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August 17, 2015

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: Docket No. PF15-1-000

PennEast Pipeline Project: Resource Report 3 - Pre-Filing Draft, dated April 2015

Dear Ms. Bose:

Please find attached New Jersey Conservation Foundation's comments regarding Docket No. PF15-1-000, *PennEast Pipeline Project: Resource Report 3 - Pre-Filing Draft, dated April 2015*. Thank you for the opportunity to provide feedback. You may contact me at 908-432-3419 with any questions or concerns.

Sincerely,

Emile DeVito, Ph.D., Manager of Science and Stewardship
New Jersey Conservation Foundation

Comments re: PennEast - Resource Report 3 - Pre-Filing Draft, dated April 2015

Page 3-10, Table 3.2-6 and section 3.2.3:

According to this table, the proposed project will cross 26 streams in New Jersey. 12 category 1 streams will be crossed; at least 7 harbor native brook trout populations. These streams all originate on the plateau, just to the north and east of the proposed pipeline route that crosses near the headwaters of every stream. The pipeline will cross these streams just as the streams fall from the plateau, and descend rapidly through steep topography and forested land into the Delaware River Basin. Directional drilling is not proposed, perhaps due to the repetition of steep topographic features adjacent to virtually every stream. Opening the forest soils on these steep slopes will make it impossible to protect the water quality in these streams during construction.

The nature of this entire region is highly fractured bedrock, so water reaches these streams rapidly during heavy rains. These streams are incredibly flashy, often rising many feet almost immediately after any heavy rain. Soil conservation measures will not work as proposed in these stream corridors during construction. There are so many streams in such close proximity, that one heavy rain will cause multiple calamitous events, and it will be impossible for any response to prevent serious damage to water quality, severe erosion and sedimentation impacts, and damage to numerous rare (state special concern), threatened, and endangered plant and animal species and their habitats that are known to be located in and immediately adjacent to almost all of these high quality streams.

The assertions made by PennEast that in section 3.2.3 (Potential impacts and Mitigation) that by adhering to FERC policy, procedures and BMPs, and by limiting the crossing width to 75 feet, that potential impacts will be avoided and minimized is completely without merit or basis. Potential impacts cannot be avoided; instream construction across waterbodies *will* cause both direct and indirect impacts to habitat and all aspects of aquatic ecology. Avoidance of impacts will be impossible. The term minimized is used, but what does it mean? Minimized as compared to what? Minimized as compared to construction without any regard for natural resources, or minimized as compared to no detectable impact on the environment. Especially on these steep slopes with flashy streams and loose soils, the statement that “in-stream pipeline construction *MAY (our emphasis)* cause both direct and indirect impacts” has neither basis nor validity. Severe impacts will occur, and since there are so many streams in proximity, running in parallel off the plateau toward the Delaware River, it will be nearly impossible to successfully respond to the multitude of failures of any preventative measures. Equivalent failures of construction stabilization techniques will occur in unison on the many streams across the entire route in New Jersey. The assertions by PennEast in this section on water quality are purely speculative. It will be impossible to avoid severe and irreversible impacts to natural resources on all of these sensitive stream crossings, and since these streams are all short and unique, there will be no chance for any meaningful mitigation. Like dominoes falling, each of these streams will be severely degraded if this pipeline is approved for construction in this repeating steep-slope setting. This route could not have been chosen in an area more sensitive to permanent and irreversible natural resource damage from pipeline construction across streams.

To further underscore this argument, one need only look at the ongoing problems created in New Jersey’s Highlands by the recent construction of the Tennessee Gas Pipeline. Severe erosion, habitat degradation, and aquatic impacts have all occurred. Here is a summary of what we have observed, all under the same BMPs and permit conditions that never work to minimize damage and actually protect natural resources:

- Failure to maintain silt fence in wetlands and slopes during storms. When fence would fall/drop and sediment ran into wetlands, contractors failed to fix fencing in a timely manner even after officials brought it to their attention.
- During heavy rains, soil washed down hills into streams and lakes. A) Hay bales failed to retain soil during heavy rains and B) in one instance, contractors failed to install hay bales prior to storm even though it was well publicized that the storm was coming.

- Surveyors failed to identify rare plants/plant communities and critical wildlife habitat, both problems to be discovered after construction began when there was no way to stop it; critical wildlife habitat was destroyed, it is unknown if plant communities were lost.
- Project repeatedly failed to meet timeline, leading to on-going and in some cases, increasing, risks to rare (and common) wildlife.
- Oil spills by vehicles (personal and construction) both on sediment and running into aquatic systems- contractors failed to report spills in a timely manner and failed to attend to the spills quickly. In known cases, it required officials to demand immediate attention yet damage was already done and irreversible.

Page 3-12, 3.3.1. Existing Resources:

The “Forest/Woodland” and “Wetland” summary paragraphs on this page are incomplete and uninformative to the point of trivializing the great abundance of natural resources contained in these diverse habitats. They name only a handful of species out of the hundreds of species that occur in these habitats, they make no mention of the diversity of plant community types existing on the varied slopes, soils, and microhabitats across the pipeline area. The species reports in Resource report 2, Appendix 2C are woefully incomplete, and omit numerous rare, threatened, and endangered species that occur along and immediately adjacent to the pipeline route. Field surveys conducted in the spring of 2015 will not be adequate in making a true assessment of the potential impacts to vegetation, as it is impossible to detect all the rare species in a habitat by conducting a one-time field survey during a limited time of the year. In addition, it is apparent from the poor quality of the habitat descriptions and the incomplete species lists that the consultants lack the botanical expertise to identify critical resources and make a scientifically-qualified judgment on damage to rare species and vegetation community types.

Page 3-17, 3.3.1.1 and page 3-21, Table 3.3-5 - Vegetation Communities of Special Concern:

The authors of the report acknowledge the existence of vegetation communities of special concern based only on existing state lists. However, there are numerous additional vegetation communities along the proposed pipeline route that warrant equivalent designation; were the applicant to conduct competent field surveys, additional and numerous rare, threatened and endangered plant species would be identified.

Yet, the pipeline is proposed to bisect the known rare plant communities documented by the New Jersey Natural Heritage Program to exist on publicly-owned natural lands. These resources are important, and should not be simply documented in reports but avoided in the permitting process. It is clear from the language of these reports that no significant efforts are proposed to avoid the known rare vegetation impacts. When it comes to natural resources that are difficult to discern, we see no indication that the applicant is planning to make a significant attempt to discover or avoid such rare resources, as they are required to do.

Page 3-22, 3.3.2 Potential Impacts and Mitigation:

The restoration plans following construction proposed in this section are biologically unsound. Seeding post-construction areas according to an upland erosion control plan will result in a community of nutrient-loving weeds and alien species. Recommendations of local soil conservation districts do not address conservation of adjacent natural communities, and the result of construction activities will be the creation of a linear corridor that will promote the spread of alien weeds and invasive species into the surrounding natural communities. In parklands, replanting temporary workspaces with native trees and shrubs will not restore the biological function to these areas. The construction process will destroy the soil horizons, introduce nutrients and weeds, and regardless of what trees and shrubs are planted, the areas will be overrun with alien, invasive herbaceous weeds, woody vines, and shrubs. Additional native trees will not be able to colonize these weedy areas – these temporary workspaces will become sources of invasion for the rest of the surrounding natural lands, continuing to degrade parkland for decades. With rare exception, post-construction attempts to replant temporary

workspaces to restore forest habitat (adjacent to the permanently non-forested linear pipeline corridor) never regain more than partial semblance of the biological functions characteristic of the eastern deciduous forest in the mid-Atlantic region. Soil disturbance and compaction, alien species, overabundant deer, and destruction of the herb, shrub, roots, fungal communities, and elimination of microhabitat heterogeneity make true restoration virtually impossible. We are concerned that the apparent lack of expertise, lack of attention to detail, and use of boilerplate statements about following local agency BMPs strongly indicates that the applicant is highly unlikely to adopt and implement carefully considered forest restoration plans that have even a remote chance of success.

Page 3-23 3.4.1 – Existing Wildlife Resources

This paragraph entitled *Forest/Woodlands* was paraphrased from a non-scientific, non-peer-reviewed general field guide published 35 years ago. This outdated source was designed to give a layperson a general description of North American forest habitats. Using such a general field guide for the purpose of this environmental resource report is inappropriate, unprofessional, unscientific, and clearly shows that the authors of this report are not qualified to evaluate impacts to forest resources along the proposed pipeline route. The paragraph lists 14 common species that can be found in almost any forest patch in the eastern US, and one raptor (Sharp-shinned hawk) that has declined so rapidly in the 35 years since the field guide was written that it probably does not occur along proposed pipeline route. There is no mention of literally hundreds of species of vertebrate wildlife that occur along the pipeline route, and thousands of species of invertebrate wildlife are completely ignored. All of the paragraphs dealing with other habitat types are equally inadequate and unprofessional, having all been paraphrased from the same 1981 general field guide authored by HH Collins. FERC has a responsibility as a federal regulatory agency to require more accurate, relevant and current information in a professional report from an applicant.

Page 3-26, 3.4.1.2. – Migratory Birds

The description and list of rare migratory bird species for Baldpate Mountain are incomplete. There are many rare (special concern) migratory bird species that breed on Baldpate Mountain that have been left off the list. Other comments recently sent to FERC by New Jersey Audubon (NJ) clearly demonstrate that the applicant has altered quotations from the NJA Important Bird Area (IBA) report. Such a serious alteration of submitted information is deceptive to FERC and the public and downplays and minimizes the actual damage that will result from a pipeline routed through Baldpate Mountain, one of the most sensitive and intact forest ecosystems in central New Jersey.

Page 3-31, 3.5.1. – Existing Resources (Threatened and Endangered Species)

The report indicates that species-specific and habitat related surveys for threatened and endangered species will be carried out during the spring and summer of 2015. FERC guidelines request information about not only T&E species, but also rare (special concern) species that occur along the route. Assuming PennEast's biologists are qualified to search for the wide-range of rare plant and animal taxa that are present along the proposed route, it is not possible to find all rare taxa in one season of searching in such a large area. For rare plants alone, many years of study are required to uncover all the species that inhabit a site. Certain areas have been partially studied by the NJ Heritage Program, but the database is known to be incomplete. The burden of proof should lie squarely on PennEast to discover the rare species along its route, and propose route modifications that avoid any impact to New Jersey's natural heritage. Mitigation for rare species populations seldom works for animals. Mitigation for rare plant species populations almost never works. There are no examples in New Jersey of long-term success of rare plant populations being moved out of harm's way into mitigation sites. Survival and reproduction of viable populations of native plants (after being moved) is exceedingly rare even under controlled, research conditions.

Page 3-37, 3.5.1.1. – Federally-listed Species

This area of the report deals with bat species, especially those which have suffered in the last decade due to White-nose Syndrome. PennEast did not conduct its bat surveys in May or June of this year when streams were running swiftly during maximum insect abundance. Rather, they are conducting their surveys during late July and August of 2015. This period has been hotter and drier than average, and the flashy streams on fractured rock basins that pervade this region have been extremely dry, in some cases with no flow at all for the entire survey period. Bats may have easily moved out of the most of the sampling area along the proposed pipeline route, to forage more optimal areas of greater insect density in the few remaining wet pockets (such as the D&R Canal) or in larger, nearby downstream floodplains close to the Delaware River. Therefore, PennEast's bat surveys are likely missing rare bats that were present in May and June of this year. The surveys need to be repeated in May 2016 in order to determine if the results are repeatable and reliable.

Page 3-47 – State-listed Species in New Jersey (specifically Long-tailed salamander).

Long-tailed salamander has been documented at numerous locations on multiple streams crossed by the proposed pipeline route. Critical habitats for sub-populations occur within the proposed pipeline ROW and animals have been documented to occupy the stream corridor extending immediately downstream from proposed construction in multiple instances. It will be impossible for PennEast to avoid irreversible adverse impacts to state-endangered Long-tailed Salamander populations and habitat under any scenario. Pipeline construction, if it occurs, will kill individuals and cause irreversible destruction of critical habitat. Streambeds will be greatly disturbed; sediment plumes will bury salamander habitats, irreversibly destroying habitats and substantially impairing populations. Even if digging in streams was to be avoided by using directional drilling, fracturing the sub-structure of the bedrock in these steep rocky systems will end up altering hydrology and impairing the suitability of breeding ponds. New Jersey's Endangered and Non-Game Species Conservation Act (ENSCA) protects these and all state-listed T&E individuals from take, and most experts believe the Act also protects take of habitat. Should PennEast obtain approvals to alter this or any state-listed T&E habitat, New Jersey Conservation Foundation is gravely concerned that approval of the PennEast pipeline would result in a violation of the New Jersey Endangered and Non-Game Species Act.

Page 3-48 – 3.5.3 - Cumulative impacts

This entire section has no basis in fact or biological reality. The assertions and conclusions presented in this section are given with no justification. The first statement that “the project has been designed to avoid or minimize impacts to resources wherever possible” actually allows for the inescapable conclusion that the project will destroy significant resources at numerous locations, because it is not possible to avoid doing so.

The entire section is rife with statements containing general qualifications that render them meaningless:

“impacts will be *minimized*”

“no long-term impacts are *anticipated*”

“restore pre-construction conditions to the *fullest extent possible*”

“no direct impacts to federal or state-listed species or critical habitat are *anticipated.*”

These statements have no justification, no quantification, and no credibility.

Perhaps the most egregious statement of all is the following. “After construction, wildlife is expected to return to post construction habitats. No permanent or long-term impacts to wildlife resources are anticipated.” This statement demonstrates a complete lack of understanding of biological principles and nearly 75 years of ecological restoration science and literature. It is well-documented that it is impossible to conduct restoration of construction sites and return the complex set of ecological functions and plant and animal communities to a heavily disturbed site. Restoration of existing degraded sites is sometimes successful at returning certain sets of

species and functions, but species accrue incredibly slowly over time, and never approach the complexity and diversity of intact natural systems. Justifying the destruction of critical wildlife habitats, heritage sites, pristine stream corridors whose soils have never been disturbed, and endangered plant and animal species habitats and populations with unsubstantiated, speculative statements that ignore the scientific literature is unscientific and unprofessional.

In summary, this report contains little if any information that can pass the scrutiny of a rigorous scientific review. It is a collection of incomplete lists, language gathered from popular, unscientific literature, and unsubstantiated speculation about “minimizing harm during construction” that bears no relationship to documental field research on processes by which ecological communities become degraded. The poor quality of this report suggests an alarming lack of concern for the environment and natural resources in choosing this proposed route. It raises serious questions about the applicant’s ability to protect natural resources if the proposed pipeline route gains approval.