September 27, 2010

Mary Ferraro, Regional Forester
New Jersey Department of Environmental Protection
NJ Forest Service - Community Forestry
Mail Code 501-4
P.O. Box 404
Trenton, NJ 08625-0404

Re: Reforestation Plan for the Tennessee Gas Pipeline 300 Line Project on State Lands in Sussex and Passaic Counties

Dear Ms. Ferraro,

The Reforestation Plan presented by Tennessee Gas Pipeline Company (TGP) to mitigate the impacts of deforestation of state-owned lands in the public trust as part of their 300 Loop Project is inadequate and lacks critical details. The applicant has not provided details on key tree maintenance and restoration issues. This plan should not be deemed complete as this missing information causes the Reforestation Plan to fall short of the requirements of the No Net Loss Reforestation Act.

1. Plan Components Concerning Eastern Hemlock Must Be Strengthened

Especially alarming would be approval for the deforestation of mature eastern hemlock (Tsuga canadensis) by the Department considering the invasion of the woolly adelgid aphid and the need to preserve mature stands of this species that are better able to combat aphid infestations and their genotypes in the face of drastically declining populations. The applicant must present data on the number of hemlocks it is proposing to remove from state lands and a reason why these individuals cannot be avoided. The state owned park lands are where the few surviving individuals that remain must be preserved, not sacrificed for the convenience of a utility company.

The applicant does acknowledge that hemlock supplies from nurseries will be in short supply due to the current crisis and has proposed to harvest and maintain a stock of seedlings from the proposed clearing area that will be replanted as part of the
reforestation plan. However the applicant later states that in the project eastern hemlock/oak community areas they will plant 400 hemlock whips per acre and the reforestation plan calls for a total of 7,003 hemlock whips to be planted. How can TGP guarantee this density and number of plantings will be achieved when there is no steady nursery stock and the number of saplings that are available for removal from the ROW area and will survive in the nursery cannot be known with certainty? At the very least the applicant must be required to collect data on the number of saplings currently available for harvest in the proposed clearing area and present figures on the available nursery stock to determine if these replanting projections are achievable. This information is critical as scientific literature suggests sapling numbers are declining in stands impacted by the woolly adelgid. Orwig and Foster found that “Due to mortality from HWA (hemlock woolly adelgid), T. canadensis seedlings were scarce in sampled stands, suggesting that advanced regeneration and seedbanks will not be important mechanisms for T. canadensis reestablishment” (1998). This finding also suggests that although the applicant is proposing to segregate and restore the topsoil layer in hemlock areas to restore the seedbank, more action will be necessary in these areas such as deer fencing. The applicant must be required to undertake a seedbank study to determine if there is a viable seedbank in those regions they intend to deforest to determine if the restoration of the topsoil will be successful. The applicant must also be required to provide more detailed information on how the hemlock saplings will be maintained in the nursery during the construction period to ensure best practices are utilized and the minimum number of individuals are lost. This plan must include components on how the seedlings will be treated to prevent death from shock when they are first removed and on how they will later stress the saplings to simulate forest conditions while in the nursery to ensure they survive after replanting.

A firm plan for the maintenance of the hemlock saplings that will be replanted must be outlined in detail and this information is not provided in the applicant’s reforestation plan. TGP must make commitments to preemptively treat these saplings to prevent loss to the woolly adelgid aphid. Specific details on steps the applicant will take to address possible infestations by the woolly adelgid aphid must be included in Section 4.8 on insect and disease control. Deer browse must be addressed in the maintenance plan as well. The applicant must be obligated to utilize deer browse prevention methods on these saplings as soon as they are planted considering the low numbers of saplings available and the susceptibility of hemlock to deer browse. Scientific literature identifies deer browse as a major concern in hemlock regeneration with one study concluding, “White-tailed deer Odocoileus virginianus browsing seems to be the major cause of the observed decline of hemlock regeneration, rather than poor seedbed conditions or changing climate” yet the applicant has provided no specific plans on how to address this serious concern with the hemlock replantings (Frelich and Lorimer, 2003). The applicant must also be required to provide plans for the long-term maintenance and monitoring of deer browse prevention methods. Deer fencing must be maintained until the hemlock population achieves sufficient girth and bark thickness to survive deer browse and antler rubbing. How does the applicant propose to protect and maintain these saplings from being destroyed by deer for 20 years? If this long term maintenance cannot be achieved the No Net Loss Act is not being satisfied because the currently existing trees are not
vulnerable to the deer. The restoration plan also fails to note that hemlock saplings are shade-loving and are outcompeted in open, sunny areas by other species that are more light tolerant. The restoration site will not be able to provide the shady conditions that hemlocks do best in so the applicant must be required to create some plan to address these concerns such as establishing canopy cover in the first year through whips and then planting the hemlock saplings the following year. The lack of canopy cover also questions the effectiveness of restoring the seedbank in these areas, because again new hemlock growth will not do well in sunny, open areas.

2. Not Enough Is Being Done to Address Deer Browse

The entire section of the reforestation plan addressing deer browse (4.9) needs to be strengthened due to the significant negative impacts deer herbivory has on Highlands forest ecosystems. The applicant clearly states that they will take no preventative action to inhibit deer browse unless replanted areas are impacted, and even then there is no explicit commitment to action being taken. The reforestation plan states, “Where areas adjacent to reforestation plantings show signs of heavy deer browse, the following methods may be implemented to prevent damage to the reforested areas:” (63, emphasis added). This weak standard must not be accepted by the Department. Instead the applicant must be proactive in preventing deer browse as this is the top problem prohibiting the success of such restoration and reforestation projects. It is well established that the forest edge (which the applicant will be creating and expanding along the ROW) experiences the highest amount of deer herbivory and therefore destruction of this reforestation project is guaranteed unless deer fencing installations are required throughout the project area. Pennsylvania Game Commission assumes no reforestation project can succeed unless the project has deer fence. Although this approach will cost more upfront it will better ensure successful re-establishment of vegetation in the replanted areas and will preclude the need to replace damaged plantings with deer resistant species as called for under the reforestation plan. If replacement by deer resistant species remains a component of this reforestation plan a list of suitable deer-resistant species must be included in the plan and must be made available for public review before Department approval.

3. More Robust Invasive Species Management Is Necessary

The invasive species management component of the plan is inadequate. Why are strict management practices only being employed in the Bearfort Mountain Natural Area and not on all state lands? The Natural Areas System has more stringent regulations than other units in the park system, and the applicant has demonstrated a capability to meet those requirements. Why are they not being utilized on the rest of state lands as best management practices?

It is especially concerning that the applicant only proposes to extend invasive species management into the adjacent forest buffer at Bearfort Mountain. The entire project would extend the ROW an additional 75 feet during constructing creating edge impacts on forest communities that were previously undisturbed. The newly created forest edge
will be a direct impact of the proposed project and will be a prime spot for invasive species infestation due to the increased light intensity on the newly created edge. However, no mitigation is being proposed for the area except in Bearfort Mountain. The applicant must be required to extend invasive species management into the forest buffer on all State owned properties. This measure is particularly important as the reforestation plan states, “Restoration shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed areas” (15). If no invasive species management is being done in those adjacent forest areas that have been opened to edge impacts by the applicant’s project, the cover of non-nuisance vegetation in adjacent forested areas will not serve as a positive baseline for comparison to determine the health of the restoration sites. The applicant will essentially be measuring the success of their restoration project against the vegetative cover of forested sites that their project degraded.

The reforestation plan calls for the restoration sites to be treated with lime and fertilizer, which will only promote infestations by invasive species. If fertilizer is to be used onsite, its use must be restricted to the roots of planted whips and saplings, and not across the entire surface of the project.

Bearfort Mountain is also the only area in which the applicant will commit to long-term invasive species management with maintenance proposed every two to three years— which suggests the three year timeframe suggested by FERC is inadequate. The same commitment must be made for all state lands for the ROW, project restoration areas, and the adjacent forest buffer. The applicant must develop a more realistic invasive species management plan for long-term maintenance and monitoring that takes into account the amount of time (in most cases 5-10 years) that is necessary to remove infestations by invasives.

4. Impacts to Red Spruce (Picea rubens) Population

The applicant proposes to remove a red spruce individual from the proposed clearing area and replant it near a population off the ROW. The applicant has also stated red spruce seeds have been collected and seedlings will be raised in the nursery to be replanted as part of the reforestation project. None of these details are contained in the reforestation plan. The environmental community was unaware of this issue until a meeting held ten days before the end of the comment period on this reforestation plan. This is unacceptable. The applicant must be required to detail their proposed activities with these saplings as part of the reforestation plan including maintenance and monitoring. The construction of deer fence exclusions around seedlings must be a component of red spruce planting activities. The applicant must be required to only use local seeds in its reforestation efforts. The impacted area is the edge of P. rubens geographic distribution and the local genotype occurring here is distinct. The applicant must be prohibited from importing red spruce saplings from northern populations.

This reforestation plan, as currently proposed, does not contain enough information to ensure that there will be no net loss on state lands. The above measures must be
implemented to address concerns that could result in the restoration project being unsuccessful. The plan components on deer browse, invasive species management, and hemlock regeneration must be strengthened before this plan can be approved.

Thank you for considering these comments.

Sincerely,

Kate Millsaps, Campaign and Grassroots Organizer

cc: Amy Cradic, Assistant Commissioner Natural and Historic Resources
Scott Brubaker, Director of the Office of Permit Coordination and Environmental Review
Donna Mahon, Executive Assistant, NHR
Melissa Dettling, Principal Environmental Scientist, El Paso Corporation
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