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MEMORANDUM

To: Members of the Pinelands Commission

From: Susan R. Grogan *[Signature]*
Acting Executive Director

Date: September 16, 2021

Subject: Evaluation of the Electric Transmission Right-of-Way Maintenance Pilot Program and Recommendations for Long Term Implementation and Incorporation of the New Jersey Pinelands Electric Transmission Right-of-Way Management Plan into the Pinelands Comprehensive Management Plan.

In 2009, the Commission adopted the Electric Transmission Right-of-Way Vegetation Maintenance Program at N.J.A.C. 7:50-10.31 through -10.35 as a Pilot Program. This Pilot Program implemented the vegetation management prescriptions contained within the Commission's New Jersey Electric Transmission Line Right-of-Way Vegetation Management Plan (ROW Plan) within the rights-of-way of spans (3,041 spans) for electric transmission lines 69 kV or higher located in the Pinelands Area. The Pilot Program was authorized for 10 years, until December 31, 2019, and provided for a 2 year extension if the Executive Director found that additional time was needed to fully assess its results. At the culmination of the Pilot Program, the rules require submission of a report by the Executive Director evaluating whether the Pilot Program has been successful and recommending whether the Commission should amend the Pinelands Comprehensive Management Plan (CMP) to institute the ROW Plan on a permanent basis. As discussed below, based on a review of the applicable criteria in N.J.A.C. 7:50-10.35(a), I find that the Pilot Program has been successful and am recommending that the Commission amend the CMP both to make the ROW Plan permanent and to incorporate new standards in N.J.A.C. 7:50-6, Part II (Vegetation) that will apply to vegetation management for new or expanded facilities and development in electric transmission rights-of-way.

Background

Right-of-Way Management Plan

On October 9, 2009, the Pinelands Commission approved the ROW Plan, dated March 2009. The ROW Plan was developed by the Pinelands Commission's Science Office and Rutgers University's Center for Remote Sensing and Spatial Analysis in collaboration with representatives from the New Jersey Board of Public Utilities, Atlantic City Electric Company, Jersey Central Power and Light Company and Public Service Electric and Gas Company. The ROW Plan had two specific objectives: 1) to create and maintain

relatively stable and sustainable early successional habitats that are characteristic Pinelands and which provide habitat for native Pinelands plants and animals, including threatened and endangered species; and 2) to ensure the reliability and safety of the electric transmission system in the Pinelands by creating and maintaining low growth vegetation communities.

As part of the development of the ROW Plan, a geographic information system database of electric transmission line rights-of-way was created. The three utility companies provided the locations and span-by-span information for all of their 69kv or higher electric transmission lines located within the Pinelands Area (3,041 spans¹). Vegetation and habitat information both on and adjacent to these rights-of-way were mapped and the vegetation management practices used by the three utilities was gathered and summarized. This permitted the development of span-by-span vegetation management prescriptions.

The ROW Plan authorizes two basic vegetation management prescriptions, manual tree cutting or mowing, within these electric transmission line rights-of-way. Most wetland spans must be cut manually. Mowing machines are allowed in upland spans and a few wetland spans. Some of the vegetation management prescriptions also include time of year restrictions to protect threatened and endangered species. Ultimately, the ROW Plan specifies 59 different variations of these two basic vegetation management prescriptions.

The ROW Plan recommended that the Commission's Executive Director should be able to approve relatively minor changes to the vegetation management prescriptions in the ROW Plan. This authority was acknowledged in N.J.A.C. 7:50-10.34(a) and was exercised six times during implementation of the Pilot Program. The following minor adjustments were authorized by the Executive Director, effectively becoming part of the ROW Plan:

- 1) Periodic mowing of vegetation growing within five feet of existing access roads located within ROWs containing wetlands was authorized, provided mowing was conducted using boom mounted mowers that stayed on the access road at all times;
- 2) Timing restrictions for wetland spans that had been limited to the driest time of the year (July through October) were adjusted to October through March 1st to accommodate the breeding period of a new federally listed threatened species (Northern Long-Eared Bat);
- 3) Vegetation management on a limited number of spans was permitted to occur outside of the July through October window to accommodate specific maintenance needs prior to this window;
- 4) Tree topping instead of cutting was permitted in a wetlands span in recognition of the fact that a required New Jersey Department of Environmental Protection Individual Wetlands Permit to allow the tree cutting has not yet been approved;
- 5) Manually cut vegetation (trees and brush) was allowed to remain in an isolated section of a ROW, after being cut into small pieces. This was based on historical practice and the impossibility of removal due to the need to cross a river and major highway; and
- 6) The cutting of trees outside of the timing restrictions identified in the vegetation management prescription was permitted to recognize an imminent threat to the electric transmission wires.

¹ Spans are the segments of the electric transmission line located between two towers.

Two additional changes were requested by the utility companies but not approved by the Executive Director. These involved cutting and leaving small trees and other vegetation (less than 3" in diameter) in wetland RsOW and the placement of concrete rubble in RsOW to allow vehicle access to a wetland so that cut trees could be removed.

Electric Transmission Right-of-Way Maintenance Pilot Program

The CMP provisions implementing the ROW Plan as a Pilot Program (N.J.A.C. 7:50-10.31 through -10.35) became effective December 21, 2009. The Pilot Program was authorized for a ten (10) year period through December 31, 2019.

During this ten-year period, the three utility companies submitted annual reports to the Commission identifying all vegetation management activities completed for the preceding year. Regular site inspections by Commission staff were conducted to verify that the vegetation management activities were consistent with the prescriptions identified in the ROW Plan. In addition, scientifically-based monitoring of vegetation plots within selected spans was completed to assess the outcomes of the permitted vegetation management activities. Commission staff summarized this information in progress reports to the Commission, the Board of Public Utilities and the three utilities as required by the rules. These progress reports addressed the type and extent of vegetation management activities undertaken by the utility companies, any significant problems or issues that arose and the need for any amendments to the ROW Plan. The reports are available on the Commission's website:

<https://www.nj.gov/pinelands/infor/online/ROWvegprogressreportFinal.pdf>

<https://www.nj.gov/pinelands/infor/online/Electric%20Transmission%20ROW.pdf>

The Pilot Program rules require the Executive Director to review the program and report on its implementation by September 30, 2019. The rules also provide the opportunity for an extension of this deadline for up to an additional two years, if the Executive Director finds that additional time is needed to fully assess the results of the Pilot Program. On December 13, 2019, the Commission authorized extension of the Pilot Program for an additional two years until September 30, 2021.

Evaluation of the Pilot Program

As required by the Pilot Program rules, the Executive Director has reviewed the Pilot Program in accordance with the following criteria set forth at N.J.A.C. 7:50-10.35(a):

- 1) The vegetation management prescriptions have been implemented in a reliable and predictable way;

The Pilot Program did result in the implementation of vegetation management prescriptions in a reliable and predictable way. Other than a few isolated instances in the initial years, the three utility companies consistently implemented the vegetation management prescriptions specified in the ROW Plan within their rights-of way.

- 2) The vegetation management prescriptions have resulted in relatively stable and sustainable early successional habitats that are characteristic of the Pinelands and which provide habitat for native Pinelands plant and animals, including threatened and endangered species;

To evaluate whether the vegetation management prescriptions contained within the ROW Plan resulted in relatively stable and sustainable early successional habitats characteristic of the Pinelands, vegetation

plots located in the center of managed RsOW in 24 spans were established and monitored for a seven year period. The goals of this vegetation monitoring were to determine: 1) if the ROW plant communities were stable over the study period; 2) how often vegetation management occurred in the RsOW (i.e. sustainability); and 3) if plant species in the RsOW were characteristic Pinelands species and similar to adjacent forest types. A full discussion of the Science Office's vegetation monitoring program is included in its report entitled, New Jersey Pinelands Electric Transmission Right-of-Way Vegetation Monitoring, dated September 2021.²

Based on data provided by the three utilities, vegetation management occurred within the 24 study spans at different frequencies, ranging from one to three times during the study period. This data was used to calculate the number of years elapsed between management activities (return interval.) Despite some variability among utilities and the type of management prescriptions being implemented, it was determined that maintaining low growth plant communities in the Pinelands using the vegetation management prescriptions in the ROW plan required approximately 3 to 4 year return intervals.

Over the seven years that these plots were monitored, it was determined that species turnover within the managed RsOW was generally low and that this equated to a high degree of plant community stability in the managed RsOW. Monitoring also revealed that plant communities within managed RsOW and adjacent forest areas were similar with respect to woody species, but differed in the composition and number of herbaceous species. This difference was attributed to the lack of tree canopy within the RsOW. Generally, it was determined that managed RsOW consisted of characteristic Pinelands plant species that were similar to adjacent forest communities and, therefore, to the extent these communities provided habitat for threatened or endangered plant or animal species, these species were likely to be found in the managed RsOW as well.

- 3) The vegetation management prescriptions contributed to the reliability and safety of the electric transmission system in the Pinelands by creating and maintaining low growth vegetation communities;

Although the utility companies decided that some of their spans did not require vegetation management during the time period of the Pilot Program, most of the 3,041 spans within the ROW Plan were subject to vegetation management. The prescriptions within the ROW Plan allowed for and resulted in the elimination of tall vegetation within the subject electric transmission RsOW. Thus, as discussed in the Vegetation Monitoring Report, utilization of the vegetation management prescriptions in the ROW Plan, resulted in the maintenance of low growth plant communities and contributed to the reliability and safety of electric transmission system in the Pinelands.

- 4) The notification and inspection system authorized in this pilot program has simplified Pinelands' permitting procedures for the utility companies and the Commission's staff.

The Pilot Program rules authorized the three utility companies to proceed with vegetation management activities within their RsOW without prior notice to or review by the Commission, provided certain conditions were met. All vegetation management activities had to be conducted in accordance with the prescriptions identified in the ROW Plan. Each utility company had to submit an annual report to the Commission identifying the specific spans in which activities were performed during the preceding year. Finally, each utility company was required to make an annual payment to the Commission to finance the

² The Vegetation Monitoring Report is not attached to this memorandum but will be made available prior to the Committee meeting.

Commission staff's inspection and monitoring obligations. These payments were in lieu of the normal development application fees required by the CMP.

The notification and inspection system authorized by the Pilot Program greatly simplified the permitting process for the three utility companies. The ROW Plan provided these utility companies with the specific vegetation management prescriptions for each of their 69 kV or higher spans and afforded the utility companies predictability when planning maintenance activities for their electric transmission lines located within the Pinelands Area. The notification and inspection system also benefited the Commission staff by significantly reducing the number of individual applications that would have been required to be filed with and reviewed by the Commission in its absence.

Recommendation

Based on the above, I conclude that the Pilot Program has been successful and recommend the following:

1. The Pinelands CMP should be amended to repeal the Pilot Program and to permanently incorporate the ROW Plan
2. The Pinelands CMP should be further amended to include vegetation management standards in N.J.A.C. 7:50-6, Part II (Vegetation), that will be applicable to new or expanded facilities and development in electric transmission rights-of-way within the Pinelands Area.