush hogging or mowing. All woody plants will be cut as close to the ground as practicable. Herbicide will not be applied to cut stumps.
- Type 2 clearing involves clearing designated access routes, structure work areas, pulling sites, and laydown areas of woody plants using only hand tools (i.e., chain saws). All woody plants will be cut as close to the ground as practicable. Herbicide will not be applied to cut stumps.

Slash will be disposed of using the following methods:

- Type A disposal consists of removing all slash and logs from the designated access routes, structure work areas, pulling sites and laydown areas in upland areas. Once removed from the designated work area, any logs will be placed at the edge of the ROW and slash will either be chipped or piled outside the limits of the access routes and work areas, with lopping as necessary to lay the material flat on the ground. All vegetation disposal will occur outside of the wetlands and agricultural fields (refer to Sections 7.8 and 10 for additional requirements). Chips will not be placed within 25 feet of wetlands, streams or floodways, and depth of chips must not exceed 3 inches. In upland locations vegetation disposal can be accomplished through mowing or brush hogging rather than piling/lopping or chipping.

- Type B slash disposal consists of dropping and lopping all slash within wetlands so that it lies as close to the ground as practicable. No mechanized equipment is permitted in a Type B clearing area for the purpose of log or slash disposal. Downed material must not exceed 1 foot average depth after dropping and lopping. If it is anticipated that the downed material will impede natural drainage patterns, the Environmental Inspector will direct that such material is cut and removed by hand as necessary.

Access routes and work areas where each type of clearing and disposal will be conducted are outlined in Table 1 in Section 6. The location of all access routes and work areas are shown on the Plan and Profile Drawings in EM&CP Volume II.

All off-ROW access routes utilize existing roads or driveways, so the need for clearing along these routes will be limited. A clear area of approximately 16 feet wide by 15 feet high will generally be required to accommodate passage by construction vehicles. To achieve this, some selective clearing/trimming of woody vegetation may be required. Cutting will generally be done by hand, and cut material will generally be disposed of by piling along the edge of the access road, with lopping or chipping as necessary to lay the material flat on the ground. No application of herbicide is proposed along off-ROW access roads. No other areas outside the ROW will be cleared or altered without obtaining approval from the owner(s) of the land to be cleared or altered.

Any trees or hedgerows that are important in terms of visual screening and do not interfere with the construction and operation of the A and C Lines will be retained. As indicated in Section 9.2, to avoid potential impacts to Indiana (or northern long-eared) bat habitat, any live or dead tree greater than 4 inches diameter-breast-height (DBH) with exfoliating bark, cracks or crevices can only be removed from October 1 to March 31. As described in Section 9.1, various measures will be employed to avoid impacting Blanding's turtle during clearing operations.

Unless allowed by the EM&CP, all trees over 2 inches DBH or shrubs over four feet in height damaged or destroyed by activities during construction, regardless of where located, will be replaced within the following year by CHG&E with the equivalent type of trees or shrubs, except if:

1. Equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operations or maintenance of the certified Facility;
2. Replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining transmission facilities; or,
3. The owner of land where the damaged or destroyed trees or shrubs were located declines replacement (or other recorded easement or license holder with the right to control replacement declines replacement).

5.0 GRADING AND BLASTING

The majority of construction access routes are not anticipated to require grading or blasting, unless necessary for equipment safety, or to create a level work area for construction equipment/vehicles. New pole locations also will generally not be graded or leveled, unless so indicated on the EM&CP Drawings. If blasting for new pole holes is needed, the safeguards set forth in Section 5.2 below will be implemented. Blasting for access road or work pad leveling will not be allowed.

5.1 Grading

Grading will only be performed on access routes, structure work sites, and pulling sites if necessary to provide a safe, level surface for the construction equipment. Grading will not be required where the terrain is flat and open. However, in areas with steep slopes or rock outcroppings, more extensive rough grading or jack hammering may be required. General areas which may require grading, are currently identified on the EM&CP Drawings. Prior to the initiation of construction, the Certificate Holder and its Contractor(s) will inspect the ROW and identify any additional upland access routes and worksites that require grading. The Certificate Holder will submit a grading plan based on this review to DPS staff prior to the initiation of construction. Any changes will be in full compliance with the SPDES general permit.

Where grading must occur, temporary erosion control measures will be applied as necessary to minimize erosion and sedimentation and stabilize disturbed soils. The temporary erosion controls will typically include installation of properly embedded silt fence immediately downslope of any disturbed soils, and between disturbed sites and adjacent wetlands and streams, as described in the Project SWPPP, and indicated in the EM&CP Drawings. Seeding and mulching will be used for both temporary and permanent stabilization of any disturbed soils as described in the Project SWPPP, and indicated in EM&CP Drawings. It is anticipated that any grading required to level access routes or structure work areas will be left in place to facilitate future maintenance activities. However, no new impervious surfaces are anticipated. Any areas where gravel or stone is added will be reviewed at the end of construction to determine whether this material should stay or be removed.

5.2 Blasting

Based on experience replacing individual poles on the A and C Lines, no blasting is anticipated on this Project. However, if blasting is required, a blasting plan will be developed specific to the location in question. The plan will take into account consideration of bedrock conditions at the site, as well as any potential environmental and landowner concerns in the area.

All blasting activities, including the transport, handling, and disposal of explosives and explosive packaging, will be in accordance with applicable safety regulations and codes (including NYS Code Rule 23, Subpart 23-11 Code Rule 39 and Chapter 80 of the Town Code of Wappinger).

If it is determined that blasting is necessary, the final blasting plan will be submitted to (and approved by) the DPS. Blasting will be performed by a New York State Department of Labor licensed blasting contractor and must comply with the following provisions, as set forth below.

- A. The contractor or its subcontractor will use sufficient stemming, matting or natural protective cover to prevent fly rock from leaving property owned or under control of CHG&E or from entering protected natural resources or natural buffer strips. Crushed rock or other suitable material must be used for stemming when available. Native gravel, drill cuttings or other material may be used for stemming if no other suitable material is available.
- B. The maximum allowable air-blast at any inhabited building may not exceed 128 decibels peak when measured by an instrument having a flat response (+ or – 3 decibels) over the range of 5 to 200 hertz.

- C. The maximum allowable air-blast at an uninhabited building may not exceed 128 decibels peak when measured by an instrument having a flat response (+ or – 3 decibels) over the range of 5 to 200 hertz. Depending on building use (or lack thereof), the allowable air-blast may increase to 140 decibels peak.
- D. If a blast is to be initiated by detonating cord, the detonating cord must be covered by crushed rock or other suitable cover to reduce noise and concussion effects.
- E. Prior to blasting at each site, a pre-blast survey will be conducted. The pre-blast survey will inspect the blast area, and adjacent areas. The survey will document existing conditions and will include, but not be limited to buildings/structures, water supply wells, utilities (above and below ground). The survey will include written documentation as well as photographic documentation of existing conditions.
- F. All blasting will be monitored with a properly calibrated seismograph. Seismographs will be installed at the nearest inhabited structure.
- G. Storage of explosives, if necessary, will conform to applicable regulatory requirements, including those contained in Department of Labor Industrial Code Rule 39 (12 NYCRR Part 39).
- H. Blasting may not occur in the period between sundown and sunrise of the following day or in the period from 7:00 p.m. to 7:00 a.m., whichever is greater. Blasting will not be conducted on Sundays or recognized holidays.
- I. A record of each blast, including seismographic data, will be provided to CHG&E and kept for at least one year from the date that both lines are reenergized. The blast record will be available for inspection during normal business hours, and will contain, at a minimum the following data:
- Weather conditions, including such factors as wind direction and cloud cover;
 - Height or length of stemming;
 - Amount of mats or other protection used;
 - Type of detonators used and delay periods used;
 - The exact location of each geophone and the distance of each geophone from the blast;
 - Seismographic readings, including peak particle velocity and frequency measured in the horizontal, vertical and longitudinal directions, and air-blast data;
 - Name and signature of the person operating each seismograph;
 - Names of the person and the firm analyzing the seismographic data, and
 - The stratum or structure on which the geophone is located during each blast.

- J. At the completion of blasting, a post-blast survey will be conducted of the same facilities (structures, foundations, water supply wells, utilities, etc.) as documented during the pre-blast survey. Findings inconsistent with those reported during the pre-blast survey will immediately be provided to CHG&E and will be documented in writing and photographed. Depending on the nature (and source) of the inconsistency, specific corrective actions will be developed in consultation with the affected party, and will set forth the method, procedures, and timing of implementation.

Construction personnel will follow standard safety requirements if blasting is performed. Such basic safety procedures include not loading holes with explosives until all holes needed at a given site are drilled; not driving equipment over loaded holes; and the use of, and adherence to, all warning horns signifying an imminent blast.

5.3 Blasting Notification

Blasting notification will consist of prior notice to affected property owners and tenants, as well as the use of appropriate warning horns (or equivalent) immediately prior to a blast to warn construction workers and others who may be near the construction site.

CHG&E will provide municipal officials and adjacent landowners/tenants notice of planned blasting five business days in advance unless local law requires otherwise (in which case, notification will be provided in accordance with the local law). DPS staff will be notified five business days in advance.

Precautions, including the sounding of appropriate warning horns, will be taken to ensure that all personnel (construction or otherwise) will be positioned a safe distance from the blasting operations at the time of detonation.

6.0 ACCESS ROUTES, LAY-DOWN AREAS AND WORKPADS

Access to the A and C Lines ROW will be required for the duration of construction access is needed to accommodate equipment, clear vegetation, install construction matting, transport poles and materials, install new poles and materials, string wire, remove old structures and equipment, restabilize/reseed construction work areas, and perform routine inspection and maintenance, as required, in the future.

No new permanent access roads are proposed on or off the ROW. However, new access routes will be required to access structures. Access routes will generally consist of a clear travel corridor approximately 16 feet wide and 15 feet high to allow the safe movement of construction equipment. As shown on the EM&CP Drawings, wetlands, streams, steep slopes and other environmentally sensitive features have been avoided to the extent practicable and no permanent fill will be placed in wetland crossings. Access routes will be clearly distinguished through the use of wooden lath markers or other appropriate marking (no pin flags will be used in agricultural fields). Stabilized construction entrances will be installed as indicated on the EM&CP Drawings (some of which may be left in place), and where necessary, clearing of woody vegetation along the routes will take place (see Section 4.0). All routes, and construction thereof, will strictly adhere to all environmental and agricultural protection requirements outlined in this document (in particular, Sections 7.0, 8.0, and 10.0). Permanent graded access routes may be left in place. However, no new impervious surfaces are anticipated. Any areas where gravel or stone is added

will be reviewed at the end of construction to determine whether this material should stay or be removed.

Construction equipment and vehicles will use public roads and private off-ROW access roads to reach the transmission line ROW. Equipment access to construction sites will be along the existing ROW and, where necessary, through private, designated off-ROW access routes. Access routes on other adjacent ROWs will also be used if they are preferable for minimizing environmental disturbances and impact. These are anticipated to include access routes on adjacent CHG&E as well as ConEd lines, and are indicated on the included on the EM&CP Drawings.

CHG&E and its contractors will not construct any new, or improve any existing, access route unless such a route is:

1. Located on the existing A and C Line ROW;
2. Located on other utility ROW or adjacent private property, as shown on the EM&CP Drawings; or
3. Otherwise described in this document and shown in the EM&CP Drawings. Should the need arise for additional off-ROW access, CHG&E will submit a minor change request to DPS staff. The EM&CP Drawings show those areas on the ROW areas where no equipment access will be allowed.

6.1 Access Route Types

The following access route types are proposed for the Project:

- Type 1 access refers to a new access route through agricultural land that does not require earth moving or matting. Type 1 access routes will be upgraded to Type 2 if rutting over 4 inches will occur due to construction traffic.
- Type 2 access refers to the use of construction matting for access through agricultural land.
- Type 3 access refers to a new or existing access route through non-agricultural upland areas. These routes generally do not require soil stripping or gravel surfacing, although minor grading or upgrading may be necessary in places to accommodate safe passage of equipment or control erosion.
- Type 4 access refers to a new access route through wetlands that does not require earth moving, placement of fill, or matting. Access will be limited to low-impact tracked equipment. However, if, in consultation between CHG&E, DPS Staff and the Environmental Inspector, suitable soil conditions exist such that no visible rutting or alteration of the hydrology of the wetland would result, then crossing the wetland can occur with rubber-tired vehicles. Should visible rutting occur, the affected access route(s) will be upgraded to Access Route Type 5.
- Type 5 access refers to the use of construction matting for access through wetlands and across streams.

Specific vegetation clearing and disposal techniques to be used along each type of access route are defined in Table 1 below:

Table 1. Vegetation Clearing and Disposal

Access/Work-Area	Method of Clearing/Disposal			
	Type 1 Clearing	Type 2 Clearing	Type A Disposal	Type B Disposal
Type 1 Access (Agricultural land)	X	X	X	
Type 2 Access (Agricultural land with matting)	X	X	X	
Type 3 Access (Non-agricultural upland)	X	X	X	
Type 4 Access (Wetland and/or stream with optional matting)		X		X
Type 5 Access (Matting)		X		X
Structure Work Areas (Wetland)		X		X
Structure Work Areas (Upland)	X	X	X	
Laydown Areas (Wetland)		X		X
Laydown Areas (Upland)	X	X	X	
Pulling Sites (Wetland)		X		X
Pulling Sites (Upland)	X	X	X	

Any woody material removed from agricultural land must be disposed of in non-agricultural upland areas.

Because all access routes basically involve driving over the existing ground (with or without construction matting) no substantial grading, surfacing or roadside drainage features are proposed. Consequently, typically plans and cross sections are not included in the EM&CP. Prior to use, some access routes may require improvement, which could include some, all, or combinations of the following activities:

- Temporary removal of fences or stone walls that may block equipment passage, unless otherwise specified in landowner agreements.
- Widening or extension of existing tracks, which may involve minor grading and/or placement of fill.
- Installation of matting or temporary culverts, at such locations as (but not limited to) roadside ditches, drainage swales, and low spots (see detail in EM&CP Drawings).

6.2 Environmental Protection Measures

Temporary erosion and sediment controls will be installed along access routes as required by the Project SWPPP and directed by the Environmental Inspector to minimize the potential for erosion and sedimentation (see Attachment B).

Stone walls will be returned to pre-construction condition following the completion of construction. Fences will be returned to preconstruction condition, unless they are no longer functional and the landowner agrees to their removal. Any landowner requirements applicable to use of access routes both on and off the ROW will be identified and will be conveyed to CHG&E construction personnel prior to the commencement of clearing and/or construction of a particular segment. Unloading/loading or use of equipment in driveways or on public roadways will be minimized to the greatest extent possible. However, if necessary, CHG&E will use matting to protect the driveway/roadway surfaces. In any instances where construction work or ROW access needs to occur directly on landscaped residential areas such as lawns, temporary matting will be used if necessary to prevent severe rutting, and full restoration will occur post-construction.

Upon the completion of construction, and as part of the restoration phase, access routes used during construction will be restored. Permanent graded access routes may be left in place. However, no new impervious surfaces are anticipated. Any areas where gravel or stone is added will be reviewed at the end of construction to determine whether this material should stay or be removed. Any disturbed soils will be stabilized with seed and mulch, and upon revegetation, all temporary erosion and sediment control measures will be removed. Unless described otherwise in the EM&CP, any trees over two inches DBH that are damaged or destroyed during construction will be replaced in accordance with Certificate Condition 47. Certain improvements made as part of the construction process may be retained outside of wetlands, streams and agricultural fields. Such improvements may include properly sized culverts, minor grade modifications, berms, or similar structural measures to promote erosion control, improve drainage, facilitate future maintenance, etc. (see details on EM&CP Drawings).

Construction entrances will be installed or upgraded wherever proposed access routes intersect with public roads, unless otherwise indicated on the EM&CP Drawings. The following types of construction entrances will be utilized:

- Type A - No special requirements necessary. Add stone as needed. Watch for any potential construction-related dirt/debris on roadway, and sweep as necessary.
- Type B - Install stabilized construction entrance per detail 1/Sheet 17 of the EM&CP Drawings.
- Type C - Install matting directly from edge of roadway onto lawn, wetland or agricultural field.

Details regarding where each of these entrance types are proposed, and how they will be treated following completion of constructions are presented in a table on Sheet 2B of the EM&CP Drawings.

In areas where construction entrances or permanent off-ROW access routes will be permanently maintained, various measures will be used to limit unauthorized off-road vehicular use, depending

on site-specific conditions and landowner requirements. Measures CHG&E will use to prevent unauthorized access to and along the ROW, include the following:

1. Posting signs at the ROW edges or on the first structure off the road edge in those locations where the ROW intersects public roads;
2. Performing outreach to educate and inform the public concerning the risks and impacts of unauthorized access;
3. Working with local law enforcement officials in an effort to prevent future trespassing; and
4. Installing gates as requested by the landowner and in consultation with DPS staff.

Structure work areas, laydown areas and wire pulling sites will be sized and located as indicated in the EM&CP Drawings. As with access routes, only limited leveling or grading is anticipated in these areas. In any of these areas where substantial soil disturbance is anticipated, or observed, sediment and erosion control measures will be employed as necessary, as described in the approved SWPPP. Structure work areas, laydown areas and pulling sites have been located to avoid wetlands to the extent practicable. Because the Project involves replacement of existing structures, some of which are already in wetlands, total avoidance of wetlands at structures work areas was not possible. Where these areas overlap with wetlands, impacts will be avoided or minimized by altering the standard size or shape of work areas, or through the use of construction matting.

Following completion of construction, all work areas will be regraded/reshaped as necessary, and stabilized through seeding and mulching. Restoration of work areas on agricultural land is addressed in Section 10 and restoration in wetlands is addressed in Section 7.0. In some non-agricultural upland areas, leveled/graded work areas around structures may not be returned to pre-construction contours, so as to facilitate future maintenance activities.

7.0 WETLANDS

Federal and state jurisdictional wetlands are located within the Project ROW and along some off-ROW access roads. CHG&E and its consultants have conducted field surveys to delineate wetlands, and have designed the Project to minimize impacts to wetlands to the extent practicable.

7.1 Wetland Delineation and Mapping

Wetland surveys were conducted in the fall of 2012 and the summers of 2013 and 2014 along the existing A and C Lines ROW and along proposed off-ROW access routes (including portions of the adjacent ConEd ROW). The purpose of the wetland surveys was to identify the location, type, and boundaries of both federal and state jurisdictional waters. Wetland boundaries were flagged in the field and subsequently surveyed and mapped. A site visit was conducted with the NYSDEC on August 7, 2013 to verify the delineated boundaries of all state-regulated wetlands. A full Wetland and Stream Delineation Report, including all wetland data sheets, is included in Attachment D.

A total of 48 wetlands were delineated within the A and C Line ROW and along off-ROW access roads. The boundaries of federal and state jurisdictional wetlands are illustrated on the EM&CP Drawings. These maps indicate the following:

- Wetland location;
- Areas where access will be required across wetlands and the types of crossing methods that may be used based on wetland type/condition (also summarized in Table 2 below); and
- Wetlands in which equipment access will be prohibited.

The EM&CP Drawings also indicate that State-regulated wetlands include a 100-foot regulated adjacent area.

7.2 General Restrictions for Construction Work in or Near Wetlands

CHG&E and its contractors will adhere to the following specifications for construction work in or near all of the wetlands identified along the corridor of the Project.

1. Wetland locations and wetland adjacent areas located within the ROW or crossed by the ROW or any off-ROW access road constructed, improved or maintained for the Project will be flagged/staked in the field prior to construction.
2. Any activities which may affect wetlands will be designed and controlled to minimize adverse impacts, giving due consideration to the environmental features and functions of the wetlands and the state-regulated wetland adjacent area.
3. Woody vegetation within 100 feet of any state-regulated wetland will be selectively cut by hand, and only as necessary to provide safe access and working conditions.
4. Woody vegetation that is dropped and lopped within wetlands will not block surface water flows or otherwise adversely affect wetland hydrology. No chipped vegetation from adjacent uplands will be placed within 25 feet of a wetland (see also Section 4.0).
5. Temporary erosion controls will be installed along access routes and around work sites, as necessary, in or near wetlands to minimize the potential for erosion and sedimentation (see Section 3.0).
6. Access through wetlands for equipment will be avoided or minimized to the extent practicable. Access will not interfere with surface water flow or the functions of the wetland. Where necessary, access through wetlands or state-regulated wetland adjacent areas will utilize low ground pressure tracked vehicles or temporary construction mats, and will be restricted to access routes and work areas shown on the EM&CP Drawings. Provisions for vehicular crossing of wetlands without matting are described in Section 7.5.
7. Equipment or machinery will not be washed in any wetland or 100-foot adjacent area, and runoff resulting from washing operations will not be permitted to directly enter any wetland.
8. Refueling near wetlands will conform to protocols contained in Section 15.3.
9. CHG&E and its contractors will not store, mix, handle open containers of, or load herbicides, chemicals labeled “toxic”, or petroleum products within 100 feet of wetlands (except as described in Section 15.3).

10. Excess excavated material resulting from structure installation will not be stored or disposed of inside wetlands. Excavated excess material will be disposed of in approved upland locations.
11. No wetland plants or soils will be disturbed due to dragging of poles. If conditions, during pole removal and replacement within wetlands and state-regulated wetland adjacent areas, do not allow dragging without soil disturbance, CHG&E and its contractors will cut up the poles and remove them by hand or utilize mats as needed to avoid impacts to wetlands.
12. Work sites in, and temporary access routes through, wetlands will be restored following the completion of construction activities, including removal of construction matting, regrading, seeding and mulching, as necessary to reestablish natural contours, drainage patterns and native vegetation.
13. Construction and restoration work in wetlands will conform to the conditions of Section 404 Nationwide Permit No. 12 (see Attachment C).
14. Discharge of turbid water to wetlands is prohibited. Water from dewatering operations will be pumped into a temporary straw bale/silt fence barrier or filter bag to settle suspended silt material prior to discharge. Direct discharge to wetlands, streams, and waterbodies will be avoided.
15. Prior to equipment entering state-regulated wetlands to remove or replace structures. CHG&E and its contractors will install cleaned construction mats.

7.3 Techniques for Construction and Access in Wetlands

CHG&E is committed to avoiding or, minimizing impacts to wetlands encountered along the Project ROW and along off-ROW access routes to the extent practicable. Extensive field reviews and engineering design adjustments were performed to locate access routes and structure locations outside wetlands. Seven poles currently in wetlands will be removed, and only three new poles will be installed in wetlands. The transmission line will span wetlands wherever possible, and access through wetlands will be kept to the minimum necessary for construction purposes. All activities to be undertaken within state-regulated wetlands are consistent with the weighing standards set forth in 6 NYCRR 663.5(e). Table 2 summarizes the crossing method proposed for each delineated wetland on the ROW or along off-ROW access roads.

Table 2. Wetland Inventory and Crossing Methods¹

Field ID	NYSDEC Wetland ID	Town	Structure Span	Wetland Type	Stream Present	Proposed Structures Located within Wetland	Crossing Method
B	n/a	Pleasant Valley	C2 – C3	PEM	Yes	0	Do Not Cross
C	n/a	Pleasant Valley	C10 – C11	PSS	Yes	0	Construction matting.
D	PV-3	Pleasant Valley	C12 – C13	PEM	No	0	Construction matting. Stay on western side of ROW.

¹Refer to Table 2 for additional stream crossing information.

Field ID	NYSDEC Wetland ID	Town	Structure Span	Wetland Type	Stream Present	Proposed Structures Located within Wetland	Crossing Method
E	PV-3	Pleasant Valley / LaGrange	C13 – C14	PSS	No	0	Construction matting. Stay on western side of ROW.
F	n/a	LaGrange	C15 – C16	PEM	Yes	0	Construction matting as necessary for pole removal only. Do not cross stream.
G	n/a	LaGrange	C16 – C17	PSS	No	0	Low impact machinery, construction matting as necessary. Cross in narrow location.
H	n/a	LaGrange	C17 – C18	PSS	No	0	Do Not Cross
I	n/a	LaGrange	C17 – C18	PFO/PEM	No	0	Do Not Cross
J	n/a	LaGrange	C20 – C22	PSS	Yes	0	Construction matting.
K	n/a	LaGrange	C23 – C24	PSS	No	0	Do Not Cross.
L	n/a	LaGrange	C28 – C29	PSS	Yes	0	Do Not Cross.
M	n/a	LaGrange	C29 – C30	PSS	No	0	Construction matting.
N	n/a	LaGrange	C30 – C31	PFO	No	0	Do Not Cross
O	PV-18	LaGrange	C32 – C34	PEM	No	0	Construction matting between Structure C33 and Overlook Road only.
P	n/a	LaGrange	C35 – C37	PSS	No	0	Low impact machinery, construction matting as needed.
Q	PV-28	LaGrange	C37 – C38	PSS	No	0	Do Not Cross
R	PV-28	LaGrange	C42 – C43	PEM	No	0	Do Not Cross
U	PV-35	LaGrange	C59 – C60	PEM	Yes	0	Cross at stream channel only – see Table 2.
V	n/a	LaGrange	A2 – A3	PSS	Yes	0	Cross at stream channel only – see Table 2.
W	n/a	LaGrange	A5 – A6	PEM	No	0	Do Not Cross.
X	n/a	LaGrange	A6 – A7	PEM	Yes	0	Construction matting.
Y	n/a	LaGrange	A6 – A8	PEM	Yes	1	Construction matting.
Z	n/a	LaGrange	A13 – A14	PEM	Yes	0	Construction matting. Do not cross stream.
XX	n/a	LaGrange	A15 – A16	PEM	No	0	Do Not Cross.
AA	n/a	LaGrange	A16 - A17	PSS	No	0	Low impact machinery, construction matting as necessary.
BB	n/a	LaGrange	A19 – A20	PSS	No	0	Do Not Cross.
CC	n/a	LaGrange	A19 – A21	PSS	No	0	Low impact machinery, construction matting as necessary.
DD	PV-57	Wappinger	A30 – A32	PSS	Yes	1	Low impact machinery, construction matting as necessary.
EE	PV-57	Wappinger	A33 – A34	PSS	No	0	Low impact machinery, construction matting as necessary.
FF	PV-57	Wappinger	A34 – A35	PEM	No	0	Low impact machinery, construction matting as necessary.
GG	n/a	Wappinger	A36 – A37	PEM	No	0	Low impact machinery, construction matting as necessary.
HH	n/a	Wappinger	A37 – A39	PSS	No	0	Low impact machinery, construction matting as necessary.
VV	n/a	Wappinger	A41 – A42	PEM	No	0	Construction matting.

Field ID	NYSDEC Wetland ID	Town	Structure Span	Wetland Type	Stream Present	Proposed Structures Located within Wetland	Crossing Method
II	HJ-4	Wappinger	A43 – A45	PSS	No	1	Use existing ConEd access road and construction matting as necessary.
JJ	n/a	Wappinger	A45 – A46	PSS	No	0	Do Not Cross.
WW	n/a	Wappinger	A46 – A47	PEM	No	0	Low impact machinery, construction matting a necessary.
KK	n/a	Wappinger	A48 – A49	PSS	No	0	Do Not Cross
LL	n/a	Wappinger	A49 – A50	PSS	No	0	Cross using existing access road or stone ford.
MM	n/a	Wappinger	A53 – A54	PEM	No	0	Cross using existing access road or stone ford.
NN	n/a	Wappinger	A54 – A56	PEM	No	0	Use existing access road.
OO	n/a	Wappinger	A59 – A60	PEM	No	0	Construction matting.
PP	HJ-72	Wappinger/ East Fishkill	A61 – A62	PSS	Yes	0	Do Not Cross
QQ	n/a	Wappinger	n/a	PSS	No	0	Use existing ConEd access road/Ford crossing.
RR	n/a	Wappinger	n/a	PSS	No	0	Do Not Cross
SS	n/a	Wappinger	n/a	PEM	No	0	Use existing ConEd access road/Ford crossing.
TT	n/a	Wappinger	n/a	PSS	No	0	Use existing ConEd access road. Ford and culvert crossing.
UU	n/a	Wappinger	n/a	PEM	No	0	Use existing ConEd access road. Ford crossing.
ZZ	n/a	Wappinger	A46 – A47	PSS	No	0	Do Not Cross

7.4 Clearing

CHG&E and its contractors will conduct clearing within wetlands as described in Section 4.0, and in accordance with the specifications in the LRVMP (Attachment F). Selective vegetation clearing (e.g., hand cutting) techniques will be used within 100 feet of any state-regulated wetland so as to reduce the amount of activity and disturbance to the wetland and wetland adjacent area. No slash will be collected and permanently piled in the wetland, whether adjacent to an access route or not. No wood chips will be stored or disposed of within 25 feet of wetlands.

7.5 Access Routes

Where wetlands cannot be avoided and equipment access is required, existing access routes will be used whenever practical. Disturbance of wetlands will be minimized through the use of construction mats or low-impact tracked equipment. A specific crossing method for each wetland is indicated in Table 2 and the location and type of crossing is as depicted in the EM&CP Drawings. However, if, in consultation between CHG&E, DPS Staff and the Environmental Inspector, suitable soil conditions exist, such that no visible rutting or alteration of the hydrology of the wetland would result, then work or crossing within the ROW or on access routes can occur with rubber-tired vehicles except where Type 5 access routes or matted workpads are specified.

7.6 Erosion Control

Temporary erosion controls will be installed around work sites in or directly adjacent to wetlands and along access routes in wetlands as described in the EM&CP Drawings and the SWPPP to minimize the potential for sedimentation into a wetland.

Such temporary erosion controls will be inspected by the Environmental Inspector at least once per week during the active construction period, and will be maintained throughout construction, replaced, as necessary, and removed in a timely manner (after revegetation is deemed effective) so as to not impair the normal drainage patterns. Any disturbed soils within wetlands will be stabilized during site restoration through the application of a native wetland seed mix as specified on the EM&CP Drawings and in the Certificate.

7.7 Spill Prevention

Petroleum products, herbicides, or hazardous substances will not be stored, mixed, or handled in open containers within 100 feet of any wetland. Power equipment may be refueled in, or within 100 feet of a wetland only in accordance with protocols described in Section 15.3. Equipment or machinery will not be washed in any wetland or state-regulated wetland adjacent area, and runoff resulting from washing operations will not be permitted to directly enter any wetland. CHG&E and its contractor will implement spill preventative measures near wetlands in accordance with Section 7.2 and 15 of the EM&CP.

7.8 Clean-up, Restoration and Reseeding

Wetland clean-up will include removal of all mats from temporary access routes, as well as the removal of any construction debris.

If necessary, disturbed portions of wetlands will be regraded or raked to restore pre-construction contours and hydrology. Grading of wetlands will be limited to the minimum necessary to restore the area. Typically, clean-up and restoration in wetland areas will occur when construction access across the wetland is no longer required.

Wetlands will be reseeded with a native wetland seed mix as specified on the EM&CP Drawings. No fertilizer will be used in wetlands. Mulch will only be used if necessary to enhance the revegetation or stabilization. Only straw or cellulose mulch will be used in wetlands (no hay).

Because no permanent wetland impacts are anticipated, there are no plans for wetland mitigation.

8.0 STREAMS

Fifteen streams were field identified in the A and C Lines ROW, including ephemeral, intermittent, and perennial channels. Four of the stream segments delineated are protected by the NYSDEC under Article 15 of the Environmental Conservation Law, including classifications of B, B(T) and C(T). Stream crossings will be avoided to the extent practicable, and as indicated in Table 3, only one of the four protected streams (C[T] Stream within Wetland U) is proposed to be crossed by a Project access route.

8.1 Stream Inventory

Stream inventories and delineations were conducted in the fall of 2012 and the summer of 2014. At each location where a defined watercourse channel was evident, information regarding stream name (if any) and classification was recorded, along with stream characteristics such as width, depth, and substrate. Data sheets for individual streams can be found in the Wetland and Stream Delineation Report included as Attachment D. Information concerning the inventoried streams, including proposed crossing techniques are summarized below in Table 3.

Table 3. Stream Inventory and Crossing Methods

ID (Stream Name)	Coordinates	Town	Channel Type	NYSDEC Stream Classification	Fishery Type	Water Index Number	Existing Structure Span	Crossing Method
A (Wappinger Creek)	73 49'51.079" W 41 44'26.903" N	Pleasant Valley	Perennial / Intermittent	B(T)	Cold Water	H-101	C1 – C2	Do Not Cross
B (UT ¹ to Wappinger Creek)	73 49'45.007" W 41 44'19.367" N	Pleasant Valley	Intermittent	B	Warm Water	H-101-8, 9, and 10	C2 – C3	Do Not Cross
C	73 49'35.695" W 41 43'41.629" N	Pleasant Valley	Intermittent	n/a	--	n/a	C10 – C11	Construction Matting
F (UT ¹ to Wappinger Creek)	73 49'24.606" W 41 43'12.382" N	LaGrange	Perennial	B	Warm Water	H-101-8, 9, and 10	C15 – C16	Do Not Cross Stream.
J	73 49'21.879" W 41 42'47.288" N	LaGrange	Intermittent	B	Warm Water	H-101-8, 9, and 10	C20 – C22	Construction Matting
L	73 49'16.61" W 41 42'12.297" N	LaGrange	Intermittent	n/a	--	n/a	C28 – C29	Do Not Cross.
S	73 48'37.429" W 41 41'2 182" N	LaGrange	Ephemeral / Intermittent	n/a	--	n/a	C44 – C45	Cross stream "in the dry" or install construction matting.
T	73 48'36.5"W 41 40'56.632" N	LaGrange	Ephemeral	n/a	--	n/a	C45 – C46	Do Not Cross.
U	73 48'45.129" W 41 40'3.77"N	LaGrange	Perennial	C(T)	Cold Water	H-95-10-5-1	C59 – C60	Construction Matting (over culvert(s) if necessary). Seasonal work restrictions (June 1 – September 30).
V	73 48'55.44" W 41 39'42.976" N	LaGrange	Intermittent	n/a	--	n/a	A2 – A3	Construction Matting.
X	73 49'1.883" W 41 39'29.918" N	LaGrange	Perennial	n/a	--	n/a	A6 – A7	Construction Matting.

ID (Stream Name)	Coordinates	Town	Channel Type	NYSDEC Stream Classification	Fishery Type	Water Index Number	Existing Structure Span	Crossing Method
Y	73 49'3.604" W 41 39'25.001" N	LaGrange	Perennial	n/a	--	n/a	A7 – A8	Do Not Cross
Z	773 49'8.122 2"W 41 38'58.642 2" N	LaGrange	Intermittent	n/a	0	n/a	A13 – A14	Do Not Cross Stream.
DD (UT ¹ to Sprout Creek)	73 49'34.374" W 41 37'46.906" N	Wappinger	Intermittent	C	Warm Water	H-95-10-1 and trib. 1a, 1b	A31 – A32	Do Not Cross.
PP (Sprout Creek)	73 50'36.189" W 41 35'55.186" N	Wappinger / East Fishkill	Perennial	C(T)	Cold Water	H-95-10	A61 – A62	Do Not Cross

8.2 General Restrictions for Construction Work near Streams

CHG&E and its contractors will adhere to the following specifications for construction work in or near streams. These specifications will apply to all perennial and intermittent streams, as applicable.

1. Construction work in streams will conform to appropriate timing restrictions to protect important fisheries resources, during spawning and primary migration periods. For cold water fisheries in the Project Area, construction work in streams will be prohibited between October 1 and ending May 31 to avoid trout spawning periods. For warm water fisheries, construction work in streams will be prohibited between March 1 and ending July 15. However, once installed, such crossings can be used by construction vehicles through the duration of Project construction.
2. Clearing of existing stream side vegetation within the ROW will be minimized to the extent practicable.
3. Slash will not be deposited within identifiable stream channels, or stacked near such channels. No chipped vegetation will be placed within 25 feet of a stream channel.
4. No construction debris (i.e., waste materials) will be stored within 50 feet of a watercourse.
5. Where stream crossings cannot be avoided, stream banks will be maintained (and, if necessary, stabilized at vehicle crossing points) to limit erosion or degradation. Stabilization may involve the use of measures such as rock riprap (native material or otherwise), erosion control fabric and/or mulch.
6. Equipment or machinery will not be washed in any stream and runoff resulting from washing operations will not be permitted to directly enter any stream.
7. Within 50 feet of a stream, the Certificate Holder will not store, mix, or handle open containers of or load herbicides, chemicals labeled “toxic”, or petroleum products, except as provided for in Section 15.3.

8. Construction equipment and vehicles will not drive through flowing streams.
9. Discharge of turbid water to streams is prohibited. Water from dewatering operations will be pumped into a temporary straw bale/silt fence barrier or filter bag to settle suspended silt material prior to discharge. Direct discharge to wetlands, streams, and waterbodies will be avoided.
10. Where poles are located near streams (e.g., within 50 feet of a stream), appropriate temporary erosion controls will be installed around the pole work site, as described in the SWPPP and indicated in the EM&CP Drawings, to minimize the potential for sediment to enter the water body.
11. Refueling near streams will conform to protocols contained in Section 15.3.

8.3 Specifications for Clearing near State Protected Streams

Vegetation removal within a 50-foot-wide buffer around state-protected streams will be limited to the minimum necessary for the construction and safe operation of the transmission facilities. Except for clearing along access routes and at structure work areas (if required), only tall-growing vegetation that currently, or in the near future, has the potential to interfere with transmission line reliability will be selectively cut or trimmed. Along access routes across streams, vegetation removal will be minimized by limiting the width of access routes and by utilizing existing access tracks, trails, or roads, if already present along the ROW.

The objective of CHG&E's clearing program near streams will be to preserve desirable streamside vegetation for habitat enhancement, shading, bank stabilization, and erosion/sedimentation control. Ultimately, the long-range vegetation maintenance program will select for species that provide these attributes and are compatible with transmission line operation.

Within the 50-foot wide stream buffer area, the disposition of vegetation after cutting will depend on factors such as the volume of slash, terrain and slope characteristics, and access. Where possible, cut woody vegetation will be piled or chipped outside of the 50-foot buffer area and no chips will be stored or disposed of within 25 feet of streams or floodways.

Slash may be cut and dropped if removal and/or piling would result in undue disturbance (scarification) to the ROW as a whole and to the stream buffer in particular. If there is a potential for the cut vegetation to enter the ROW stream channel (e.g., as a result of flooding), slash will be moved to a suitable location, away from the stream.

8.4 Access: Temporary Stream Crossing Techniques

To the extent practicable, equipment crossings of streams will be avoided. Where stream crossings are required, existing stream crossings will be used whenever possible, and no new permanent stream crossings will be installed as part of the Project. Table 3 and the EM&CP Drawings indicate the streams that must be traversed by equipment, along with the preferred method for the crossing. The following guidelines will be observed when construction activity occurs in the vicinity of streams:

- Stream flow will be maintained such that flow immediately downstream of the worksite will equal flow immediately upstream of the worksite.

- There will be no increase in turbidity downstream of the construction activity that will cause a substantial visible contrast to natural conditions.
- Water from dewatering operations will be pumped into a temporary straw bale/silt fence barrier or filter bag to settle suspended silt material prior to discharge. Discharge will be directed to upland areas. Direct discharge to wetlands, streams, and waterbodies is prohibited.

CHG&E and its contractors will use two basic methods to provide equipment access across streams, as described below. Typical construction details for matted crossings are included in the EM&CP Drawings.

1. Ford crossing with stone. This method involves the placement of stone (typically clean gravel, riprap, or equivalent) in the bottom of a dry stream bed at the access point in order to provide additional equipment support. This method will only be utilized where the stream bottom is not firm or will be subject to substantial construction traffic. Addition of the stone will allow equipment to drive through the stream channel at the existing ford without causing additional damage to the stream bed or banks or resulting in downstream sedimentation. Stone will not be piled or otherwise placed so as to block stream and will be removed after the completion of construction.
2. Mat span with or without culverts (temporary). Construction mats placed from bank-to-bank will be used to span streams with running water. Mats also may be placed on top of temporary culverts if necessary to maintain stream flow and accommodate fish passage.

CHG&E or the contractors will be responsible for checking all existing or installed culverts and assuring they are not crushed or blocked during construction. If a culvert is blocked or crushed, or otherwise damaged, CHG&E will repair the culvert or replace it.

Different methods from those listed above (or combinations thereof), may be necessary and environmentally appropriate for a particular stream at the time of construction. This determination will be made by the Environmental Inspector based on site-specific conditions at the time of construction, and any proposed change will be handled in accordance with the approved minor change process described in Section 2.3 and Certificate Condition 31.

8.5 Erosion/Sedimentation Controls

CHG&E and its contractors will install temporary erosion and sedimentation controls, consisting primarily of silt fence, as described in the Project SWPPP (Attachment B) to minimize impacts to streams. Additional temporary erosion controls may be installed at the direction of Environmental Inspector.

In general, temporary erosion controls will be installed:

- Across portions of the ROW with disturbed/exposed soils upslope of streams;
- At the top of stream banks that are adjacent to disturbed portions of the ROW;
- Along disturbed access routes leading to streams.

Temporary erosion controls will be inspected by the Environmental Inspector in accordance with the requirements of the SPDES general permit and the Blue Book during the active construction period, and will be maintained throughout construction and restoration until revegetation and site stabilization is determined to be effective as outlined in the Project SWPPP.

8.6 Stream Restoration

CHG&E and its contractors will remove construction matting or stone associated with temporary stream crossings at the completion of construction. All restoration will be done “in the dry”, utilizing a pump around procedure if necessary (see detail in EM&CP Drawings). The original contours of the stream bed will be re-established and stabilized using native gravel and stone, if necessary. The stream banks will also be restored to pre-construction contours and stabilized with native stone, a native seed mix, and/or mulch (straw or cellulose only, not hay). Temporary sediment and erosion controls will be installed in accordance with the EM&CP, and as directed by the Environmental Inspector. These controls will be removed once 80% vegetative coverage has been achieved, or as directed by the Environmental Inspector.

9.0 ECOLOGICAL AND ENVIRONMENTALLY SENSITIVE AREAS

9.1 Threatened and Endangered Species

CHG&E or the contractors will promptly notify the Environmental Inspector, DPS staff and the NYSDEC Region 3 Regional Natural Resources Supervisor if any threatened or endangered animal species or animal species of special concern or rare, threatened or endangered plants listed in New York are encountered on the Project ROW, or any access road or other off-ROW area (including laydown areas and marshalling yards) that is part of the Project, so as to determine the appropriate measures to be taken to protect such species. If necessary to protect a species or its habitat from immediate harm, CHG&E will cease construction or ground-disturbing activities in the area.

CHG&E has consulted with the New York Natural Heritage Program (NYNHP) and the U.S. Fish and Wildlife Service (USFWS) to identify biologically sensitive resources in the Project Area and has developed this EM&CP to ensure appropriate mitigation measures to avoid impacts to those resources. Listed threatened and endangered species that could occur in the Project area include the following:

- The Indiana bat is a small bat that is listed as an endangered species at both the state and federal level. Forest trees that have the potential to provide summer roost habitat for Indiana bat are present, largely along the ROW edges and off-ROW access routes. Although adverse impacts to Indiana bat habitat are not anticipated, CHG&E or its contractors will implement a series of preventative actions (refer to Section 9.2).
- The northern long-eared bat is a small bat that has been proposed for federal listing as an endangered species. Forest trees that have the potential to provide summer roost habitat for northern long-eared bat are present, largely along the ROW edges and off-ROW access routes. Although adverse impacts to northern long-eared bat habitat are not anticipated, CHG&E or its contractors will implement preventative actions as outlined in Section 9.2.

- The Blanding's turtle is state-listed as a threatened species. Preferred habitat for this species is shallow wetlands such as shrub swamps, marshes, and shallow ponds (NYNHP, 2011a). A Blanding's turtle survey and habitat evaluation was conducted along the ROW in October 2012. No Blanding's turtles were documented during the investigation; however one wetland complex was identified as having suitable habitat (Wetland F). As indicated in the EM&CP Drawings and Table 2, the majority of Wetland F will not be crossed during Project construction, and no new structures will be constructed within the wetland. However, limited access to Wetland F will be needed to remove an existing structure. Five additional wetlands (C, O, V, CC, and DD) were determined to represent marginal Blanding's habitat. In addition, the NYSDEC has requested that wetlands J, K, L, M, EE, QQ, RR, SS, TT, and UU also be added to the list of sites where Blanding's turtle could occur based on proximity to known sites. Blanding's turtle protective measures are described in Section 9.2, below.

9.2 Habitat Impact Avoidance & Minimizations

To avoid potential impacts to Indiana and northern long-eared bat habitat, construction activity will be confined to existing cleared ROW and existing off-ROW access roads and laydown areas. Where selective tree clearing is necessary, any live or dead tree greater than 4 inches DBH (or branches of comparable diameter) with exfoliating bark, cracks or crevices will only be removed from October 1 to March 31, to protect summer roosting habitat for the bats.

Whenever possible, lay down and other staging areas will be sited away from potential Blanding's turtle nesting areas and the travel corridors between potential nesting areas and wetlands that have been identified as potential Blanding's turtle habitat (see below). If it is not possible to site staging areas away from these areas, temporary barriers consistent with the detail included in the EM&CP Drawings will be installed to either prevent movement to, or facilitate movement across, these features, unless the Blanding's Turtle Inspector is present when construction activity is occurring in these areas.

For construction activities which occur between April 15 to October 15 at the following locations, the Blanding's Turtle Inspector will be present to inspect for Blanding's turtles ahead of construction activity occurring on a particular day and periodically as construction progresses during the work day.

Wetlands C, F, J, K, L, M, O, CC, DD, EE, QQ, RR, SS, TT, and UU and upland locations associated with these wetlands, specifically (i) Wappinger's Creek to Cramer Road; (ii) Croft Hill Road to Old Noxon Road; and (iii) Diddell Road to Route 376.

If a Blanding's turtle is encountered within the work area during construction, the Blanding's Turtle Inspector (or those Designated Agents listed on Blanding Turtle Handling Licenses) shall handle the turtle consistent with the conditions set forth in the license.

Presence of a Blanding's Turtle Inspector on the ROW is not needed from October 16 through April 14, or in any areas on the Project not specified above. However, all individuals on the Project will be watchful for Blanding's turtles as well as other RTE species.

Although the transmission line will not significantly alter or reduce available habitat for any of the listed species, during the construction Project, CHG&E will brief construction personnel on the

sensitive biological resources that could occur in the Project Area; the state and federal legislation that protects such species; and on the importance of checking for, preserving, and protecting such species should they be encountered during construction activities.

9.3 Other Ecological Resources

Ecological surveys were conducted along the ROW to identify vegetative communities, plant and wildlife species, and other ecological resources that could be considered sensitive. Results of these surveys are presented in Exhibit 4 and Appendix F of the Article VII Application. These surveys revealed that the ROW does not include habitat for rare plants or listed species (other than those listed in Section 9.1), unique plant communities, forest vegetation, or sensitive habitats such as deer wintering areas. Consequently, these resources will not be impacted by Project construction and operation.

9.4 Scenic, Recreational and Cultural Resources

Scenic and recreational resources within one mile of the ROW were identified in a comprehensive Visual Impact Assessment included as Appendix I to the Article VII Application. Other than the Dutchess County Rail Trail and the Town of Pleasant Valley ball fields, no scenic or recreational resources were identified on or directly adjacent to the ROW. Because the Project involves replacement of existing transmission structures, and in the area of the Rail Trail runs parallel to two 345 kV Con Ed transmission lines, no long term adverse impact on this recreational resource is anticipated. However, to minimize temporary construction related impacts, along the Dutchess County Rail Trail, CHG&E will notify the County 24 hours prior to work. CHG&E and its contractors will also implement the following measures to limit disturbance along the trail:

- Install signs on trail warning pedestrians of construction activity;
- Install stop signs on ROW access route to assure construction vehicles stop before crossing the trail;
- Use rubber matting to protect trail surface when crossing with tracked equipment;
- Have flag men in place to warn / stop pedestrians during pole delivery or wire pulling across trail; and
- Have bucket truck(s) in place to support lead line or conductor during wire pulling.

Impacts to the Town of Pleasant Valley ball fields will be limited to use of an off-ROW access route that lead to a single structure being replaced. Consequently, disturbance of this facility will be minor and short term. CHG&E anticipates conducting work in this area during the winter to minimize disruption or disturbance of recreational facilities and activities. However, if work in this area cannot be restricted to the winter season, CHG&E will undertake the following actions:

- Notify the Town at least one week prior to the start of construction for the structures that are accessed from the town ball fields.
- Install signs warning users of construction activity.

- Use temporary construction fencing to fence off the limits of the off-ROW access route, if required by the Town.
- Prohibit use of rest rooms at the ball fields by construction personnel.

CHG&E and its contractor will also restore any damages to the rail trail and Pleasant Valley ball fields, or associated site amenities (such as parking areas, plantings, signs, etc.) which occur during construction.

To minimize visual contrast in some of the more visible sections of the line, several of the wood poles that have been replaced with self-weathering steel structures within the last five years and are scheduled to remain, will be reframed. Five of the thirteen retained structures will have the existing galvanized steel cross-arms and cross-braces replaced with self-weathering steel cross-arms and cross-braces.

Cultural (historic and archeological) resources were identified in a Phase 1 Cultural Resource Survey included as Appendix J to the Article VII Application. As indicated in a letter from the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), none of these resources will experience a significant adverse effect from the Project, and therefore, no specific mitigation measures are proposed. See additional discussion in Sections 11.0 and 13.0 of this EM&CP.

10.0 AGRICULTURAL AREAS

Agricultural land occurs along the ROW primarily in the form of row crops and hayfields. The majority of the agricultural land within the ROW is maintained in hayfields. Corn is the primary row crop in the Project Area. Agricultural land is most common in the northern portions of the Project Area, especially in the vicinity of Plass and Overlook Roads. The proposed route intersects two agricultural districts: Dutchess County 20 and 22. Based upon aerial photo interpretation and on-site investigations, approximately 1.7 miles of the proposed A and C Lines Rebuild passes through active agricultural land. In order to protect agricultural resources during construction, an Agricultural Inspector will be present during all phases of the project (see Section 2.3). The fundamental duty of the Agricultural Inspector is to ensure that all aspects of the Project that affect farmland, either fully meet or exceed; a) the basic standards of the NYSDAM; and b) Project-specific Certificate conditions relevant to agricultural resources. The Agricultural Inspector's duties include the following:

- Informal and formal training of the Certificate Holder staff, Environmental Inspectors, and construction personnel in the proper use and application of the agricultural Certificate conditions.
- Technical field direction and supervisory control over all aspects of the Project that affect agricultural resources, through every stage of on-site work (i.e., ROW clearing, construction stages, clean-up stage, and initial restoration stages).
- Technical field direction and supervisory control (after the satisfactory completion of initial restoration), over the on-site monitoring of, and the follow-up restoration in, agricultural lands.

- Appropriate communication with affected farmland owners and operators over the Project's duration, from planning through construction/initial restoration, to completion of post-construction monitoring and follow-up restoration.

Agricultural inspections may be conducted by the same individual responsible for other duties (i.e. Environmental Inspector) if qualified. The role of the agricultural inspector is to coordinate communications on behalf of CHG&E with the County Soil and Water Conservation Districts, NYSDAM and local farm owners/operators.

CHG&E and its contractors will adhere to the following guidelines during construction within agricultural lands to the extent practicable:

1. Segments of farm roads utilized for construction access, as shown on the EM&CP Drawings, will be improved prior to construction through the selective placement of stone or the installation of construction matting if required to accommodate safe passage of construction vehicles.
2. Parking areas, marshalling yards, and other temporary and permanent support facilities will be located outside of active agricultural fields.
3. Disturbance of surface and subsurface drainage features (ditches, diversions, tile lines, etc.) will be avoided. Restoration of these features will be per the NYSDAM Guidelines and the detail included in the EM&CP Drawings.
4. Farm drainage features, fences and gates affected by construction will be rebuilt to previous or better condition upon completion of construction. The base of all new posts will be secured to a reasonable depth below the surface to prevent frost heave.
5. The Agricultural Inspector will identify black cherry (*Prunus serotina*) trees located on the ROW near active livestock use areas. No black cherry trees will be disposed of within active livestock-use areas.
6. The placement of structures on crop fields or on other active agricultural land where the structures may interfere significantly with normal agricultural operations or activities, will be avoided.
7. No wood chips will be stored or disposed of within active agricultural fields.
8. In agricultural areas of till over bedrock where blasting is required, matting or controlled blasting will be used to limit the dispersion of blast rock fragments. All blasted rock not used as structure backfill will be removed from croplands, haylands and improved pastures. The till and topsoil will be returned in natural sequence to restore the soil profile. Farm owners/operators will be given timely notice prior to blasting on farm property. If the need arises, a blasting plan would be developed specific to the location in question. The plan would take into account consideration of bedrock conditions at the site, as well as any potential environmental and landowner concerns in the area (see Section 5.0).

Agricultural protection measures will be utilized to limit soil erosion and compaction in agricultural areas. Specifically, CHG&E and its contractors will follow these mitigation measures to protect and restore agricultural soils:

1. Access across agricultural lands will be conducted with the use of low impact tracked equipment or construction matting.
2. Soils will be considered too saturated to work on if the equipment required for construction creates rutting in agricultural fields in excess of 4 inches deep.
3. Where extensive or prolonged access is needed or when visible rutting begins to occur, additional agricultural protection measures will be used such as construction matting and stripping and stockpiling of topsoil alongside the area of disturbance (topsoil will be kept separate from subsoil) on the property from which it was removed.
4. Although topsoil stripping is not anticipated, if necessary, topsoil will not be stripped during saturated conditions when such actions would damage agricultural soils.
5. If mats are installed across farmlands, the mats will be layered where necessary to provide a level access surface. Once access is no longer required across agricultural areas, the mats will be removed and the Agricultural Inspector will use a soil penetrometer to determine if soil compaction has occurred as a result of construction activities. All compacted areas where topsoil was not stripped will be remediated through decompaction to a depth of 18 inches (unless bedrock is encountered at a depth of less than 18 inches) using a deep ripper or heavy-duty chisel plow. Soil compaction results will be no more than 250 pounds per square inch (PSI) as measured with a soil penetrometer. In the event that subsequent construction or clean-up activities result in additional compaction, additional deep tillage will be performed to alleviate such compaction.
6. All vehicular movements and construction activity will be restricted to marked access routes or areas where appropriate agricultural protection measures have been employed, such as construction matting, or where topsoil has been removed.
7. Construction entrances from public roadways directly onto agricultural fields will utilize construction mats and will be removed upon completion.
8. All structures and guy anchors removed from agricultural areas as part of the construction activities will be removed in their entirety to a minimum depth of 48 inches below the soil surface. All holes or cavities created by the removal of the old facilities will be filled to the same level as the adjacent area, plus 6 to 12 inches of additional soil to allow for settling. All material used for fill will be similar to native soil. All fill material will be compacted.
9. Although not anticipated, in areas where topsoil is stripped, agricultural soils will be restored following construction by following sequence of activities:
 - Removal of any construction matting or other temporary fill.

- Decompaction of compacted subsoils to a depth of 18 inches (unless bedrock is encountered at a depth of less than 18 inches) using a deep ripper or heavy-duty chisel plow. Soil compaction results will be no more than 250 pounds per square inch (PSI) as measured with a soil penetrometer.
- Removal of stones (four inches and larger in size) from the surface of the decompacted subsoil.
- Spreading of stockpiled topsoil over the decompacted subsoil, and reestablishing pre-construction contours to the extent practicable.
- Disking and removal of stones (four inches and larger in size) following the spreading of topsoil.
- Seeding and mulching topsoil. Seed selection in agricultural fields will be based on guidance provided by the landowner and NYSDAM personnel.

10. Topsoil stockpiles left in place prior to October 31st will be seeded with winter rye and mulched with straw. Topsoil stockpiles left between October 31st and May 31st will be mulched with straw.

On affected farmland, any restoration practices will be postponed until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration will not be conducted while soils are in a wet or plastic state. Stockpiled topsoil will not be regraded until plasticity, as determined by the Atterberg field test, conducted by the Agricultural Inspector, is significantly reduced. No Project restoration activities will occur in agricultural fields between the months of October through May unless favorable soil moisture conditions exist. CHG&E will monitor and advise NYSDAM and DPS staff regarding tentative restoration planning. Potential schedules will be determined by conducting the Atterberg field test.

CHG&E will provide a monitoring and remediation period of two (2) growing seasons following completion of ROW restoration in active agricultural areas. CHG&E will retain the services of an Agricultural Inspector on at least a part-time basis through this period. The monitoring and remediation phase will be used to identify any remaining agricultural impacts associated with ROW construction that are in need of mitigation and to implement the follow-up restoration. During this phase, the Agricultural Inspector will also maintain a list of invasive species observed on the Project ROW on or adjacent to agricultural land. In agricultural areas where invasive species are documented along the ROW, the Agricultural Inspector will determine whether such species were pre-existing or whether such species were introduced by the Project. Site evaluations conducted along the A and C Lines during the summer of 2014 did not indicate the presence of invasive species within agricultural fields. Prior to construction, the Agricultural Inspector will conduct additional evaluations to document the presence of invasive species. If it is determined that the Project was directly responsible for the introduction of invasive species to the agricultural areas, CHG&E will consult with the farm operator, DPS staff and NYSDAM to determine the appropriate corrective actions.

During the monitoring and remediation period, on site monitoring will be conducted at least three (3) times during each growing season and will include a comparison of growth and yield for crops

on and off the ROW. When the subsequent crop productivity within the affected ROW is less than that of the adjacent unaffected agricultural land, the Agricultural Inspector, in conjunction with CHG&E, NYSDAM and the farm owner/operator will help to determine the appropriate rehabilitation measures for CHG&E to implement (soil de-compaction, topsoil replacement, etc.). During the various stages of the Project, all affected farm operators will be periodically apprised of the duration of remediation by the Agricultural Inspector. Because conditions which require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period will not obviate CHG&E's responsibility to fully redress all Project impacts. After completion of the specific remediation period, CHG&E will continue to respond to the reasonable requests of the farmland owner/operators to correct Project related effects on the impacted agricultural resources.

11.0 CULTURAL RESOURCES

As indicated previously, a Phase 1 Cultural Resources Investigation was performed for the proposed transmission line route. The purpose of the Phase 1 survey was to determine whether previously identified cultural resources (historic and archeological sites) are located in the areas that may be affected by the proposed Project, evaluate the potential for previously unidentified cultural resources to be located in the Project's area of potential effect, and determine whether archeological sites are located in the areas that may be affected by Project construction.

Relative to archeological resources, the results of the Phase 1 cultural resources survey for the Project can be summarized as follows:

- The entire Project Area is an existing utility ROW, sections of which include both overhead electrical transmission lines as well as underground gas transmission lines. In general, the Project Area can be characterized as previously disturbed.
- A reconnaissance survey was conducted at all proposed new/replacement pole locations and 36 shovel tests were excavated at 19 proposed new or replacement pole locations. The remaining pole locations were all either visibly disturbed, sloped, or located immediately adjacent to existing poles (i.e., within the disturbed area associated with the construction/installation of existing poles).
- No pre-contact Native American materials or potentially significant historic-period artifacts or features were observed at any of the proposed new/replacement pole locations or recovered from any of the 36 shovel tests. No archeological sites were identified within the Project Area.
- The New York State of Parks, Recreation & Historic Preservation (NYSOPRHP) reviewed the Phase 1 cultural resource survey report describing the shovel testing completed on site, and in correspondence dated August 7, 2013, stated that the Project will have no impact on any significant historic properties listed, or eligible for listing, in the National Register of Historic Places (Yates, 2013). Therefore, no additional cultural resources investigation, avoidance, or mitigation measures are required for the proposed Project.

However, should archeological materials be encountered during construction, CHG&E or the Contractor will stabilize the area and cease all ground-disturbing activities in the immediate

vicinity of the materials found and protect those materials from further damage. Within 24 hours of such discovery, the CHG&E will notify and consult with DPS staff and NYSOPRHP Field Services Bureau to determine the best course of action. No construction activities will be permitted in the vicinity of the archeological materials until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation has been determined.

Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the vicinity of the find will be halted immediately and the remains will be protected from further disturbance. Within 24 hours of any such discovery, CHG&E will notify and consult with the DPS staff and NYSOPRHP Field Services Bureau. Treatment and disposition of any of human remains that may be discovered will be managed in a manner consistent with the NYSOPRHP's *Human Remains Discovery Protocol*. All archaeological or remains-related encounters and their handling will be reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections.

12.0 INVASIVE SPECIES

An invasive species is an organism that has been purposefully or accidentally introduced outside its original geographic range, and is able to proliferate and aggressively alter its new environment, potentially causing harm to the economy, environment, or human health. Invasive plant species spread in a number of different ways. Dispersal mechanisms include wind, water, wildlife, vegetative reproduction, and human activity. Populations of invasive species typically establish most readily in places where the ground has been disturbed, thereby exposing the soil. The Project will utilize an Invasive Species Control Plan (ISCP) that is based on the Environmental Energy Alliance of New York's (EEANY) *Best Management Practice for Preventing the Transportation of Invasive Plant Species* (EEANY, 2012 or most current version) to minimize the spread of invasive species within NYSDEC jurisdictional areas and agricultural areas affected by Project construction (see Attachment E). The ISCP will be implemented for the duration of construction activities followed by a two-year monitoring program in agricultural fields. In addition, CHG&E and its contractors will comply with the provisions of 6 NYCRR Part 192, Forest Insect and Disease Control, and ECL Section 9-1303 and any quarantine orders issued thereunder.

13.0 VISUAL IMPACT MITIGATION

As mentioned previously, a Visual Impact Assessment (VIA) was prepared for the Project. Based on industry standards, the area within 1-mile of the center line of the proposed transmission line was defined as the visual study area. Within this area all visually sensitive resources (scenic areas, historic sites, parks, trails, recreational areas, etc.) were identified. Potential Project visibility and visual impact were evaluated through viewshed analysis, field review, preparation of visual simulations, and evaluation of visual contrast by a panel of registered landscape architects.

The VIA concluded that the Project would not have a significant adverse visual impact. This conclusion was based on the following:

1. Visually sensitive resources (other than adjacent residences the Pleasant Valley ball fields, and the Dutchess County Rail Trail) generally do not occur on or adjacent to the Project ROW.

2. Existing vegetation will be effective in screening views of the Project from more distant sites/resources.
3. Because the Project involves replacement of existing transmission lines, vegetation clearing will be minimal and the change in visual character will be minor.

Other than maintaining a screen planting of cedars at the Todd Hill Substation (on the north side of the Bushwick Road), no landscaping, visual screening or other visual mitigation measures are proposed at road crossings, the Pleasant Valley ball fields, the Dutchess County rail trail, or adjacent properties.

14.0 NOISE IMPACTS

Noise will be generated during Project construction, primarily from vehicles and equipment operating along access routes and at structure work areas, laydown areas and pulling sites. The construction equipment to be used is similar to that used during typical public works projects and tree service operations. Typical sound levels for equipment used during each stage of construction is shown in Table 4. Various construction activities may occur simultaneously with multiple construction crews potentially operating within the Project ROW. Thus, multiple sources of noise may be present any one time.

Table 4. Typical Construction Noise Levels

Construction Phase	Example Construction Equipment	Equipment Noise Level at 50 feet, dBA
Site Access and Preparation	Bulldozer	86
	Chain Saw	84
	Grader	82
	Roller-Compactor	83
	Loader	78
	Water Truck	80
	Dump Truck	76
Structure Installation	Bulldozer	86
	Loader	78
	Backhoe-Loader	78
	Fork Lift	80
	Mobile Crane	81
	Auger Rig	84
	Drill Rig	79
	Compressor	78
	Pump	81
	Jackhammer	89
	Dump Truck	76
	Specialty Truck	80
	Helicopter	103
Water Truck	80	
Erecting of Support Structures	Fork Lift	80
	Mobile Crane	81
	Compressor	78
	Flatbed Truck	74
	Water Truck	80

Stringing of Conductors	Tracked Dozer	86
	Backhoe-Loader	78
	Compressor	78
	Line Puller	81
	Mixed Trucks	80
	Specialty Truck	75
	Helicopter	103
	Water Truck	80

Source: Federal Highway Administration, 2006

Construction sound will be attenuated with increased distance from the source. In addition, noise impacts will be minimized and mitigated by requiring that all equipment be maintained in good operating condition, and that all motors and engines will be muffled according to manufacturer's specifications and will comply with State Environmental Law, Subchapter E, Part 450 (Noise from Heavy Motor Vehicles). Any faulty noise suppressor will be repaired or replaced, equipment will not be left running unnecessarily, and existing tall growing vegetation that serves as a noise barrier will be maintained to the maximum extent practical.

Noise impacts will also be mitigated by limiting construction activities to the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. If, due to safety or continuous operation requirements (including as necessary to coordinate outages for the convenience of residents or businesses), construction activities are required to occur on Sundays or after 7:00 p.m., CHG&E will notify DPS staff, the affected municipality and adjacent neighbors. Notice will be given at least 24 hours in advance unless the Sunday or after 7:00 p.m. construction activities are required for safety reasons that arise less than 24 hours in advance.

Routine Project inspections and maintenance will occur annually, but are will generally be of short duration, are not expected to result in adverse noise impacts, and will not require specific mitigation measures. ROW vegetation maintenance may require the use of chain saws. A short term event, chainsaw activities would be limited to daytime periods only. Therefore no mitigation for operational noise is proposed.

15.0 POLLUTION PREVENTION

CHG&E and its contractors will comply with all applicable regulations regarding the management of wastes and hazardous substances. CHG&E will require that all contractors follow appropriate waste management regulations, and that any reportable spills or incidents involving waste oils, fuels or hazardous wastes are handled appropriately in compliance with both CHG&E's spill procedures and relevant legislation.

15.1 Construction Materials

CHG&E and its contractors will store construction materials in a manner that minimizes exposure to precipitation and runoff, where appropriate, or otherwise to prevent the contamination of stormwater and the environment. For pollutant materials that must be kept dry (fertilizers, plaster, dry ingredients, etc.), indoor storage, temporary shelters, storage trailers, tarpaulins, and other means will be employed to keep these materials from being exposed to stormwater. Building component materials that are normally exposed to precipitation while being stored will be placed in upland areas away from all stormwater conveyances and will be stored in a manner that will not

concentrate runoff. The contractor will have only the minimum amount of material at each work site necessary to complete the work at that site. No concrete is expected to be utilized for the Project.

All construction materials stored onsite will be stored in a neat, orderly manner in appropriate containers with appropriate labels. Products will be kept in their original containers with the original manufacturer's label, unless the containers are not re-sealable and manufacturer's recommendations for proper use and disposal will be followed. Original labels and material safety data sheets (MSDS)s will be retained for the period of time that the product is being utilized onsite in accordance with all applicable Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1926.33). Containers will not be stored on the ground, but will be stored in cabinets or on a stable working surface such as a portable trailer bed or other secure decking. Containers will be kept closed unless the material is being transferred. All transfer operations will be monitored and not left unattended. The contractor will not store, mix or load chemicals labeled toxic or petroleum products within 100 feet of a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area along the ROW, except as specified in Section 15.3. This applies to storage and does not apply to normal operation or use of equipment in these areas. All employees and/or other handlers of hazardous materials will be properly trained and instructed on the proper reporting and handling requirements.

At the end of all construction, the ROW and respective work areas will be thoroughly cleared of debris such as nuts, bolts, spikes, wire, pieces of steel, and other assorted items, including debris left on the ROW from previous maintenance and structure replacements.

15.2 Handling and Disposal of Solid/Bulky Wastes

CHG&E and its contractors will maintain construction work areas (e.g., transmission line ROW, marshalling yards) in a clean and neat condition at all times. At no time will litter be permitted to accumulate for more than one day at any location on the ROW. CHG&E's construction personnel (including contractor personnel, as appropriate) will be responsible for policing construction areas and for removing all construction-generated debris. Solid wastes will be stored in materials yards or at CHG&E's maintenance facilities and disposed of in accordance with applicable regulations. Removed transmission structures will be disposed in accordance with Section 20.0.

15.3 Petroleum and Chemical Handling Procedures

The handling, transportation, storage and disposal of oil, fuels, used oils, and (if any) hazardous wastes will be conducted in an environmentally safe manner. Any hazardous substances will be transported, stored, and handled as recommended by the suppliers and/or manufacturers and in compliance with all applicable federal or state regulations. CHG&E will keep local fire and emergency management teams apprised of on-site hazardous chemicals and waste, and will implement all requirements of NYS hazardous waste regulations including but not limited to:

- Train and instruct employees, contractors and/or other handlers of hazardous waste on the proper reporting, storage, inspection, and handling requirements;
- Separate hazardous waste from normal waste through segregation of storage areas and proper labeling of containers;

- Use appropriate storage and, when necessary, DOT-approved transportation containers, along with secondary containment measures where applicable;
- Verify that the hazardous waste transporters servicing the Project have all required licenses, registrations and/or U.S. Environmental Protection Agency (EPA) identification number and that the waste is disposed of at an approved/licensed facility prior to shipping hazardous wastes;
- Transport all hazardous waste under a cradle-to-grave system of manifests;
- Follow accurate record keeping requirements as to the quantity and nature of hazardous wastes generated onsite, and maintain a file of MSDS for all onsite chemicals; and
- Do not store hazardous wastes within 100 feet of a wetland, water body or other ecologically sensitive site or existing recreational area along the ROW.

CHG&E and its contractors will dispose of used oil, other petroleum products, and hazardous wastes (if any) in accordance with the following requirements:

- Disposal of these wastes in sanitary landfills is not permitted.
- Waste oils must be stored in appropriate, properly labeled drums or tanks, with appropriate secondary containment, until shipment to waste oil recycling centers, incinerators, or secure disposal facilities approved for such wastes.
- Used oil filters will be drained into designated containers for accumulation of liquids and placed in separate storage containers (properly labeled), as detailed above, until transported to approved disposal facilities.

All fuel handling and storage facilities will comply with applicable federal and state regulations. Above-ground bulk storage, with the exception of mobile tank trucks, will have secondary containment or be adequately bermed with impervious material to contain a potential loss from complete tank failure. Bulk storage sites will be located so that potential spills cannot enter a watercourse or wetland, and in any case will not be within 100 feet of any identified wetland or water body. The area around storage sites and fuel lines will be distinctly marked and kept clear of debris to allow for routine inspection for possible leaks.

Fuels used in the construction process will be stored at specified equipment marshalling yards. Where practical, refueling will be conducted at the marshalling yards. If refueling along the ROW is required, fuel will be trucked in using appropriate equipment and appropriate environmental precautions taken as outlined below:

1. Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. All refueling of equipment within 100 feet of wetlands or streams will be conducted under the direct supervision of the Environmental Inspector. Absorbent pads or portable

basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.

2. Refueling of hand equipment will be allowed within 100 feet of wetlands when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand held equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.

During construction, no liquid or solid wastes or fuels will be deposited on the ground or into water bodies. When equipment servicing must be performed at marshalling yards or on the ROW and requires the drainage or pumping of lubricating oils or other fluids from the equipment, a groundsheet of suitable material and size will be spread on the ground to catch the fluid in the event of a leak or spill.

Construction staging and laydown areas will have an adequate supply of suitable absorbent material and any other supplies and equipment necessary to immediately clean-up inadvertent waste or fuel spills. Spill kits are expected to be kept in construction vehicles and at marshalling yards where equipment is stored.

15.4 Sanitary Waste

Portable sanitary facilities will be provided for use by Project personnel during construction. These facilities will not be located within 50 feet of a stream or water body, and will be securely fastened to the ground, or otherwise prevented from turning over. A local licensed vendor will maintain these facilities and provide proper disposal.

15.5 Construction Equipment

All on-site construction vehicles including contractor employee vehicles will be monitored for leaks and will receive regular preventative maintenance to reduce the risk of leakage. Any equipment leaking oil, fuel or hydraulic fluid will be repaired immediately or removed from the site. Contractor personal vehicles at all times, and construction equipment at the end of the working day, will be parked at least 100 feet from a wetland, water body, or other ecologically sensitive site or existing recreational area along the proposed ROW except where it is necessary to maintain continuity of construction. Petroleum products and hydraulic fluids that are not in vehicles will be stored in tightly sealed containers that are clearly labeled. All gasoline and fuel storage vessels with greater than a 25-gallon capacity that are not installed in a vehicle will have secondary containment constructed of an impervious material and be capable of holding one-hundred ten percent (110%) of the vessel capacity.

15.6 Spill Response and Cleanup Procedures

CHG&E and its contractors will comply with all federal, state and local laws, regulations and regulatory agreements pertaining to immediate and follow-up reporting of environmental spills or releases of petroleum products or hazardous substances.

Under the New York State Navigation Law Art. 12 §175, CHG&E will report the incident to the NYSDEC immediately (no longer than within two hours) following discovery. The law defines a discharge as any intentional or unintentional action resulting in the spill, release, pumping, etc., of petroleum to a waterway or to the lands from which it might flow into the waterways.

For spills of chemicals other than petroleum, the New York State Releases of Hazardous Substances regulations (6 NYCRR Part 595) apply. According 6 NYCRR § 595.1(12), a “release” is defined as “any unauthorized pumping, pouring, emitting, emptying, overfilling, spilling, leaking, leaching, or disposing, directly or indirectly, of a hazardous substance or any other substance which results in the formation of a hazardous substance upon release so that the substance or any related constituent thereof, or any degradation product of such a substance or of a related constituent thereof, may enter the environment.” Under 6 NYCRR § 595.1(16), a “spill” is defined as “any escape of a substance from the containers employed in the normal course of storage, transfer, processing, or use.”

15.6.1 Spill Response Plan

If a spill of fuel, oil, chemicals, or hazardous substance occurs during any phase of the construction, the affected area will be cleaned up expeditiously, in accordance with the procedures appropriate to the material spilled and with the specifications of CHG&E’s emergency spill response procedures (Attachment G). All spills (no matter the size) must be reported promptly to the Environmental Inspector who in turn will immediately notify a member of the Environmental Affairs staff at CHG&E.

15.6.2 Notification and Reporting

CHG&E’s Environmental Affairs staff is responsible for making all contacts to the local, state and federal agencies relative to a reportable spill. All spills must be reported to the NYS Spill Hotline at 1-800-457-7362 within the two hours of discovery. DPS staff will also receive notification of any reportable spills. If CHG&E’s Environmental Affairs staff are unavailable then the Environmental Inspector will notify the NYSDEC and DPS staff.

On-Site Reporting Requirements

All spills on-site should immediately be reported to the Environmental Inspector, who is responsible for obtaining all relevant spill information needed to report the spill. If the Environmental Inspector cannot be reached, the contractor will contact the Construction Manager and notify the Environmental Inspector as soon as possible.

Off-Site Reporting Requirements

Unintentional or accidental spill or release of any fuel or chemical in any quantity on land, water or to the air will be reported immediately, but no later than two hours after identifying the spill.

15.6.3 Unanticipated Encounters with Contaminated Soil

If pre-existing contaminants are found in the soil during construction, construction activities will be stopped immediately in that area, and the Environmental Inspector will be notified. The Environmental Inspector will report the unanticipated encounter of contaminants to the CHG&E's Environmental Affairs staff, who will notify the NYSDEC and the DPS staff. Construction will not be resumed until the contaminants of concern have been properly removed and/or the NYSDEC has issued an approval to continue construction activities in the area of concern. Any future construction activities at the referenced site will be conducted in accordance with all conditions specified by the NYSDEC.

16.0 HERBICIDES

CHG&E does not currently anticipate the use of herbicides during construction of the Project. However, if herbicide application becomes necessary, CHG&E or its Contractors will comply with the applicable provisions of Articles 15, 71 and 33 of the ECL and any permits held by CHG&E governing the application, use and control of herbicides. Additionally, CHG&E and its contractor will adhere to the following guidelines.

- CHG&E will notify DPS staff and the appropriate NYSDEC Regional Natural Resource Supervisor(s) and Pesticide Control Specialist 14 days prior to the commencement of herbicide application on the Project. The application of herbicides will be made under the direct supervision of a NYS Certified Applicator who will own or be employed by a New York State-registered business. The supervising certified applicator will be familiar with and understand the provisions of the Certificate Conditions and will be present in the field to ensure compliance with best management practices for targeting species and for proper application of authorized herbicides.
- All herbicides used will have valid registrations under applicable state and federal laws and regulations. Any request for a proposed change to the herbicides planned for use during construction, including mix proportions, additives or method of application, with the exception of colored dye, will be submitted for approval pursuant to Certificate Condition 31 at least 30 days prior to implementation of the proposed change. All changes will be made in accordance with the pesticide label requirements.
- Application of herbicides will conform to all label instructions and all applicable state and federal laws and regulations. Herbicides will not be applied within 10 feet of streams or standing water or within 100 feet of any public water supply (reservoirs and wellheads), in accordance with CHG&E's NYSDEC-issued Freshwater Wetlands General Activity Permit for use of certain specified herbicides for ROW maintenance (see Attachment I). Applicators will reference the EM&CP Drawings, which indicate wetland and state-regulated adjacent area boundaries, prior to treating. Applications required in seasonally flooded freshwater wetlands will be undertaken during a dry season.
- Herbicide spraying within wetlands will be done only by backpack treatment or squirt bottle treatment method, in accordance with the CHG&E's NYSDEC-issued Freshwater Wetlands General Activity Permit for use of certain specified herbicides for ROW maintenance (see Attachment I).

- No equipment wash water or excess herbicide will be allowed to enter wetlands, wetland adjacent areas, streams, or waterbodies. Empty containers will be disposed of in accordance with label instructions and applicable regulations.
- The ROW and adjoining properties will be posted and notified regarding herbicide use using the NYSDEC-approved format (ECL Part 33 and 6 NYCRR Part 325).

17.0 FUGITIVE DUST CONTROL

Apart from localized fugitive dust emissions as a result of the use of construction equipment, Project construction is not expected to result in adverse air quality impacts. Construction equipment used on the Project will be maintained in accordance with standard specifications designed to limit emissions of air pollutants. All construction equipment will be maintained in good working order and will meet National Ambient Air Quality Standards and New York State emission standards.

Because soil disturbance is anticipated to be largely confined to minor excavation/grading at structure sites, significant generation of dust is not anticipated during Project construction. However, CHG&E will take appropriate measures to minimize fugitive dust (or other airborne debris) from construction activities. Should dry conditions exist such that dust from construction activities could become a nuisance or hazard to adjacent homeowners, pedestrians, or motorists, CHG&E will direct that dry areas be dampened by watering (using a truck or other appropriate means) covered with mulch, or application of some other suitable dust control method. In no cases will dust negatively impact homes or businesses adjacent to the Project.

The CHG&E Environmental Inspector and/or Construction Manager (or their designees) will assess conditions at construction sites and will specify the application of dust suppressants, as necessary.

CHG&E does not anticipate the use of any dust suppressants other than water. CHG&E will install stabilized construction entrances/stone aprons on access routes prior to their intersection with public roadways to minimize the tracking of mud or generation of dust on roadways as described in the SWPPP and indicated on the EM&CP Drawings. Soil tracked onto public roads that could result in dust generation will be cleaned up as described in Section 18.4.

18.0 HIGHWAY AND UTILITY CROSSINGS

The Project will cross various state and local roads, as well as utility lines (e.g., water, cable television, telephone, water/sewer lines, and gas). Prior to construction over or near these corridors, CHG&E will notify and, as necessary, coordinate with the representatives of the affected utilities and highway departments.

18.1 Notification

At least two days prior to excavation work in the vicinity of buried utilities, CHG&E or the contractor must notify utilities through the “Call Before You Dig” program. If the utility is not registered with this program, CHG&E or the contractor must notify the utility operator directly. CHG&E will also notify affected highway departments at least five days prior to construction over or within the ROW of a local or state road.

18.2 Overhead Electric Facilities

The location of all known underground and overhead electrical lines are indicated on the EM&CP Drawings. When crossing an existing overhead electric line the following specifications will apply:

- a. The utility responsible for the upkeep and maintenance of the overhead electric line will be contacted and consulted concerning the proposed crossing.
- b. The responsible utility will be consulted concerning “safe minimum clearance” for construction machinery.
- c. All guy wires, ground lines and other surface or subsurface supports or facilities will be located in the field prior to the initiation of construction.
- d. Depending on the length of the facility to be installed, the voltage of the electric line to be crossed and existing weather and topography, the new facility and the construction equipment installing it may need to be temporarily grounded. This activity will be performed in compliance with the National Electrical Safety Code (NESC) as applicable to electric transmission line construction.

In instances where the new electric transmission facilities will parallel existing overhead electric facilities, the following additional specifications will apply:

- a. An Electrical Safety Inspector will be designated. The Electrical Safety Inspector will be in the chain of command for the Project and will have "stop work authority."
- b. The Electrical Safety Inspector will:
 - Supervise grounding equipment and materials;
 - Provide safety training of all individuals expected to work in or visit the Project area adjacent to electric lines;

18.3 Underground Gas Lines

The location of all underground gas lines on the A and C Lines ROW, and along off-ROW access routes, have been located in the field, surveyed, and are shown on the EM&CP Drawings. To assure protection of underground gas lines during construction, CHG&E's One-Call rules will be followed. Prior to the initiation of construction in the vicinity of gas lines, CHG&E's Construction Manager will initiate One-Calls to mark the exact location of buried gas lines in the field. It will be the responsibility of CHG&E's Construction Manager and the contractor to keep the marks fresh in the vicinity of the work. If the marks are lost for any reason, another One-Call must be made. The Gas Engineering Department will be consulted to determine actual pipe depth in the immediate area of the work.

The CHG&E Gas Engineering Department will be informed in a timely manner about the conduct and progress of the Project so that Gas Engineering personnel can be present if/when the pipeline is at heightened risk. The pipeline is considered to be at heightened risk whenever excavation/drilling work is done near the pipe, heavy machinery passes over it, and heavy loads

are lifted to a significant height above it. The CHG&E Gas Engineering Department must review (and approve) plans for crossing over the pipeline with heavy equipment (and perform periodic site inspections to make sure the plan is being followed). Gas Engineering personnel must also be present on site whenever excavation work may expose the pipe. If there is any plan to dig or drill (e.g., for either pole or guy installation) close to any CHG&E gas pipeline, the pipe must first be exposed in the presence of Gas Engineering personnel via Hydrovac or hand excavation to confirm its exact location.

Specific gas line protection measures have been identified on the EM&CP Drawings. Three basic protection measures are proposed, depending on the proximity of the gas line and the type of construction activity occurring. These include the following:

- A. Install construction matting or steel plates over the gas line where crossing with construction equipment (protect a minimum of 5 feet from the center of the gas line, for total of 10 feet of mat/plate protection x vehicle or work area width).
- B. At a minimum of 5 feet from the gas line, install temporary construction fencing, caution tape, or other such barrier to create a buffer between work areas/access routes and the gas line. Construction vehicles or materials shall not enter this buffer area.
- C. At a minimum of 5 feet from the gas line, install temporary construction fencing, caution tape, or other such barrier to create a buffer between work areas and the gas line. Construction vehicles shall not enter this buffer area, except along designated access routes. Install construction matting on designated access route at gas line crossings (protect a minimum of a 5 feet from the center of the gas line, for total of 10 feet of mat protection x vehicle or work area width).

18.4 Highway Crossings

When installing conductors over roads, or working at structure locations adjacent to roads, CHG&E will adhere to standard procedures designed to minimize impacts on normal traffic flow and to limit delays or public inconvenience. During construction of the Project, paved surfaces of all public and private roads will be protected from heavy equipment damage. Should any pavement damage occur, it will be restored to pre-construction condition (see photos in Attachment H) or better by CHG&E.

Prior to the commencement of construction at each road crossing, CHG&E will notify state and local highway departments of the approximate date on which work will begin. All work within state highway rights-of-way will be in accordance with the traffic and safety standards and other requirements contained in 17 NYCRR Part 131, *Accommodation of Utilities Within State Highway Rights-of-Way*. CHG&E will consult with the New York State Department of Transportation (NYSDOT) DPS, and other appropriate authorities to ensure that the proposed construction method and specifications are acceptable, determine whether the proposed Project will conflict with planned transportation projects and determine if the affected agencies desire to have representatives in the area when transmission line construction activities are occurring across the affected highway.

During wire pulling, safety at highway crossings will be maintained by using bucket trucks to assure that lead lines and conductors do not present a potential hazard to passing motor vehicles or pedestrians. No temporary rider poles will be installed at the road crossings.

Other appropriate safety procedures including periodic consultation with municipal highway agencies, will also be implemented to minimize the potential for injuries to workers or to the public at large. Devices to notify the public of construction, such as flag persons, signs, traffic controls, night flashers, and markers, will be used as required by the applicable safety regulations (see also Section 19.0). Adequate signs, barricades, and lights will be provided and suitable barricades will be erected and maintained around construction areas while work is in progress. No construction equipment or material will be placed in any manner or location that will obstruct highway warning or directional signs or signals. Typical Maintenance and Protection of Traffic Plans and road crossing photographs are included in Attachment H.

18.5 Mud Control on Roads

CHG&E will implement measures to control or to clean up the mud from local or state roads as appropriate. Stabilized construction entrances will be installed on access routes prior to their intersection with public roads in order to minimize the amount of mud on vehicles and equipment entering the road. The type and location of stabilized construction entrances on each access route are indicated on the EM&CP Drawings. In addition, roads in the immediate vicinity of an access point will be swept periodically, in accordance with the SWPPP, to remove significant amounts of mud. The objective of the mud control program will be to avoid safety hazards that, may be associated with significant accumulations of mud on a particular stretch of roadway.

18.6 Other Utility Crossings

No direct impacts to underground utilities are anticipated because the construction of the Project will not require excavation except at new pole locations. However, underground utility crossings (e.g., electrical, cable television, gas, telephone, water lines) will be flagged or marked prior to the commencement of transmission line construction excavation in a particular area in order to avoid any potential for conflicts.

Pole locations (including guying) near or crossing other utilities also will be reviewed with representatives of such utilities prior to construction. Owners of the facilities crossed will be contacted no later than 24 hours prior to the start of construction and will be given reasonable opportunity to be present during excavation and construction.

19.0 TRAFFIC MAINTENANCE

For each road crossing and location where construction vehicles will access the facility ROW from local roadways, CHG&E will obtain the necessary highway work permits and develop and implement a Maintenance and Protection of Traffic (MPT) plans in consultation with the appropriate highway departments. The MPT plans will identify procedures to be used to maintain traffic and provide a safe construction zone for those activities within the roadway ROW. The MPT plans will address temporary signage, lane closures, placement of temporary barriers and traffic diversion. These plans are anticipated to include the following components:

1. All signage utilized will comply with New York State Department of Transportation (NYSDOT) *Manual of Uniform Traffic Control Devices* (manual No. 7155). Placement of signs will be determined in consultation with the jurisdictional agency. At a minimum, signs will be placed at the following distances:
 - Signs announcing construction at 500 feet and 1,000 feet;
 - Signs depicting workers at 300 feet;
 - Where blasting is to take place within 50 feet of a road, a blast-warning sign at 1,000 feet.

2. Flagmen will be present at all times when equipment is crossing any public road, when equipment is being loaded or unloaded from a vehicle parked on a public road, and where two lane traffic has been reduced to one lane. All flagging operations will comply with 17 NYCRR Part 131.

Table 5 contains a list of roadways that are currently planned to have lane, shoulder, or street closures. These closures will be conducted in accordance with lane/shoulder closure, signage, flagmen and traffic protection as indicated in the NYSDOT standards included in Attachment H. Copies of all required highway work permits and MPT plans for each roadway will be provided to the DPS prior to the initiation of construction.

Table 5. Maintenance and Protection of Traffic at Road Crossings and Accesses

Municipality	Roadway	Type of Work ¹	Potential Type of Closure	EM&CP Drawings Sheet No.	Photo Log Photo Number(s)	NYSDOT Sheet Number ²
Town of Pleasant Valley	Niagara Rd.	1, 2	Lane	3	1 & 2	619-60
Town of Pleasant Valley	Main Street (NYS RT 44) <i>Mile Marker 20.54</i>	1, 2	Lane	3	3 & 4	619-60
Town of Pleasant Valley	"Access A" off Plass Rd.	1	Shoulder	3/14	35-36	619-20
Town of Pleasant Valley	Plass Rd. (North)	1, 2	Lane	3	5 & 6	619-60
Town of Pleasant Valley	"Access B" off Plass Rd.	1	Shoulder	3/14	37-38	619-20
Town of LaGrange	"Access C" off Freedom Rd.	1	Shoulder	3/14	39-40	619-20
Town of LaGrange	Rombout Rd. (North)	1, 2	Lane	5	7 & 8	619-60
Town of LaGrange	"Access D" off Freedom Rd.	1, 2	Lane	5	41-42	619-60
Town of LaGrange	Overlook Rd. (North)	1, 2	Lane	6	9 & 10	619-60
Town of LaGrange	"Access E" off Freedom Rd. <i>*Light vehicles only</i>	1	Shoulder	7/14	43-44	619-20
Town of LaGrange	Frost Hill Rd. (North)	1, 2	Lane	7	11 & 12	619-60
Town of LaGrange	Frost Hill Rd. (South)	1, 2	Lane	7	13 & 14	619-60
Town of LaGrange	Cramer Rd.	1, 2	Lane	7	15 & 16	
Town of LaGrange	Vervalen Rd.	1, 2	Lane	7	17 & 18	619-60
Town of LaGrange	"Access G" from Timothy Dr.	1	Shoulder	7	45-46	619-20
Town of LaGrange	"Access G.2" from Freedom Plains Rd. (NYS RT. 55) <i>Mile Marker between 20.54 – 20.55</i>	1	Shoulder	8	47-48	619-20

Municipality	Roadway	Type of Work ¹	Potential Type of Closure	EM&CP Drawings Sheet No.	Photo Log Photo Number(s)	NYSDOT Sheet Number ²
Town of LaGrange	Bushwick Rd.	1, 2	Lane	8	21 & 22	619-60
Town of LaGrange	Croft Hill Rd. (North)	1, 2	Lane	8	23 & 24	619-60
Town of LaGrange	"Access I" from Laurer Rd.	1	Shoulder	9	49-50	619-20
Town of LaGrange	Old Noxon Rd. (North)	1, 2, 3	Lane/Road	9	25 & 26	619-60/66
Town of LaGrange	Noxon Rd. (North)	1, 2	Lane	9	27 & 28	619-60
Town of LaGrange	Pine Ridge Rd.	1, 2	Lane	9	29 & 30	619-60
Town of LaGrange	Diddell Rd. (North)	1, 2	Lane	10	32	619-60
Town of LaGrange	"Access J" from Diddell Rd.	1	Shoulder	10	51-52	619-20
Town of Wappinger	"Access K" off Diddell Rd.	1	Shoulder	15	53-54	619-20
Town of Wappinger	NYS Route 376 <i>Mile Marker between 10.53 – 10.54</i>	1, 2	Shoulder	12	33 & 34	619-20
Town of Wappinger	Monfort Rd.	1, 2	Lane	13	55-56	619-60

¹Work activities include the following actions: (1) construction entrance/access, (2) wire pulling, (3) machinery access for pole replacement

²Additional NYSDOT MPT Section 619 procedures and details (such as signage and barriers) included in Attachment H may be applicable at each closures and will be implement as needed.

20.0 STRUCTURE REMOVALS

It will be critical to minimize the amount and duration of outages of the A and C Lines while the new structures and conductors are being installed. In most instances, the new structures will be constructed either to the north or south of the existing structure in the same line, and existing structures will be subsequently removed. After new poles are in place and the new A and C Line conductors have been attached, the old poles will be cut off at or near ground level or completely removed. Any poles within active agricultural fields will be removed in their entirety. Wherever existing structures are removed from agricultural fields, the area will be restored to allow agricultural activities. Such restoration will include the removal of all vegetation from the structure area and grading of the ground surface to match the adjacent field. All rocks 4 inches and greater in size will be removed from the surface.

The decision regarding removal of pole butts from wetlands will be made based on field conditions at the time of pole removal. Poles in wetlands will be removed in their entirety with the equipment available on site if such removal can be accomplished with minimal disturbance to vegetation and soils. However, if these efforts would create excessive impacts to the wetlands, the poles will be cut flush with the ground and the butts will be left in place. If pole removal and replacement within wetlands and their adjacent areas cannot be accomplished without soil disturbance, the poles will be cut up and removed by hand, or construction mats will be installed so that dragging of poles will be atop the construction mats within the wetland and adjacent area.

Existing transmission facility components removed or replaced as part of construction of the Project, and other line debris from previous maintenance and repair activities, will be removed from the ROW to appropriate destinations and handled in accordance with New York State solid waste regulations.

21.0 HELICOPTER USAGE

CHG&E may use helicopters for removing existing structures and lifting and transporting framed poles from established marshalling yards to each pole/structure location. Additionally, helicopters may be used for installing wire, and pulling ropes, where practical. If helicopter use is proposed, a plan will be prepared by the CHG&E and submitted to DPS for review and approval. Any helicopter use plan will comply with all Federal Aviation Administration (FAA) required flight rules, and will include:

- Prior notification to emergency response agencies including State and local Police, Sheriff, Fire Department and 911 Central Office
- Identification of flight route(s) with and without external loads
- Refueling procedures and notification of refueling area including fuel storage with Local Fire Department

Additionally, traffic control personnel will be deployed at public road crossings to ensure safe passage of the public. Local town officials will be notified as to time and duration of the flight operations. All flights would occur during daylight hours.

CHG&E personnel will supervise all helicopter operations on the A and C Lines ROW.

22.0 CLEAN-UP AND RESTORATION

Clean-up activities will be ongoing through the construction of the Project, as described below.

22.1 Clean-up

Clean-up will be an ongoing function as the construction crews will be directed to police the ROW for construction-related debris and trash, and to remove such materials, if possible, when leaving a work area. After the completion of construction on a transmission line segment, CHG&E will inspect all of the work areas within the Project segment and remove any remaining construction-generated debris and trash.

Final clean-up inspections will be performed prior to final restoration to minimize the potential for debris to be left on the ROW or at construction work areas. Clean-up inspections will not be performed when snow cover is present and visibility of construction areas could be limited. If construction ends late in the season or in the winter and there is snow cover, final clean-up inspections will be delayed until the following spring, when the snow cover is gone.

Clean-up will include an inspection for all types of debris, including but not limited to the following:

- General trash (e.g., wrapping papers, pieces of silt fence).
- Scraps of debris including insulators, conductors, static wires, guy wires, anchors, and other miscellaneous material (e.g. flagging).
- Empty reels used for static wire or conductors.
- Poles (or pieces thereof) that have been removed during the Project or previous pole replacement activities.

All scrap materials and rubbish will be removed from the ROW and associated construction sites, and designated for reuse or recycling (by Certificate Holder or others) or for disposal in an approved manner, consistent with the characteristics of the waste.

Temporary erosion control devices will be maintained throughout the clean-up and restoration phase of a Project segment. However, after revegetation/site stabilization is deemed effective, all used silt fence, silt fence pieces, and silt fence/hay bale stakes are considered debris and will be removed from the ROW and other construction work sites. Depending on conditions, some of the silt fence and stakes may be reused. Used hay/straw bales will be broken up and spread on the ROW. This material will be spread out to the maximum extent practical. Hay will not be spread in environmentally sensitive areas (e.g., wetlands).

22.2 Final Grading

22.2.1 Restoration of Elevations and Contours

Final grading, as necessary, will be performed after the clean-up inspection of a particular transmission line section. The objective of final grading will be to return both upland and wetland areas disturbed during construction to pre-construction elevations and contours, except in those instances where regrading conducted during construction would facilitate future maintenance activities. Depending on the time of year when construction activities (line installation/removal) are completed, final grading may be either performed as soon as practical after clean-up inspections or delayed until weather conditions are favorable. Conditions that could affect the timing of final grading include, among others, inclement weather and saturated or frozen soils. If construction ends in the late fall or winter and sites are not to be final graded and reseeded until the following spring or summer, over winter site stabilization measures will be implemented as described below in Section 22.3.6.

As part of, or prior to, the clean-up inspection, CHG&E will assess the need to regrade areas along the transmission line segment, and will determine the specific areas where grading is required. As mentioned above, in some areas, grading performed to create level work areas at structure sites will be kept in place to facilitate future maintenance activities. Grading will be performed with small backhoes, bulldozers, grade-alls, or equivalent. In areas of limited construction disturbance, small work areas may be smoothed using hand-held equipment. Appropriate temporary erosion controls will be maintained during the grading process. If temporary erosion controls have to be removed in order to perform grading in a particular area, CHG&E will direct construction crews or the contract crews assigned to restoration to replace the controls by the end of the same work day.

22.2.2 Use of Fill

If necessary in selected non-wetland locations, excess fill from onsite excavation areas (e.g., pole excavations) will be used to create level work areas or re-establish grade to pre-construction conditions. Excavated soils would not be considered suitable for backfill of a new pole if:

- Visual inspection showed an unusually high moisture content (mud or “soupy”);
- If visual inspection showed a significant amount of large rocks that would potentially prohibit proper backfilling, compaction or settling around the structure;

- Visual inspection showed a high content of organic matter that would prevent adequate compaction.

Unsuitable soil will be disposed of as follows:

- In non-agricultural areas or areas that are not maintained by landowners (such as lawns);

Unsuitable soils will either be used for backfill of open holes following removal of nearby existing poles, or spread on the ROW near the new structure. Spreading will not occur in wetlands. In upland areas, spreading will be performed in such a manner as to maintain existing contours and drainage. Mounding soils against the base of the new structure may also occur.

- In agricultural areas and in areas maintained by landowners (such as lawns);

Unsuitable soils would either be used for backfill of open holes following removal of nearby existing poles, or removed from the agricultural field or lawn. Unsuitable soils removed from these areas would either be disposed of elsewhere on the ROW or at other suitable locations approved by the Environmental Inspector and DPS Staff.

22.2.3 Permanent Erosion Controls

As part of final grading, permanent erosion controls may be left across or along permanent off-ROW access roads or the transmission line ROW. The need for such erosion controls will be determined by the Certificate Holder on a site-specific basis. The primary types of permanent erosion controls that may be applied include:

- Diversion berms (also referred to as water bars).
- Broad-based dips.
- Stone ditches where access roads have made a slope cut.

Because most of these types of permanent erosion controls require soil disturbance, CHG&E will not install these controls unless warranted to enhance the long-term stability of portions of the ROW or ROW access routes.

22.2.4 Repair of Disturbed Pavement

Any pavement, curbs, or sidewalks affected by the installation of the new facilities will be restored to pre-construction or better conditions, and will conform to applicable state, county, or local specifications.

22.2.5 Removal of Temporary Access Routes

Temporary access routes will be regraded, as necessary, as part of final restoration.

Materials used for access route construction, such as temporary culverts or construction mats, will be removed during final grading or seeding and mulching, depending on the availability of other access for seeding equipment. Any temporary use of stone for new stream crossings will be

removed as part of final restoration. Temporary access routes will be reseeded, as required, using a native seed mix (specified on the EM&CP Drawings) and straw and/or cellulose mulch.

Materials removed from temporary access routes will be transported off site. To the extent possible, these materials will be salvaged and reused or recycled. Materials that cannot be otherwise productively reused or recycled will be disposed of in accordance with applicable state and local laws and regulations, and where necessary, with approval of DPS staff.

22.3 Restoration

Restoration, as described in this Section of the EM&CP, consists of the stabilization and revegetation of non-agricultural areas disturbed during transmission line construction. For restoration of agricultural lands, see Section 10.0. Temporary erosion controls will be maintained (and replaced if necessary) until revegetation is determined to be effective by the Environmental Inspector. Unless allowed by the EM&CP, all trees over two inches DBH or shrubs over four feet in height damaged or destroyed by activities during construction, regardless of where located, will be replaced within the following year by CHG&E with the equivalent type of trees or shrubs, except if:

- a. Equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operations or maintenance of the Facility.
- b. Replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining transmission facilities; or,
- c. The owner of land where the damaged or destroyed trees or shrubs were located declines replacement (or other recorded easement or license holder with the right to control replacement declines replacement).

22.3.1 Specifications for Revegetation

The goal of CHG&E's restoration and revegetation program will be to stabilize areas disturbed from construction activities in a timely manner. Along the transmission line ROW, the long-term objective is to achieve vegetative cover similar to existing ROW conditions.

22.3.2 Site Preparation

Site preparation to restore disturbed areas (including temporary access routes, off-ROW access roads, lay-down areas, wire pulling sites, etc.) may involve the following activities, depending on site-specific conditions:

- Disking and Raking. In non-agricultural land where soils are severely rutted or compacted, CHG&E may disc or scarify soils with a brush drag or york rake prior to seeding.
- Liming and Fertilizing. In residential lawn areas, lime and/or fertilizer may be applied as required by site-specific conditions. The need for such materials will be determined based on the extent of disturbance, landowner requests, and Natural Resource Conservation Service (NRCS) recommendations.

No fertilizer or lime will be applied in wetland areas (including the 100 foot adjacent area of state-regulated wetlands) or riparian corridors (i.e., within 50 feet of protected streams).

22.3.3 Seeding and Mulching

After disturbed areas have been restored to grade, scarified, limed, and fertilized (as necessary), a native seed mixture appropriate for the area will be applied as specified in the SWPPP and indicated on the EM&CP Drawings.

On slopes with highly erodible soils and/or extremely steep grade, the use of soil erosion control blankets (i.e., jute matting, curlex, or equivalent) may be required (see detail in EM&CP Drawings). Seed may be applied by hand or a hand crank seeder, cyclone seeder, or hydroseeder. Hydroseeding may be used where extensive seeding is needed and where good access and water supply is available. A seed drill may also be used in areas where access is available for seeding equipment. If seed is applied using vehicles, efforts will be made to avoid rutting areas that have been final graded.

Straw or cellulose fiber (when hydroseeding) will typically be used for general mulching purposes. Mulch will be applied in accordance with standards specified in the Blue Book. On slopes over 15% and along stream banks, CHG&E may direct that mulch be pegged, crimped, or otherwise secured to the ROW or temporary access routes. Mulch can be applied in a slurry if hydroseeding or hydromulching operations are used.

Alternate seeding and mulching applications must be approved, in advance, by the Environmental Inspector, and may require an approved EM&CP minor change.

22.3.4 Timing of Reseeding and Planting

Unless otherwise directed by CHG&E and approved by the Environmental Inspector, based on site-specific requirements and on weather conditions at the time of site restoration, seeding and landscape planting will be performed as quickly as practical after final grading is complete. As a guideline, soil and water conservation districts recommend the following spring and fall planting dates:

- April 1 – June 1
- August 15 – October 15

Seeding outside of the above-referenced standard timing windows may be performed with the understanding that if the seeding fails, reseeded subsequently will be performed. Winter ryegrass or similar type of temporary conservation seed mix may be used to stabilize disturbed sites until additional seeding can be performed.

22.3.5 Monitoring

The effectiveness of the restoration work will be evaluated by the Environmental Inspector after initial seeding. Any areas where seeding is not effective (i.e., vegetative cover is less than 80%) or where further stabilization methods are required will be identified and remediated (through application of additional seed, fertilizer, mulch, and/or temporary erosion controls, as appropriate) as soon as practical. Once final stabilization has been achieved as outlined in the SWPPP, a Notice

of Termination will be submitted to the MS4 municipalities. Required post construction monitoring of restored agricultural lands is described in Section 10.

22.3.6 Over Winter Site Stabilization

In the event that construction activities for a transmission line segment (or part thereof) are completed too late in the season to perform final clean-up, final grading, and/or reseeding, CHG&E will implement procedures designed to temporarily stabilize disturbed sites. Among the procedures that may be used are:

- Application of straw mulch.
- Verify the effectiveness of all existing temporary erosion and sedimentation controls.
- Replace or repair damaged control devices as appropriate, and ensure that all controls are properly staked and secured into the ground.
- Install additional temporary erosion controls across disturbed slopes as necessary, at the direction of the Environmental Inspector or Construction Manager.

CHG&E will periodically inspect the effectiveness of the over winter stabilization as described in the SWPPP, taking particular care to inspect the temporary erosion controls during periods of spring runoff and snow melt. Temporary erosion controls will be maintained and replaced as necessary.

22.3.7 Temporary Erosion Control Maintenance and Removal

Disturbed areas will generally be stabilized to prevent erosion if no work will occur on them for seven days. Temporary erosion controls will be maintained throughout restoration, until final seeding and/or natural revegetation is determined to be effective, or until sites are otherwise stabilized. Reseeding will be deemed effective when perennial vegetation covers approximately 80% of disturbed areas.

In areas where reseeding will not be possible (e.g., areas of rock), temporary erosion controls may not be required or may be removed after nearby disturbed areas are revegetated.

As describe in Section 22.1, silt fence, stakes and wire/string straw bale binders will be removed from construction areas upon the completion of restoration and transported off-site for disposal or reuse. Straw bales will be broken up on site and scattered as mulch on the ROW.

23.0 FENCES AND GATES

Construction of the Project may require the temporary removal of some fences, stone walls, guard rails, etc. to allow access for construction equipment and personnel.

In areas where fences, walls or similar barriers must be removed, CHG&E or its contractors will apply the following procedures as appropriate to specific situations:

1. To the extent possible, remove only the portions of fences, stone walls or guard rails necessary to permit the passage of construction vehicles and equipment. Brace areas on

either side of the section to be removed, as necessary, in order to maintain the integrity of the remainder of the barrier.

2. Install temporary gates, as appropriate, and if necessary, to maintain the original purpose of the barrier, while still allowing access for construction vehicles and equipment.
3. Keep gates closed when not in use.
4. After the completion of construction and restoration in an area, replace barrier equivalent to pre-construction condition unless otherwise specified by the landowner. If necessary, install permanent gates for operation/maintenance purposes. Typical gate details are included in EM&CP Drawings.
5. Stone walls will be restored to equivalent pre-construction condition, except as otherwise provided in written agreements with the affected landowners.

24.0 WORK HOURS

Construction activities on the Project will be confined to the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. If, due to safety or continuous operation requirements (including as necessary to coordinate outages for the convenience of residents or businesses), construction activities are required to occur on Sundays or after 7:00 p.m., CHG&E will notify DPS staff and the affected municipality. Such notice will be given at least 24 hours in advance unless the Sunday or after 7:00 p.m. construction activities are required for safety reasons that arise less than 24 hours in advance. For certain construction phases and activities, additional work hours may be necessary. Nothing herein will preclude CHG&E from making necessary arrangements for the extension of work hours with appropriate local agencies in compliance with local ordinances. DPS staff and adjacent neighbors will be notified of such arrangements.

25.0 QUALITY ASSURANCE

To assure that all transmission line structures and components conform to required standards and specifications, CHG&E and its contractors will comply with the Project Quality Assurance (QA) Plan included as Attachment J. The QA Plan includes 1) the name(s) and qualifications of the individual(s) who will conduct inspections under the Plan (“Quality Control Inspections”); and 2) the manner in which Quality Control Inspections will be performed

26.0 REFERENCES

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