
BUREAU OF FORESTRY

January 15, 2016

PNDI Large Project Number: 22275

Preston Smith

Korey McCluskey

Tetra Tech

661 Andersen Drive

Pittsburgh, PA 15220

Email: preston.smith@tetrattech.com, Korey.McCluskey@tetrattech.com (hard copy not to follow)

Re: Sunoco Mariner East 2 Pipeline

Trans-Pennsylvania (multiple counties and municipalities)

Dear Mr. Smith and Mr. McCluskey,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number 22275 for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources of concern under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only. **The proposed project will affect State Forest Lands within the Gallitzin and Tuscarora State Forest Districts.** Further coordination with the Bureau of Forestry is required (see "Projects on State Forest Lands").

No Impact Anticipated per Survey (with Avoidance/Mitigation/Monitoring)

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. On March 13, 2014, DCNR requested a botanical survey for thirty-one state-listed species. TetraTech, Inc. conducted extensive botanical surveys in 2014 and 2015 throughout specific Areas of Concern (AOC) within the proposed pipeline project corridor. Sixty-three separate occurrences of PA Threatened & Endangered and PA plant species of concern were identified. Eight of the sixty-three occurrences were identified outside of the AOC's. Below is a summary of the botanical survey findings with anticipated impacts, recommended conservation actions, and final DCNR determinations.

AOC W10

One population of *Andropogon glomeratus* (Bushy Bluestem; PA Proposed Rare) was identified within the proposed limit-of-disturbance. Impacts to this population are unavoidable. However, it is unlikely this population is naturally occurring. Therefore, it is not a conservation concern. No mitigation is required.

DCNR Determination: No Impact Anticipated

Area between AOC W10 and AOC ALT W1

Four populations of *A. glomeratus* were documented within this area. Pop. 3 is located directly within the proposed right-of-way. Impacts to this population are unavoidable. However, it is unlikely this population is naturally occurring. Therefore, it is not a conservation concern. No mitigation is required.

Three populations of *Viola appalachiensis* (Appalachian Blue Violet; PA Proposed Rare) were also identified. Implementation of limit-of-disturbance (LOD) reductions or "neck downs" of the proposed temporary right-of-way (ROW) will avoid impacts to Pop. 1 and minimize impacts to Pop. 2 and Pop. 3. In addition, orange construction fencing will be installed to further safeguard Pop. 2. This species is fairly disturbance tolerant, and the majority of the population will likely persist.

One population of *Actaea podocarpa* (Mountain Bugbane; PA Proposed Rare) was found at a stream crossing location and cannot be directly avoided. Sunoco Pipeline, L.P. (SPLP) proposes to sod-excavate this population and restore the area with the same sod upon restoration (all within 24-48 hours). A botanist will be present on site to monitor all activities from pre-construction to restoration. The success of the restoration will be monitored two days following restoration activities and again

at 4 and 8 weeks (or, if sod-excavation is conducted outside the growing season, a similar monitoring schedule at the earliest appropriate time). A monitoring report will be submitted to DCNR for review detailing the success of the sod-excavation.

DCNR Determination: No Impact Anticipated (*A. glomeratus*); No Impact Anticipated per Avoidance (*V. appalachensis*); No Impact Anticipated per Avoidance with Monitoring (*A. podocarpa*)

AOC ALT W1

Four populations of *A. glomeratus* and two populations of *Scirpus ancistrochaetus* (Northeastern Bulrush; PA Proposed Threatened, Federally Listed) were identified within this area. *A. glomeratus* Pop. 5 and *S. ancistrochaetus* Pop. 1 will be avoided by HDD bore. DCNR will defer all management recommendations for the *S. ancistrochaetus* populations to U.S. Fish and Wildlife Service.

DCNR Determination: No Impact Anticipated (*A. glomeratus*); defer to USFWS (*S. ancistrochaetus*)

AOC W14

Twenty populations of *Antennaria virginica* were identified within AOC W14. Populations 1, 2, 11, 12, 13, 14, 18, 19, and 20 were observed outside of the proposed LOD and will not be impacted. Populations 4, 5, 6, 10, and 15 were observed within the proposed LOD, but will be avoided by narrowing the ROW.

Populations 3, 8, and 16 are unavoidable. A long temporary LOD reduction will be utilized at Pop. 17 to reduce impacts. In addition, minimal impacts will occur to Pop. 7 and Pop. 9. Soil segregation and replacement will be used to mitigate impacts to these populations. SPLP has agreed to conduct monitoring of these populations for three (3) years annually to document recolonization and success of the minimization and mitigation strategies.

DCNR determination: No Impact Anticipated per Avoidance/Mitigation/Monitoring

AOC E1

Five populations of *Carex shortiana* (Short's Sedge; PA Proposed Rare) were identified within AOC E1. Populations 1, 2, and 3 are located outside LOD, and will not be impacted. Populations 4 and 5 are located within LOD, but a HDD bore will be utilized to travel beneath these populations, avoiding any potential impacts.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E2

Six populations of *Polygala polygama* (Racemed Milkwort; PA Proposed Endangered) were documented within AOC E2 on Tuscarora State Forest. Populations 1, 2, 3, and 5 are located within the proposed temporary ROW for the project. Populations 4 and 6 are located outside of the proposed LOD and will not be impacted. Minimal impacts to populations 1, 2, 3, and 5 are expected, but will be further minimized with a pipeline realignment and LOD shift through the state forest. This route shift was routed to the south of the known populations to avoid the majority of impacts and has already been agreed upon by the PA DCNR and the Tuscarora SF District Forester. According to TetraTech, approximately 5-15 individuals will be impacted by this project (7 -22% of the population).

DCNR Determination: Since this population occurs on state forest land, DCNR Natural Heritage Section defers to and recommends further coordination with the Tuscarora State Forest District Forester Gene Odato and Kelly Sitch of DCNR.

AOC E3

Six populations of *Ribes missouriensis* (Missouri Gooseberry; PA Endangered) were identified within AOC E3. Populations 1, 2, and 3 were observed outside of the proposed LOD and therefore will not be impacted. Pop. 5 is located in the proposed corridor, but will be avoided with the implementation of LOD reduction or "neck downs" of the temporary ROW. Minimal impacts to Pop. 4 and Pop. 6 are anticipated, with narrow "neck downs" of the temporary ROW and relocation of proposed additional work spaces serving as minimization measures.

DCNR Determination: No Impact Anticipated per Avoidance

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AOC E4

One population of *R. missouriensis* was documented within AOC E4. It is outside the LOD and will not be impacted by this project.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E6

Four populations of *Opuntia humifusa* (Eastern Prickly-pear Cactus; PA Rare) were identified within AOC E6. All four populations were observed outside of the proposed LOD and therefore will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E14

A survey for *Carex aquatilis* (Water Sedge; PA Threatened) was conducted in AOC E14 in Berks County, PA. A population of *C. aquatilis* was previously documented at this site. No *C. aquatilis* was found within AOC E14, but *C. stricta* (tussock sedge), a similarly looking species, was identified. A voucher specimen was sent to Carnegie Museum for identification confirmation. The sedge was confirmed to be *C. stricta*. Therefore, no impacts to any species within DCNR's jurisdiction within AOC E14 are anticipated.

DCNR Determination: No Impact Anticipated per Survey

AOC E17

Two populations of *Desmodium nuttallii* (Nuttall's Tick-trefoil; PA Proposed Threatened) were identified within AOC E17. These populations were observed outside of the proposed LOD and will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E19

Three populations of *Packera anonyma* (Plain Ragwort; PA Rare) and two populations of *Phemeranthus teretifolius* (Round-leaved Fame-flower; PA Threatened) were found within AOC E19. A serpentine grassland community of concern was also delineated. The populations and associated plant community are located outside of the proposed LOD and will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

Per SPLP's agreements to avoid, minimize impacts, and conduct mitigation and monitoring of the PA Threatened and Endangered and PA plant species of concern as described above, DCNR has determined that no impact is likely. DCNR looks forward to receiving monitoring reports for the *Actaea podocarpa* and *Antennaria virginica* populations.

PROJECTS ON STATE FOREST LANDS:

A portion of this project takes place on the Tuscarora State Forest (District 3). The DCNR Bureau of Forestry's *State Forest Resource Management Plan* sets forth guidelines for ecologically-sound management of State Forest Lands and resources including protection of wetlands, wildlife, native wild plants and invasive species management. **This letter applies to PNDI impacts only and does not authorize the initiation of any work on State Forest Lands. Further coordination with the Bureau of Forestry is required.** If you have not already done so, please contact Gene Odato, District Forester for Tuscarora State Forest, at 717-536-3191, and Terrence G. Stemmler, District Forester for Gallitzin State Forest at 814-472-1862, for additional information.

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DCNR recommends the following steps to help prevent the spread of invasive species:

- The area of disturbance should be minimized to the fullest extent that would allow for construction. This will help to lessen the area of soil and vegetation disturbance associated with this project.
- If possible, please clean all construction equipment and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds from the equipment and undercarriages of the vehicles that may have been picked up at other sites.
- Avoid using seed mixes that include invasive plant species (e.g. crown vetch) to re-vegetate the area. Please also attempt to use weed-free straw or hay mixes when possible. More information about Pennsylvania invasive plants can be found here: <http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm>

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Ecological Information Specialists, Jason Ryndock (717-705-2822; c.jryndock@pa.gov) or Frederick Sechler (717-705-2823; c-frsechle@pa.gov).

Sincerely,



Greg Podnieszinski, Section Chief
Natural Heritage Section, DCNR Bureau of Forestry