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February 14, 2024

Re: Glassboro WMA restoration plan NJDEP File # 0801-23-0001.1 (PEA 230002) Block and Lot [2101, 1] [2102, 1] [2103, 1] Clayton Borough, Gloucester County

Dear NJDEP Land Use Department,

We have reviewed the Glassboro WMA restoration plan and would like to provide comments based on field experience with the properties in question. The restoration plan is inappropriate for this location based on a number of design criteria. The proposed approach would be well-suited to an urban setting, but is not appropriate for this native setting within this management area. This forest and its landscape have natural resource and cultural significance that have not been addressed in the original clearing design, nor this restoration proposal. Given the significance of this land, we believe that an optimal plan should include the six following features:

- Cover open soil with straw cover (not hay) to stabilize areas currently eroding;
- Monitor the natural recruitment, while controlling the spread of invasive species
- Control deer herbivory using ex-closures (as planned);
- Plant Atlantic White Cedar in the lowest wetland habitat restoration (as planned);
- Omit all other plantings, as well as any work with heavy machinery that would cause further soil compression; and
- Lengthen the restoration timeline to 10 years to allow for natural regeneration.

It is recognized that there is a need to set an appropriate precedent that deters wetland violations, and we appreciate the dedication of resources to this restoration. However, we believe that a relatively handsoff approach will be the most effective way to achieve the ecological goals appropriate for this forest. The area cleared for the original project is in an optimum location to receive local native plant recruitment but it will take time. The following paragraphs provide additional background information on specific concerns with the current proposed restoration plan.

Cultural Resources

From this plan's inception, the site's cultural resources have been misinterpreted by the Department. The land on either side of Carpenter Avenue includes historic landscapes and prehistoric resources that are impacted by this project. Two feed plots—one on either side of Carpenter Avenue—have a historic significance. Both were created during the 1930s by local work crews employed by the Citizens Conservation Corps (CCC), the nation's original unemployment service. The fields should be preserved as historic land features and maintained as they have been for nearly 70 years. Within and surrounding both fields are pre-historic sites of significance based on landscape location and age. Since there have been no formal Phase 1a inspections by the Department or their representatives to document the size, scope, or culture of these plots, no more land disturbance should occur.

Site Soil Compression

If the DEP insists on including planting in the restoration, then it should proceed only with work that can be performed *by hand*, and not allow the continued use of heavy equipment on the property. Significant soil damage has already been wrought in terms of surface solum compaction. The soils have swelled over the winter and could rebound, but no additional heavy equipment traffic should be permitted.

Invasive Species

Monitoring and hands-on intervention are needed to control the existing and introduced invasive species. Prior to the original clearing, non-native species were confined to the open feed plots and the narrow Carpenter Avenue road shoulder. Southern New Jersey's native forests are more resilient than most New Jersey woodlands to non-native species, unless aggravated by disturbance and nutrition. Prior to the violation, no non-native species existed within this native forest. The species present in the violation today area include the prior existing roadside stilt grass, and recently introduced weeds brought to the site through the errant use of weed-infested hay for erosion control. Straw, not hay, should be used to stabilize the limited area of erosion. We find the use of annual rye grass plantings to be acceptable for temporary erosion control, as the chosen strain does not present a challenge to future replacement by native species. We agree that the installation of a deer enclosure fence is warranted to facilitate re-growth in the areas delineated in the proposed plan. This will control both deer and unauthorized vehicular access.

Sourcing Plant Materials

There is ample evidence that native plants with local genotypes are already colonizing the disturbed area. This includes woody and herbaceous species. Most of the plants that are proposed to be planted as part of this restoration plan are inappropriate, both in terms of their sourcing, as well as for the species selection. The proposed planting and seed list includes many plants that are not native to the Upper Maurice River watershed. Some are not even native to Southern New Jersey. Furthermore, a plant that is considered native can still be problematic if the seed is not sourced from the immediate area. If DEP is proceeding with plantings, it should be ensured that seed is sourced from an entity that has actually collected seed in South Jersey, such as Pinelands Nursery. It would be most appropriate if local seed (woody and herbaceous) was collected specifically for this site.

We believe that the most prudent course of action would be to allow natural re-growth to proceed. Halting intervention for a few years while monitoring provides the local plant population an opportunity to re-establish itself. During this time, efforts could also be undertaken to collect local seed. If the regular monitoring reveals that some areas are failing to become re-established, then the local seed stock can be used as a supplemental spot treatment.

The only disturbance that had previously occurred in the wetland forest and forested upland buffers that comprise this violation was woodcutting that had occurred up until the early 20th century. These sites had *never* had their intact native soil horizons disturbed by colonial or modern agriculture. These native, intact soils have resisted invasion by alien species and supported a fully native plant and animal community. The only exceptions to this nearly-pristine status are alongside Carpenter Avenue and in the two artificial "wildlife food plots." The best chance for ecological restoration to be successful is to let the soil heal and for the native seed and root bank to recover the forest–which has already been underway. Fortunately, the few rare, herbaceous plant species that were ignored and pulverized during the site clearing seem to have recovered since last summer via their own seed banks. This is an example of how the site will recover on its own. Utilizing a formulaic planting approach that is inappropriate for virtually undisturbed ecosystems will only promote further establishment of an uncharacteristic plant and animal community.

We applaud the concept of protecting the entire site with a deer-excluding fence; this is the single most important task that should be done immediately. Then, use straw and annual rye on bare spots, patiently watch the soils and the site regeneration, control the introduced alien invasive weeds, and only tinker with seeds or plants of local provenance if absolutely necessary at a later date.

Included with this letter, please also find a map that highlights the areas of slope erosion that were stumped and are now in need of measures to control erosion. Thank you for the opportunity to comment on the restoration plan for this violation on our public lands.

Sincerely,

Heidi Yeh, Ph.D. Pinelands Preservation Alliance

Emile DeVito, Ph.D. New Jersey Conservation Foundation

Joseph Arsenault, M.S. Senior Ecologist

William E. Young, PWS, CERP Wetland Scientist



Red line outlines slope areas in need of straw cover.