

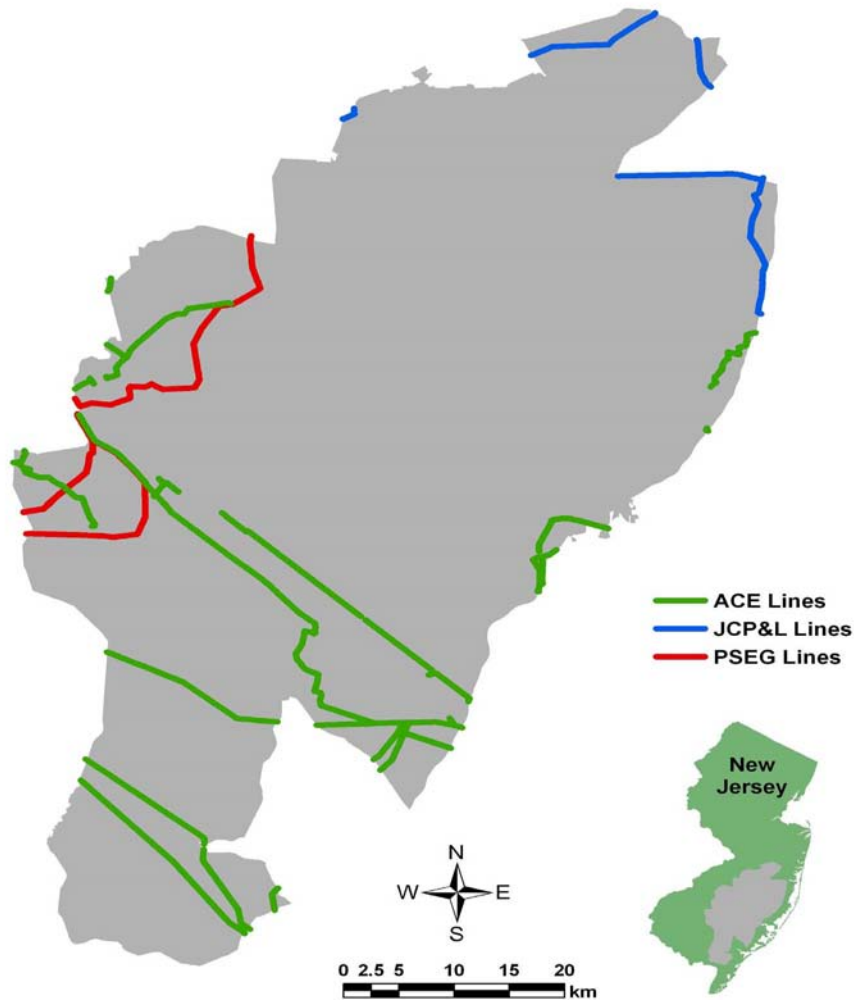
**Progress Report for 2010, 2011 and 2012
New Jersey Pinelands Electric Transmission Right-of-Way Maintenance Plan.**

March 2014



Introduction

On October 9, 2009, the Pinelands Commission approved the New Jersey Pinelands Electric Transmission Right-of-Way Vegetation Management Plan (ROW Plan). A copy of the approved ROW Plan is attached. The purpose of the ROW Plan is to manage vegetation in approximately 233 miles of existing (high voltage) electric transmission rights-of-way in the Pinelands Area. The ROW Plan requires that vegetation be managed in such a manner as to both create low-growth, early successional habitats that are characteristic of the Pinelands and to ensure the reliability and safety of the electric transmission system. The concerned rights-of-way (ROW) are managed by three utility companies (Atlantic City Electric, Jersey Central Power and Light and Public Service Enterprise Group). Atlantic City Electric (ACE), has the greatest area of ROW (47%) in the Pinelands Area. Public Service Enterprise Group (PSEG) has the next greatest area of ROW (38%) in the Pinelands Area. Jersey Central Power and Light (JCP&L) has the least amount of ROW (15%) in the Pinelands Area.



Location of ROW Plan electric transmission line rights-of-way in the Pinelands Area.

An amendment to the Pinelands Comprehensive Management Plan (CMP) authorizing the implementation of the ROW Plan as a “pilot program” became effective on December 21, 2009 (N.J.A.C. 7:50-10.31 through 10.34). The purpose of the pilot program is to implement and evaluate the effectiveness of the ROW Plan.

The CMP requires that by September 30, 2019, the Commission’s Executive Director must review the pilot program and report to the Pinelands Commission on its implementation. The purpose of the 2019 report is to determine whether the pilot program has been successful when measured against CMP specified criteria. If determined to be successful, the pilot program could be incorporated directly into the CMP.

The CMP also requires that once every two years the Commission’s Executive Director submit a **Progress Report** to the Commission, the utility companies and the Board of Public Utilities describing:

1. **The type and extent of vegetation management activities undertaken,**
2. **Any significant problems or issues, and**
3. **The need for any amendments to the ROW Plan.**

The CMP further requires that each of the three utility companies submit an annual report to the Commission’s Executive Director by January 31 of each year. That report must detail the specific rights-of-way spans in which prescribed vegetation management activities have been performed. A span is the area within the right-of-way located between two support towers that suspend the transmission wires. For calendar years 2010, 2011 and 2012, all three companies have submitted their annual reports.

Lastly, the CMP requires that, in lieu of an application fee, each of the three utility companies must pay a yearly fee to help finance a Commission vegetation monitoring program and a compliance inspection program and vegetation monitoring program. The CMP prescribed fee amount must be paid to the Commission at the beginning of each calendar year for nine successive years. Each of the three concerned utility companies paid the required fee for 2010-2012. The fees were apportioned to the utility companies on the basis of the estimated acreage within each company’s rights-of-way.

Commission Staff Vegetation Monitoring Program

As part of the Commission pilot program, 24 vegetation monitoring spans were selected in 2011 throughout the Pinelands Area. Each monitoring span contains two vegetation sample plots, for a total of 48 sample plots. Each sample plot is measured once per year to monitor vegetation changes over the 10 year pilot program. Vegetation was first measured in the monitoring plots in 2011. In 2012, 48 additional forest plots were inventoried next to the spans being monitored to provide a local reference for which plant species in the spans are native and to indicate what vegetation might have been in the

span prior to establishing the utility right-of-way. These data will be analyzed at the end of the pilot program to determine if the management prescriptions are successful in creating low growth successional habitats that are characteristic of the Pinelands.

Commission Staff Compliance Inspections Program

The Commission staff developed specific vegetation management prescriptions for all of the 3,041 spans in the Pinelands Area as part of the ROW Plan. Commission staff members conduct compliance inspections to determine whether the vegetation management prescriptions are being carried out by the respective companies in the field, consistent with the management prescription required by the ROW Plan. The Commission staff conducted compliance site inspections on 312 of the 1,414 spans where vegetation management has been conducted during the first three years (2010, 2011 and 2012).



View of an upland span with a prescription of “Mow”. This span is in Bass River State Forest near the Garden State Parkway.

1. Type and Extent of Vegetation Management Activity

There are two metrics to measure the extent of vegetation management that has occurred within the 233 miles of ROW in the Pinelands Area: by number of spans or acreage of rights-of-way. For the sake of clarity, this report will focus on the number of ROW spans to discuss the extent of vegetation management activity. There are 3,041 individual spans in the Pinelands Area. The ROW Plan anticipated that it would take three to four years to manage all 3,041 Pinelands Area spans. This means that any given span would be subject to vegetation management once every three or four years.

The ROW Plan authorizes two basic vegetation management prescriptions within the rights-of-way: either “cut trees manually” or “mowing.” Some of the management prescriptions for individual spans include time of year restrictions to protect threatened

and endangered species. There are 59 different variations of the two basic vegetation management prescriptions.

2010 Activity

This was the first year the utility companies were required to report management activities to the Commission. During calendar year 2010, 804 spans (26% of the total number of spans) were subject to vegetation management. JCP&L, the utility company with the fewest spans in the Pinelands Area, did not manage any Pinelands Area spans in 2010.

Of the two utility companies that managed vegetation in 2010, one self-reported that it incorrectly managed about ten spans; including mowing instead of cutting trees manually and mowing during a time of year prohibited by the ROW Plan. However, this company managed a total of 713 Pinelands Area spans during this year, so the amount of mismanaged spans was 1.4%, a relatively minor amount. The other utility company did not report any mismanaged spans among the 91 total spans it treated in 2010.

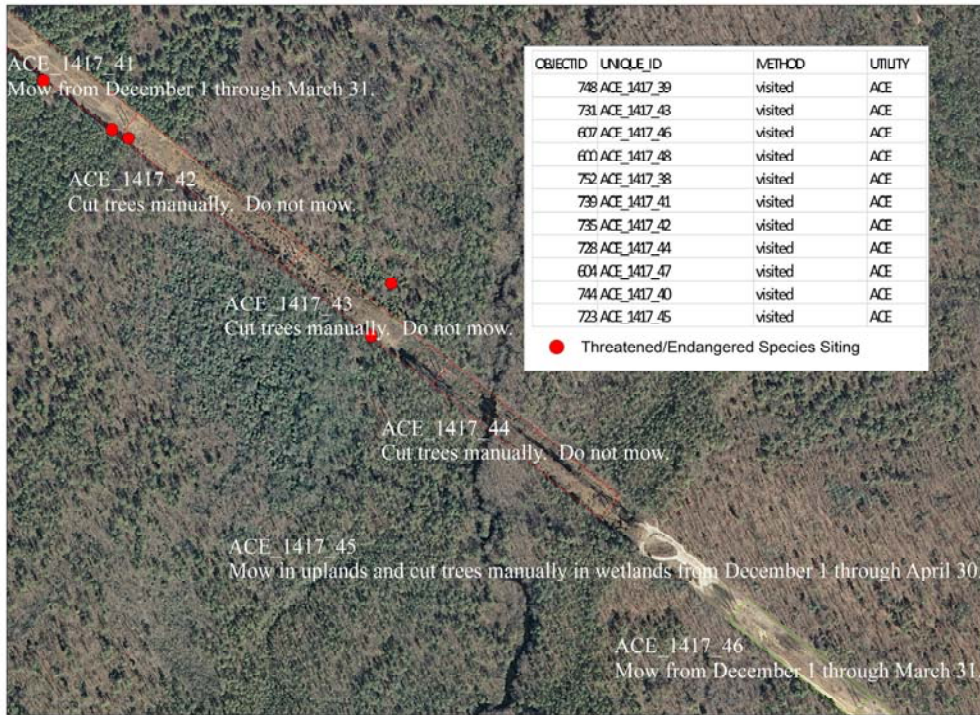


View of a wetland span with the prescription of “Cut trees manually. Do not mow.” Resprouting tree stumps are visible in this picture of a span near Buena.

2011 Activity

During calendar year 2011, Commission staff developed a uniform data records spreadsheet that provided vegetation prescriptions, yearly treatment information reported to date, approved prescription modifications and compliance site inspection notes for each span. Sections of this spreadsheet format were provided to the utility companies so that their reports could be imported directly into the

Commission spreadsheet. In 2011, only 144 spans total (5% of the total number of spans) were subject to vegetation management by the three utility companies.



Example of information integrated from the spreadsheet and aerial photography.

Only one utility company self-reported mismanagement of spans that were treated in 2011. This utility company reported that about 34 spans were not given the correct prescription out of the 78 spans that it treated in 2011. All of these mismanaged spans were wetland spans that were mowed instead of their prescribed treatment, which calls for trees to be cut manually.

2012 Activity

In 2012, the uniformity of vegetation management reporting was greatly improved by the use of the data spreadsheet developed by the Commission staff and provided to the utility companies to report management activity. During calendar year 2012, the number of treated spans increased from 2011. A total of 466 spans (15% of the total number of spans) were subject to vegetation management in this year. Although no utility company reported mismanagement of any of the 466 spans managed in 2012, Commission staff inspections revealed that a few spans were not managed properly. This is discussed further in the “Problems Encountered” section below.



Many ROW spans have locked gates at their intersection with roads.

Summary of 2010, 2011 and 2012 Activity

Approximately 76% of the 1,141 spans managed over the three-year period had the “mow” prescription. This percentage may be a reflection the fact that the majority of spans are located in uplands where this prescription is appropriate. This prescription is the easiest and most common prescription and it is preferred by all three utility companies because vehicles, machinery and minimal personnel can be used to cut all vegetation in the ROW. The utility companies have indicated that it is feasible to “mow” all vegetation smaller than 6 inches in diameter. Of the 3,041 total Pinelands Area spans, 1,660 spans, or 55%, have a “mow” only prescription.

The remaining approximately 24% of the 1,141 spans managed over this three-year period had a prescription that called for trees to be cut manually. This prescription is required in wetlands where forest or tree sprouts occur in the ROW. Mowing is not permitted in spans with this prescription. This prescription appears to be the most challenging for the utility companies to conduct due to the increased manpower needed and difficulty accessing these wetland spans without special vehicles and equipment. Of the 3,041 total Pinelands Area spans, 642 spans, or 21%, have a “cut trees manually” prescription. As discussed in the individual year summaries, not following this prescription, either by mowing or by using vehicles to cut, or assist in the cutting of vegetation, was a problem in all three years.



Accessing ROW spans can be difficult.

2. Significant Problems or Issues Encountered

During the first three years of ROW Plan implementation, the Commission staff issued several letters to the utility companies regarding vegetation management issues and problems that staff observed in the field. In addition, a follow-up meeting with all three utilities was held on August 15, 2012 to review the vegetation management prescriptions and to answer questions.

There were a few problems/issues encountered during the first three years.

Problem/Issue #1: Wrong prescription/treatment observed in field. Commission staff compliance inspections indicated that this problem was encountered on spans managed by all three utility companies during 2010, 2011 and 2012. Most frequently, Commission staff members were informed that the utility company contractors responsible for the actual implementation of the vegetation management prescriptions were sometimes not familiar with the ROW Plan. This is evidenced by questions raised by utility company contractors who called the Commission staff regarding the feasibility of implementing a specific prescription that is required by the approved ROW Plan.

Solution: With each passing year, the utility companies and their contractors appear to have had fewer misunderstandings in terms of the proper prescription for a given ROW span. At the previously mentioned August 15, 2012 meeting with Commission staff, wetlands cutting prescriptions treatments were clarified.

Problem/Issue #2: Lack of access to every ROW span. Upon undertaking compliance site inspections, the staff determined the following facts about inspecting the ROW spans:

- Large numbers of spans have impassible sections due to wetlands, even if a four wheel drive vehicle is used.
- A majority of spans have locked gates or some other physical barrier blocking vehicle access to the span at paved roads.
- Access to any given span may require entering the ROW at a different geographically distant span. How to access a given span is not always obvious from driving public roads or looking at aerial photographs. When access to a particular span requires multiple attempts to succeed, it reduces the number of spans that can be site inspected by the Commission staff in a given day. All three utility companies have this issue with their spans.

Solution: To solve these problems, the Commission staff conducts most site inspections with representatives from the utility companies. The staff is able to inspect more spans in a given day when gates are opened, and when utility company field crews who know details about access to any particular span are present. Also, the utility companies provided information on the spot regarding a given prescription, and corrective measures can be identified immediately.

Problem/Issue #3: Threatened/Endangered plant species management. Since the ROW Plan was devised in 2009, site inspections of the ROW or Commission development applications on parcels adjacent to a ROW have resulted in the discovery of three new locations along the ROW where endangered Pinelands plants have been discovered. Three different plant species, American mistletoe, Elliptical rushfoil and Pine Barrens gentian have been discovered in ROW spans where they were not previously identified.

Solution: Commission staff records and verifies all new threatened and endangered species sightings within the ROW. For Elliptical rushfoil and Pine Barrens gentian, a timing restriction will be added to the ROW Plan assigned “mow” prescription if one is not currently prescribed. For the Mistletoe location, the concerned utility company is aware of the location and a separate management plan is required to cut any trees in the spans where mistletoe is located.

Problem/Issue #4: Sample vegetation plots did not receive required vegetation management. All three utility companies had some type of problem with the vegetation sample plots. One company thought that the plots were not to be treated. Another company left cut trees/branches in the ROW resulting in covering of plots. A third company used a vehicle to cut wetland spans (which is not permitted) and the vehicle heavily trampled the plots, removing plot markers and vegetation.

Solution: The utility companies were provided verbal guidance that the plots are to be treated like the rest of the span. The utility companies, when informed of the issue, all represented that they are able to prevent these sample plot disturbances in the future. Additionally, one utility company asked to be shown where the sample plots are located, and it was given a GIS layer map of all the plots.

3. Need for Amendment to the ROW Plan

During the first three years (2010, 2011 and 2012) of implementation, no need to substantively amend the ROW Plan has been identified.

The ROW Plan may need to be amended in the future to clarify the permitted use of vehicles and equipment within wetlands spans. The ROW Plan indicates that the prescription for “cut trees manually” means to “cut trees or topped trees at the base by hand with the use of chainsaws or similar hand tools.” The ROW Plan also requires that “in wetlands, all branches and logs that result from cutting trees should be chipped into a vehicle on the access road and removed from the ROW.” The use of vehicles on existing maintenance roads within the ROW of these wetland spans is permitted. However, all three utility companies have indicated that, even if a maintenance road exists within a particular wetlands span, they cannot feasibly “cut trees manually” without using equipment and vehicles, as necessary, throughout the wetland span. The utility companies have further indicated that equipment and vehicles are also needed to remove cut vegetation from throughout any concerned wetland span as required by the ROW Plan.

Other than on existing maintenance roads, the use of vehicles and equipment within forested wetland portions of a span to cut and remove vegetation where the prescription is “cut trees manually” is not consistent with the requirements of the ROW Plan. If it is determined by the utility companies and the Commission staff that some type of equipment and vehicles in wetlands spans is necessary, the ROW Plan will need to be amended. If it is determined that the use of motorized vehicles throughout wetland spans is not permitted, then alternatives will need to be discussed with the utility companies.



Use of equipment such as this Marshmaster needs to be clarified. It can traverse wetland ROW spans where there is no bermed access road.

Minor Adjustments to the Management Prescriptions Required for 2010-2012

The pilot program provides that minor adjustments to the vegetation management prescriptions may be made with the Executive Director's prior approval. During the three year period, the Commission staff reviewed and responded in writing to six written requests for minor modifications/clarifications. These requests were received in 2011 and 2012 only, prior to the previously mentioned August 2012 follow-up meeting with the utility companies.

One utility company made four requests in 2011 concerning forested wetland spans that contained topped trees and a major river crossing. The requests were:

- Manage outside of the prescribed July-October window because maintenance was needed prior to this window in 2011.
- To top trees instead of cutting them down because a required NJDEP Individual Wetlands Permit was not yet granted.
- Leave manually cut woody vegetation, including trees and brush, in an isolated section of wetland ROW, after cutting it into small pieces because this was historically done and removal from the wetland is impossible due to a river crossing and a major highway crossing.

- Cut trees in the ROW outside of management prescriptions due to imminent threat to transmission wires.

These requests were granted in June 2011, after a review by the Commission staff and approval by the Commission's Executive Director, as minor adjustments to the ROW Plan.

Another utility company made two requests in 2012, also concerning forested wetlands spans which had access issues. These were:

- Leave small cut trees/vegetation of less than 3" in diameter in wetland ROW
- Place concrete rubble in ROW to allow vehicle access to a wetland so that cut trees can be removed.

These requests were not granted because the plan does not permit the described activity. The utility company subsequently devised an approach to remove all the cut wetland vegetation from the ROW.

One of the objectives of the ROW Plan was to "eliminate time consuming and costly reviews of development applications for individual spans for both the utility companies and the Commission." With respect to requests for "minor adjustments," meeting with representatives of the utility companies and reviewing and responding to the utility company's six written requests for minor adjustments to the ROW Plan was time consuming for both the utility companies and the Commission staff during this initial period. To date, however, the number of such requests is manageable. Commission staff will continue to monitor the number of these requests for the upcoming two year period. Hopefully the number of requests will lessen as the pilot program progresses.

Conclusion for the first three years: 2010-2012

In total, during calendar years 2010, 2011 and 2012, the three utility companies conducted vegetation management in a total of 1,414 spans (46% of the total number of Pinelands Area spans). This data suggests that it may take an average of six years, instead of three or four years, to have all the Pinelands spans receive vegetation management. This may be due to the newness of the pilot program. Determining how to treat the vegetation in wetlands spans efficiently, but within the requirements of ROW Plan, was the main issue faced within the first three years of the ROW Plan. In conclusion, although implementation of the ROW Plan has necessitated unanticipated staff time associated with discussing the proper treatment of individual spans, the ROW Plan has been more efficient and effective for both the utility companies and the Commission staff than filing individual applications for vegetation removal with the Commission for approval.