

Appendix E

Agricultural Impact Minimization Plan

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1.0 AGRICULTURAL IMPACT MINIMIZATION PLAN

1.1 Purpose

The purpose of this plan is to outline and describe the methods, approaches, and procedures that the PennEast Pipeline Company, LLC and its contractors (“PennEast”) will utilize during the construction, surface restoration, and operation of the pipeline project to minimize impacts on active agricultural lands.

1.2 Applicability

The methods, approaches, and procedures described in this plan apply to active agricultural lands, defined as land that is actively managed for cropland, hayland, or pasture.

If the construction BMPs laid out in this plan do not fully address the issues on a specific parcel of agricultural land, PennEast will negotiate mitigation efforts directly with the impacted landowner.

1.3 Communication

Prior to the construction of the pipeline, PennEast shall provide to each landowner, landowner’s designate and/or tenant: the name, telephone number and mailing address of PennEast’s representative assigned to that geographic area and responsible for the liaison activities on behalf of PennEast. PennEast shall respond promptly to any landowner and/or tenant issues or concerns both during construction and long-term operational activities. Prior to construction, PennEast will provide landowners and tenant farmers of active agricultural lands with as much advance notice as possible, but not less than 24 hours prior to entry.

1.4 Construction BMPs

1.4.1 Soil Disturbance and Topsoil Segregation

- I. *Soil Disturbance* - Areas of soil disturbance will be limited to previously approved construction right-of-way, temporary work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the Federal Energy Regulatory Commission’s (FERC) Orders.
- II. *Clearing and Grubbing* – Removal of existing vegetation will be conducted using mechanical and manual methods depending on terrain and seasonal conditions. Herbicides will not be used before, during, or after construction.
- III. *Topsoil Segregation* - Topsoil will be stripped and segregated away from subsoil to prevent mixing of soils in either the full work area or in the trench and subsoil storage area, unless the landowner or land management agency specifically approves otherwise. Topsoil segregation will avoid issues such as topsoil mixing from deep rutting and topsoil compaction. Topsoil may not be intermixed with subsoil materials. Topsoil will be stored in a windrow parallel to the pipeline trench in such a manner that it will not become intermixed with subsoil materials.
 - a. The salvaged topsoil and subsoil will be maintained separated throughout construction activities.
 - b. Segregated topsoil will not be utilized for padding of the pipeline, constructing temporary slope breakers or trench plugs, improving or maintaining roads or as fill material.

- c. Topsoil piles will be stabilized using approved temporary erosion control measures to prevent loss due to wind and water erosion.
- d. Subsoil will not be stored directly on unstripped topsoil without a barrier.
- e. Segregated topsoil will be returned to the property from which it was removed. Topsoil will not be mixed or utilized on adjacent properties.
- f. PennEast shall coordinate with the landowner to identify black cherry trees located on the right-of-way near active livestock use areas during the construction plan development. Black cherry tree vegetation is toxic to livestock when wilted and shall not be stockpiled in areas accessible to livestock. During the clearing phase, such vegetation will be disposed of in a manner that prevents contact with livestock.

1.4.2 Construction Methods and Minimum Cover

- I. Drain Tiles
 - a. Existing drain tiles will be identified and located before construction as best as reasonably possible with landowner coordination.
 - b. Existing drain tiles within the area of disturbance will be checked for damage.
 - c. Damaged drain tiles will be repaired by qualified drain tile specialists and PennEast will coordinate with the landowner to continue to monitor drain tiles post construction to ensure repairs are properly functioning
- II. Irrigation Systems – Water flow in irrigation systems will be maintained, unless shutoff is coordinated with affected parties.
- III. Depth & Cover - In agricultural lands, the pipeline will be constructed with a minimum cover of 4 feet. If specific farming operations require more than 4 feet of cover, the minimum cover will be negotiated with that specific landowner.
- IV. Temporary Roads - The location of temporary roads to be used for construction purposes will be negotiated with the landowner and the tenant farmer if applicable. The temporary roads will be designed to not impede proper drainage and will be built to minimize soil erosion on or near the temporary roads. Every attempt will be made to use existing farm lanes for access and to repair damages to the existing lanes. Upon construction completion, temporary roads may be left intact through mutual agreement of the landowner, the tenant farmer (if applicable) and PennEast unless otherwise restricted by federal, state or local regulations. If the temporary roads are to be removed, the right-of-way upon which the temporary roads are constructed will be returned to its previous use and restored to a condition equivalent to that existing prior to their construction.
- V. Temporary Staging Areas - The location of temporary staging areas to be used for construction purposes will be negotiated with the landowner. Upon construction completion, any area used as a temporary staging area will be returned to its previous use and restored to a condition equivalent to that existing prior to construction.
- VI. Dewatering Activities - No back filling shall be done in water filled trenches. All freestanding water shall be removed prior to any back filling. In the event it becomes necessary to pump water from open trenches, PennEast shall pump the water in a manner that will avoid damaging adjacent agricultural land, crops, and/or pasture. Such damages include, but are not limited to: inundation of crops for more than 24 hours, sheet and rill erosion, discharge of sediment in ditches and other water courses, and the deposition of gravel in fields, pastures, and any water courses. All pumping of water shall comply with existing drainage laws, local ordinances relating to such activities, and provisions of the Clean Water Act.

1.4.3 Temporary Erosion Control

- I. Temporary erosion controls will be installed promptly following soil disturbance and will be maintained and reinstalled as necessary during construction.
- II. Temporary erosion control measures will be installed according to the requirements of applicable permit requirements.
- III. Temporary erosion control measures will may include the following:
 - a. Silt socks
 - b. Silt fence
 - c. Temporary rock construction entrances
 - d. Temporary mulch on segregated topsoil

1.4.4 Restoration & Cleanup

- I. Cleanup - Cleanup operations will commence promptly following backfill operations. Final grading, topsoil replacement, and installation of permanent erosion control structures will be completed within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) will be maintained until conditions allow completion of cleanup.
- II. Debris Removal – PennEast will ensure the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process.
- III. Rock Removal - The pipeline trench, bore pits, or other excavations may be backfilled with soil containing rocks consistent in concentration and size with that existing prior to the pipeline’s construction and similar to adjacent areas not disturbed by construction. In agricultural lands, excess rock will be removed from the top 12 inches of soil.
- IV. Trench Breakers - Permanent trench breakers will be installed pursuant to the project Erosion & Sedimentation Control Plan and in compliance with permit conditions. The construction right-of-way will be restored to preconstruction contours.
- V. Compaction & Rutting - During restoration, topsoil and subsoil will be tested for compaction at regular intervals and compared to similar soil types in undisturbed areas to approximate preconstruction conditions. PennEast will utilize penetrometers or other appropriate devices to conduct the tests and will maintain detailed records of the test results. Additional plowing or tilling will be performed if further compaction occurs from subsequent construction and cleanup activities. Plowing/ripping and disking will be done at a time when the soil is dry enough for normal tillage operations to occur on undisturbed farmland adjacent to the areas to be ripped.
- VI. Seeding & Revegetation - Any seeding performed will comply with permit requirements and be in agreement with landowner’s designated seed mix pursuant to the terms of the individual landowner easement agreements.
- VII. Pre & Post Construction Yield & Monitoring – PennEast will be responsible to ensuring the reestablishment of agricultural land productivity
 - a. PennEast will retain a consultant to measure crop yields pre & post-construction and in cooperation with the landowner or tenant farmer (if applicable). Consideration for time of year of measurement, historical rainfall, soil moisture content, and other appropriate conditions will be incorporated.
 - b. PennEast will conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner or tenant farmer

concerns. At a minimum, PennEast will conduct inspections during the first three years after construction. This time period should allow the crop yields to show the soil quality has not been negatively impacted by construction.

- c. PennEast does not anticipate encountering acid producing soil deposits in either Pennsylvania or in New Jersey. According to the NJDEP, N.J. Geologic Survey GIS data layer entitled “Coastal Plain Sediments with Potential to Form Acid (Sulfate) Soils”, the project site and vicinity does not contain any soil types with potential to contain acid producing soil deposits. If acid producing soils are encountered during construction, BMPs will be implemented as recommended in the NJ Flood Hazard Area Control Act Technical Manual (NJDEP, 2008).
 - d. PennEast will continue restoration efforts until monitoring proves crop yields have returned to pre-construction levels.
 - e. Drainage and irrigation systems will be monitored until restoration is successful. Problems resulting from construction will be corrected promptly.
 - f. Unless other mutual arrangements have been agreed to with the landowner, crop yield restoration will be considered separate and apart from the compensation provided to the landowner for the easement and any damages or crop loss during construction.
- VIII. Land Leveling – PennEast will restore the disturbed construction areas to its pre-construction elevation and contour as near as practicable. PennEast will provide landowners with contact information to enable them to request certain land leveling activities should uneven settling or surface drainage problems develop. PennEast will provide such land leveling efforts weather and access permitting and to the extent such efforts do not violate any governmental agency permits or approvals.
- IX. Fencing - All fencing and gates removed for the installation of the pipeline shall be replaced or installed according to the landowner’s specifications. Temporary fencing shall be provided as necessary to restrict access to active work areas by livestock until there is adequate vegetative cover over the work area.
- X. Pipeline Markers - Unless specified by law, pipeline markers shall be located at roads, fence lines and edge of field boundaries where they will not be damaged or disrupt farming operations.

1.4.5 Inspections

- I. Environmental Inspectors will be assigned to each construction spread during construction and restoration. Environmental Inspectors assigned to agricultural lands will be experienced on pipeline construction methods on agricultural lands.
- II. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC’s Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.
- III. Environmental Inspectors will be responsible for inspecting construction activities for compliance with the environmental conditions of the FERC Orders, the mitigation measures proposed, the requirements of other environmental permits and approvals, and environmental requirements in landowner easement agreements.
- IV. Environmental Inspectors will verify that the approved limits of disturbance are marked and maintained throughout construction.
- V. Environmental Inspectors will inspect erosion control measures and identify needs.

1.4.6 Reporting

- I. PennEast shall maintain records that identify by milepost:
 - a. method of application, application rate, and type of fertilizer, pH modifying agent, and seed used;
 - b. acreage treated;
 - c. dates of backfilling and seeding;
 - d. names of landowners requesting special seeding treatment and a description of the follow-up actions;
 - e. the location of any subsurface drainage repairs or improvements made during restoration; and
 - f. any problem areas and how they were addressed.
- II. PennEast shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required pursuant to the FERC Plan; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction.

1.5 Easement Process

PennEast will negotiate easement agreements with individual landowners. In addition to including the terms relating to the temporary and permanent easements, easement agreements for agricultural lands will include a section addressing the loss of crops during the construction period.