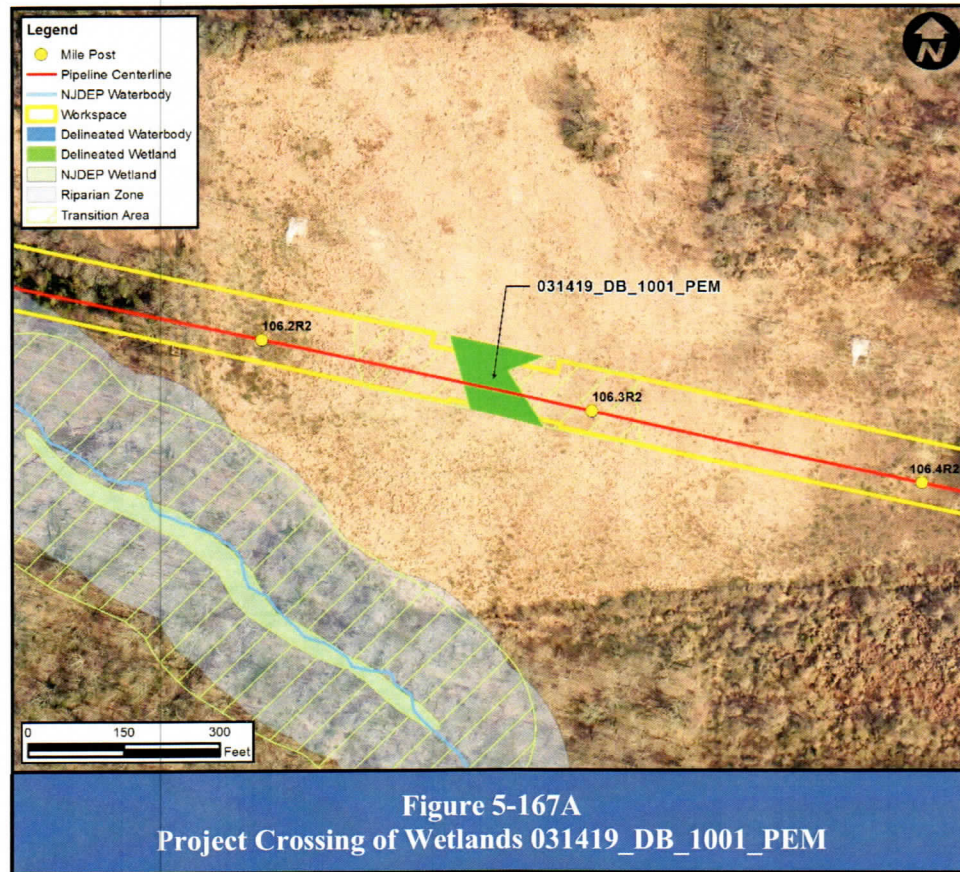


## 5.208 Regulated Crossing 167A



### INVENTORY

#### Wetlands

Wetland 031419\_DB\_1001\_PEM is a field-delineated palustrine emergent wetland located in a fallow field, adjacent to an existing, maintained utility right-of-way. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

#### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

#### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

#### Public Lands

Regulated Resource 031419\_DB\_1001\_PEM is located on Block 60, Lot 4.02 in Mercer Township. This property is public land owned by the County of Mercer.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 031419\_DB\_1001\_PEM has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Based upon fieldwork and review of publicly available data, stream channels are not located at this regulated crossing.

### Riparian Zones

Based upon fieldwork and review of publicly available data, riparian zones are not located at this regulated crossing.

### Fishery Resources

Based upon fieldwork and review of publicly available data, fishery resources are not located at this regulated crossing.

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs

and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;

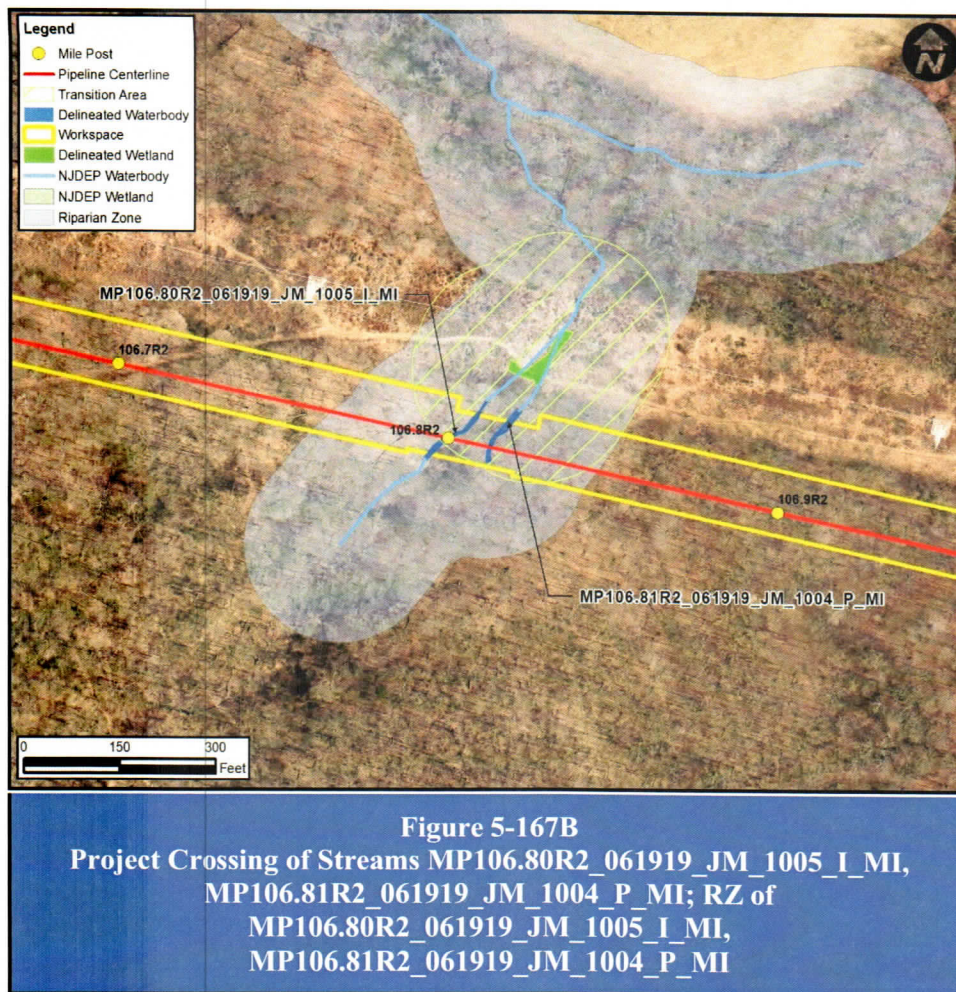
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

### **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.209 Regulated Crossing 167B



### INVENTORY

#### Wetlands

Not present.

#### Transition Areas

Not present.

#### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

#### Public Lands

Regulated Resource 031419\_DB\_1001\_PEM is located on Block 60, Lot 4.02 in Mercer Township. This property is public land owned by the County of Mercer.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Stream MP106.80R2\_061919\_JM\_1005\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Stream MP106.81R2\_061919\_JM\_1004\_P\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Stream MP106.80R2\_061919\_JM\_1005\_I\_MI is a field delineated, intermittent, minor stream that flows north through forest. It is an unnamed tributary to Moores Creek.

the following

Stream MP106.81R2\_061919\_JM\_1004\_P\_MI is a field delineated, perennial, minor stream that flows north through forest. It is an unnamed tributary to Moores Creek.

### Riparian Zones

RZ of MP106.80R2\_061919\_JM\_1005\_I\_MI is the 150-foot riparian area associated with an unnamed tributary to Moores Creek. This riparian area is vegetated.

RZ of MP106.81R2\_061919\_JM\_1004\_P\_MI is the 150-foot riparian area associated with an unnamed tributary to Moores Creek. This riparian area is vegetated.

### Fishery Resources

Based upon fieldwork and review of publicly available data, fishery resources are not located at this regulated crossing.

## **ASSESSMENT**

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through riparian areas and dry crossing of streams is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

## Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;

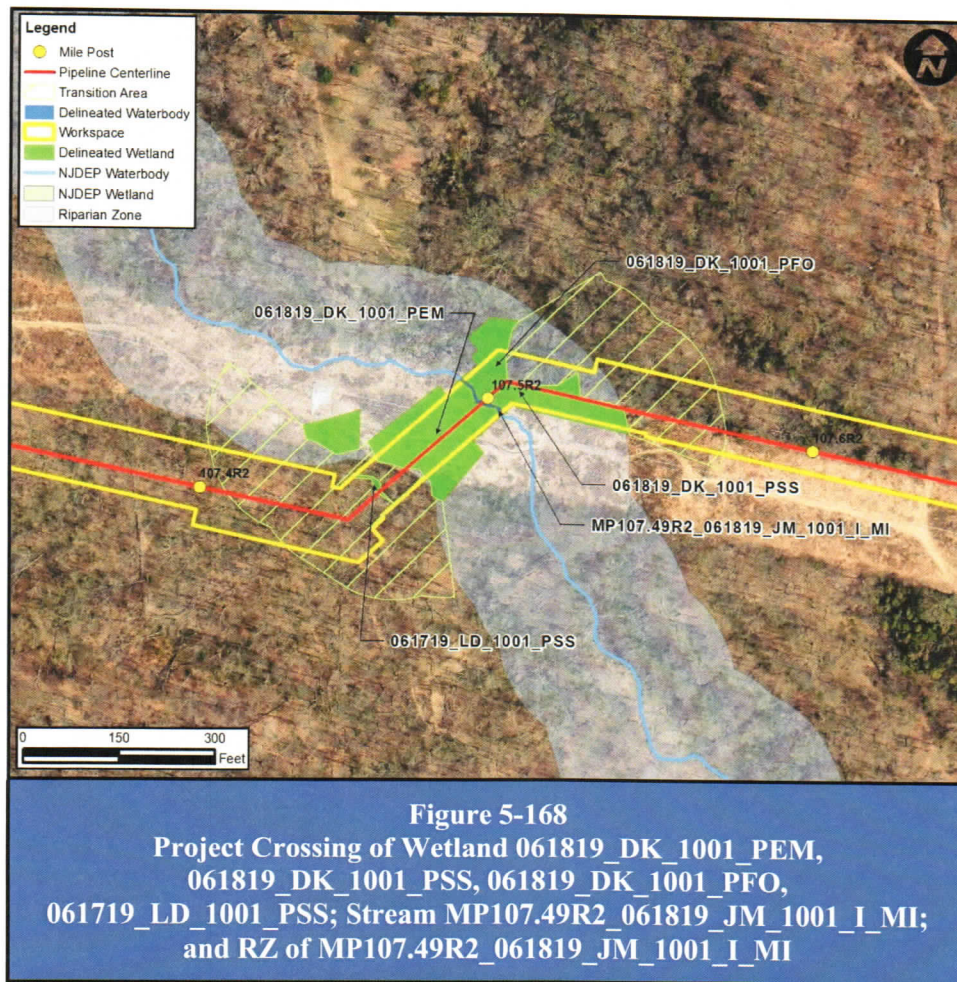
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable; no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

### **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.210 Regulated Crossing 168



## INVENTORY

### Wetlands

Wetland 061819\_DK\_1001\_PEM is a field delineated, palustrine, emergent wetland that occurs in an existing, maintained, utility right-of-way. The feature drains into an unnamed tributary to Fiddlers Creek (field delineated as 061819\_JM\_1001\_I\_MI). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 061819\_DK\_1001\_PSS is a field delineated, palustrine, shrub-scrub wetland that occurs in an existing, maintained, utility right-of-way. The feature drains into an unnamed tributary to Fiddlers Creek (field delineated as 061819\_JM\_1001\_I\_MI). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 061819\_DK\_1001\_PFO is a field delineated, palustrine, forested wetland that occurs adjacent to an existing, maintained, utility right-of-way. The feature drains into an unnamed tributary to Fiddlers Creek (field delineated as 061819\_JM\_1001\_I\_MI). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 061719\_DK\_1001\_PSS is a field delineated, palustrine, shrub-scrub wetland. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

#### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

#### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

#### Public Lands

None of the regulated resources in this crossing are on public lands.

#### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 061819\_DK\_1001\_PEM has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 061819\_DK\_1001\_PSS has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 061819\_DK\_1001\_PFO has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 061719\_DK\_1001\_PSS has not been identified as potentially suitable habitat for any threatened or endangered species.

Stream MP107.49R2\_061819\_JM\_1001\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

#### State Open Waters and Channels

Stream MP107.49R2\_061819\_JM\_1001\_I\_MI is a field delineated, intermediate, minor stream that flows northwest through a palustrine emergent wetland (field delineated as 061819\_DK\_1001\_PEM). It is an unnamed tributary to Fiddlers Creek.

#### Riparian Zones

RZ of Stream MP107.49R2\_061819\_JM\_1001\_I\_MI is the 150-foot riparian area associated with an unnamed tributary to Fiddler Creek. This riparian area is actively disturbed and vegetated beyond.

## Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, Delaware River FW2-TP(C1) is classified as fresh water trout producing waterbody.

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas and dry crossing of streams is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;

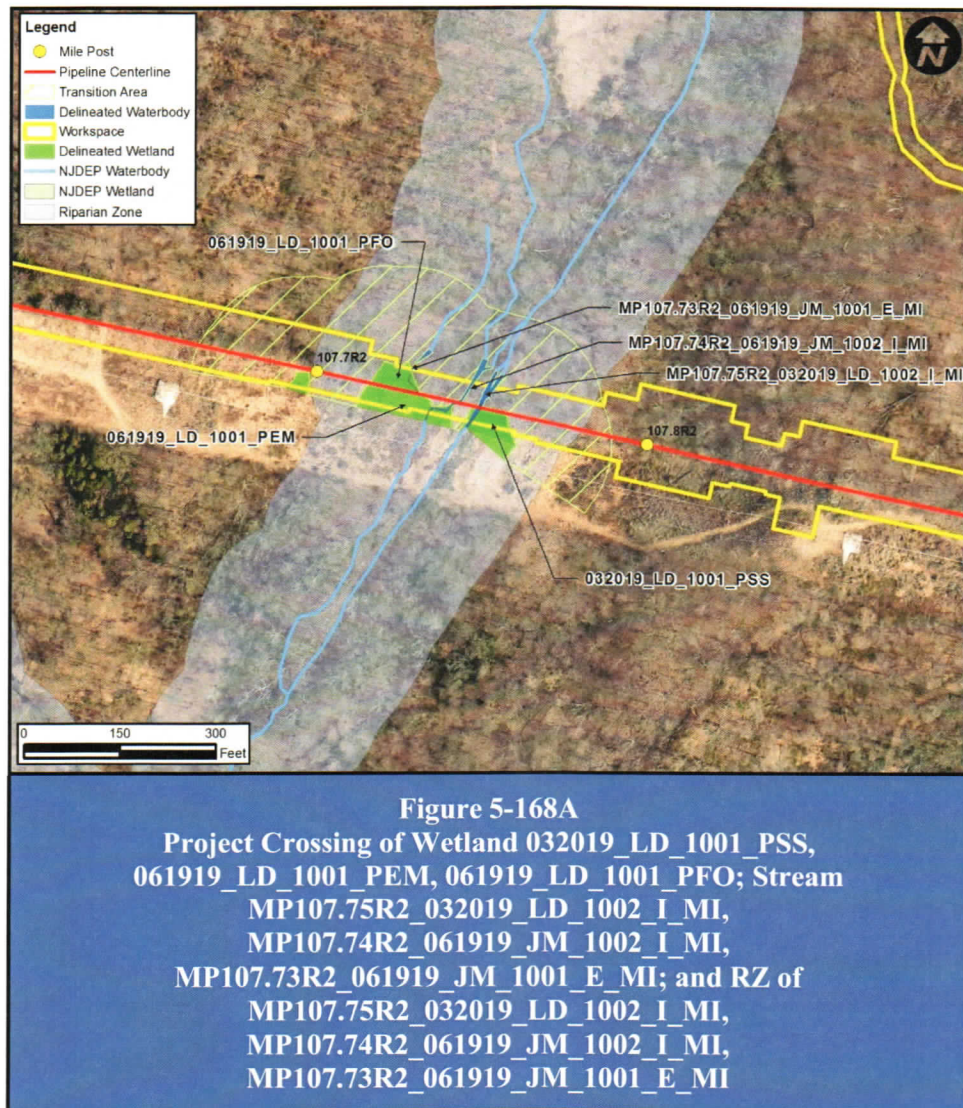
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

## **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.211 Regulated Crossing 168A



### INVENTORY

#### Wetlands

Wetland 032019\_LD\_1001\_PSS is a field-delineated palustrine scrub-shrub wetland located at the forested edge of an existing, maintained utility right-of-way. The feature appears to drain into an intermittent stream (field-delineated as 032019\_LD\_1002\_I\_MI). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 061919\_LD\_1001\_PEM is a field delineated, palustrine, emergent wetland that occurs in an existing, maintained, utility right-of-way. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 061919\_LD\_1001\_PFO 061919\_LD\_1001\_PFO is a field delineated, palustrine, forest wetland occurring adjacent to an existing, maintained, utility right-of-way. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.



### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

### Public Lands

None of the regulated resources in this crossing are on public lands.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 032019\_LD\_1001\_PSS has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 061919\_LD\_1001\_PEM has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Wetland 061919\_LD\_1001\_PFO 061919\_LD\_1001\_PFO has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Stream MP107.75R2\_032019\_JM\_1002\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle, golden-winged warbler.

Stream MP107.74R2\_061919\_JM\_1002\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Stream MP107.73R2\_061919\_JM\_1001\_E\_MI has not been identified as potentially suitable habitat for any threatened or endangered species.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Stream MP107.75R2\_032019\_JM\_1002\_I\_MI is a field-delineated minor, intermittent tributary of Fiddlers Creek flowing west through forest, along Pleasant Valley Road. It crosses beneath an access road via culvert.

Stream MP107.74R2\_061919\_JM\_1002\_I\_MI is a field delineated, intermittent, minor stream that flows south through forest. It is an unnamed tributary to Fiddlers Creek.

Stream MP107.73R2\_061919\_JM\_1001\_E\_MI is a field delineated, ephemeral, minor stream that flows south through forest.

### Riparian Zones

RZ of MP107.75R2\_032019\_JM\_1003\_I\_MI is the 150-foot riparian area associated with this stream. This riparian area is a combination of vegetated and actively disturbed.

RZ of Stream MP107.74R2\_061919\_JM\_1002\_I\_MI is the 150-foot riparian area associated with this stream. This riparian area is a combination of vegetated and actively disturbed.

RZ Stream MP107.73R2\_061919\_JM\_1001\_E\_MI is the 150-foot riparian area associated with this stream. This riparian area is a combination of vegetated and actively disturbed.

### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of the Fiddlers Creek is classified as a trout maintenance waterbody (FW2-TM).

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas and dry crossing of streams is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;

- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

## **FINDINGS**

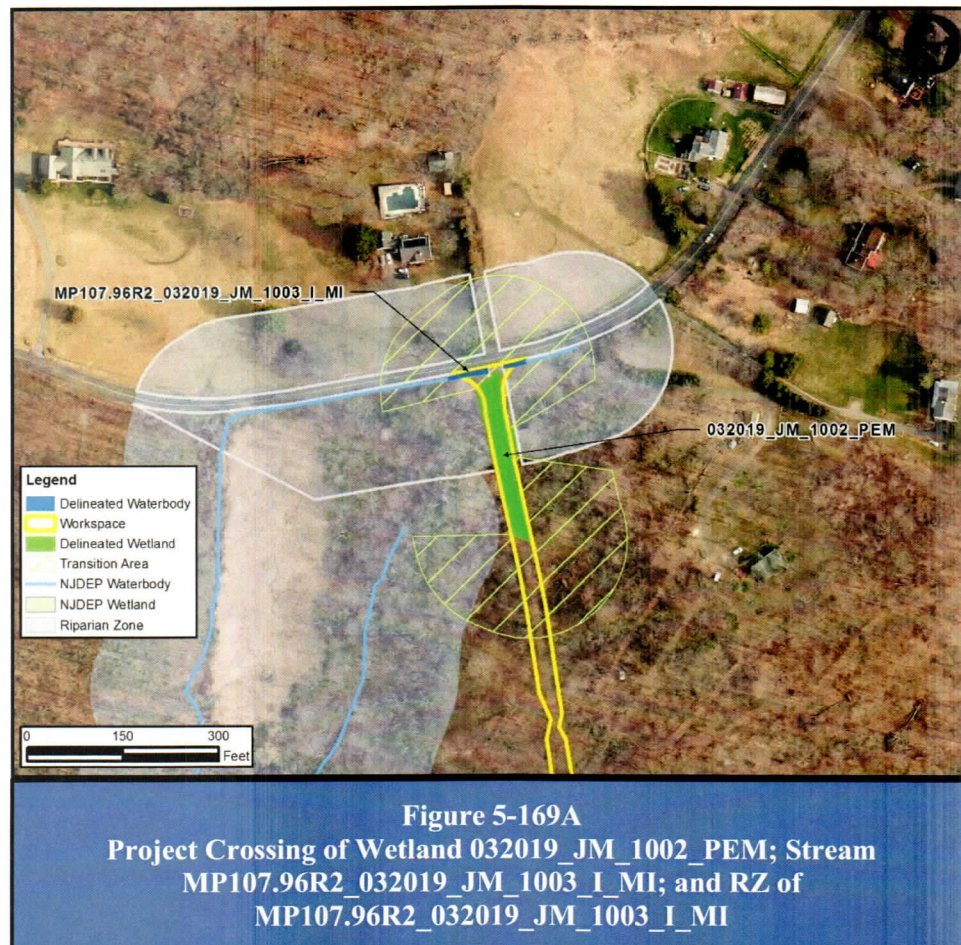
The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.

#### **5.212 Regulated Crossing 169**

Regulated Crossing 169 was eliminated after no stream feature was found during field surveys.



## 5.213 Regulated Crossing 169A



## INVENTORY

### Wetlands

Wetland 032019\_JM\_1002\_PEM is a field-delineated palustrine emergent wetland occurring on an access road through forest. The feature appears to drain into an intermittent roadside stream (field-delineated as 032019\_JM\_1003\_I\_MI). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

## Public Lands

Regulated Resources 032019\_JM\_1002\_PEM and 032019\_JM\_1003\_I\_MI are located on Block 60, Lot 28 in Mercer Township. This property is public land owned by the County of Mercer/State of New Jersey – Department of Environmental Protection.

## Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 032019\_JM\_1002\_PEM has not been identified as potentially suitable habitat for any threatened or endangered species.

Stream MP107.96R2\_ 032019\_JM\_1003\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

## State Open Waters and Channels

Stream MP107.96R2\_ 032019\_JM\_1003\_I\_MI is a field-delineated minor, intermittent tributary of Fiddlers Creek flowing west through forest, along Pleasant Valley Road. It crosses beneath an access road via culvert

## Riparian Zones

RZ of MP107.96R2\_ 032019\_JM\_1003\_I\_MI is the 150-foot riparian area associated with this stream. This riparian area is a combination of vegetated and actively disturbed.

## Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of the Fiddlers Creek is classified as a trout maintenance waterbody (FW2-TM).

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Access roads, HDD pullbacks, and other Project related surface disturbances not directly associated with pipeline installation are proposed at this regulated crossing. Regulated activities associated with these activities have been minimized to the maximum extent practicable as documented in the Alternatives Analysis, Attachment K. Proposed activities include temporary clearing and grading necessary for temporary construction access or workspace. Permanent impacts may include the removal of trees. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

## Measures Taken to Reduce Potential Adverse Environmental Impacts

Surface disturbances not directly associated with pipeline installation could not be avoided at this regulated crossing. PennEast sought to avoid or minimize the impacts to wetlands, State Open Waters and riparian zones in these areas; discussion of these efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;

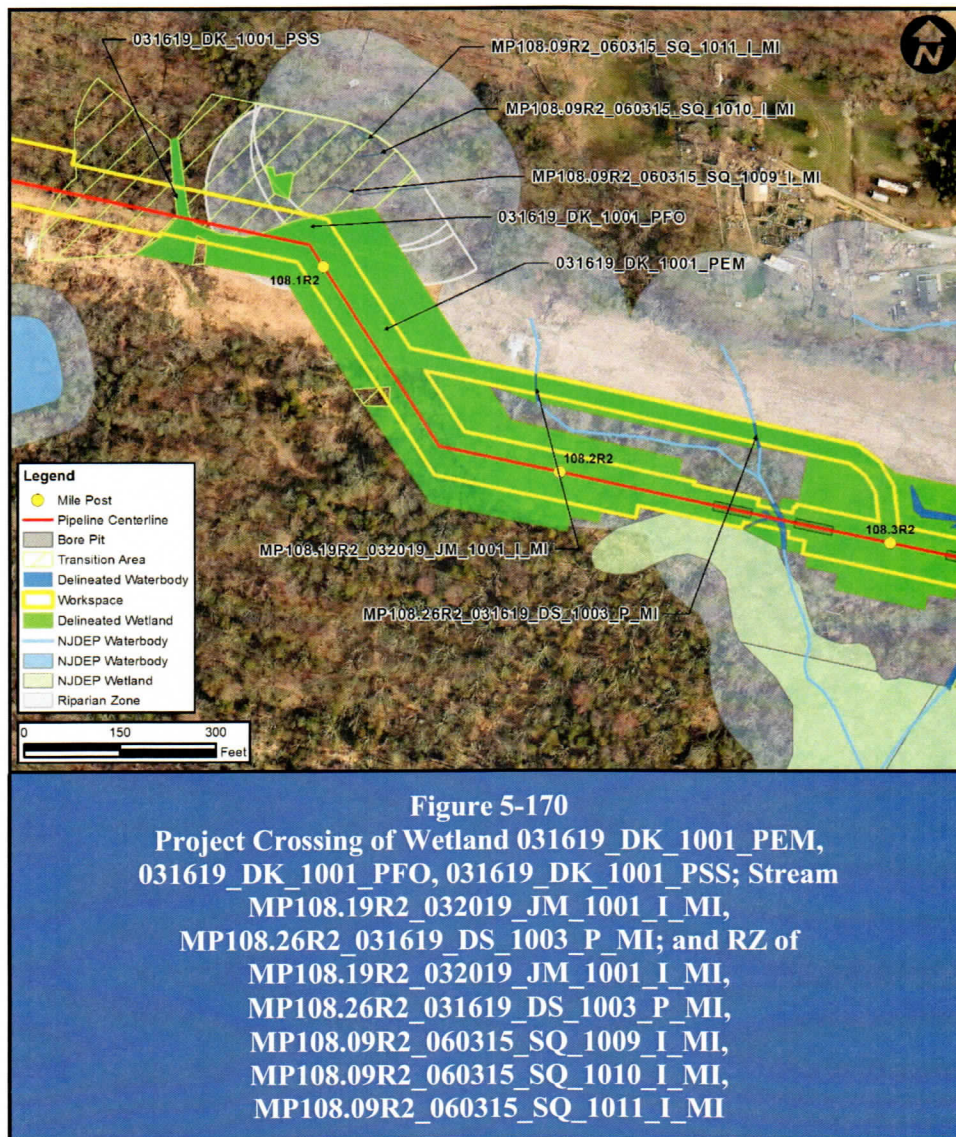
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable; no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

### **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.214 Regulated Crossing 170



## INVENTORY

### Wetlands

Wetland 031619\_DK\_1001\_PFO/PSS/PEM is a field-delineated palustrine forested/scrub-shrub/emergent wetland. The emergent component occurs within an existing, maintained utility right-of-way. The feature drains downslope into a series of streams, which ultimately drain into the main stem Fiddlers Creek at the east end of the property. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.



### Special Aquatic Sites

Vernal pools are seasonal pools that are critical to the lifecycle of certain amphibians and invertebrates. These species complete reproduction within vernal pools and then disperse to surrounding areas. NJDEP establishes a vernal pool dispersal area with a 1,000-foot radius from the known limits of a vernal pool. As discussed in Section 4.8 of the Habitat Protection Plan (Attachment J-1) a dispersal area of vernal pools (VP-2852) were identified at this regulated crossing. A habitat analysis for this vernal pool dispersal area is provided in Table 3.8-1 in the Habitat Protection Plan

### Public Lands

None of the regulated resources in this crossing are on public lands.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 031619\_DK\_1001\_PFO/PSS/PEM has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Stream 031619\_DS\_1003\_P\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Stream 032019\_JM\_1001\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle, and golden-winged warbler.

RZ of MP108.09R2\_060315\_SQ\_1009\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

RZ of MP108.09R2\_060315\_SQ\_1010\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

RZ of MP108.09R2\_060315\_SQ\_1011\_I\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Stream 031619\_DS\_1003\_P\_MI is a field-delineated minor, perennial tributary of Fiddlers Creek flowing south from an existing, maintained utility right-of-way into forest.

Stream 032019\_JM\_1001\_I\_MI is a field-delineated minor, intermittent tributary of Fiddlers Creek flowing south through forest and an existing, maintained utility right-of-way.

### Riparian Zones

RZ of MP108.19R2\_032019\_JM\_1001\_I\_MI is a 150-foot riparian area associated with an unnamed tributary to Fiddlers Creek.

RZ of MP108.26R2\_031619\_DS\_1003\_P\_MI is a 150-foot riparian area associated with an unnamed tributary to Fiddlers Creek.

RZ of MP108.09R2\_060315\_SQ\_1009\_I\_MI is a 150-foot riparian area associated with an off-site, unnamed tributary of Fiddlers Creek. This riparian area is partially vegetated and partially actively disturbed.

RZ of MP108.09R2\_060315\_SQ\_1010\_I\_MI is a 150-foot riparian area associated with an off-site, unnamed tributary of Fiddlers Creek. This riparian area is partially vegetated and partially actively disturbed.

RZ of MP108.09R2\_060315\_SQ\_1011\_I\_MI is a 150-foot riparian area associated with an off-site, unnamed tributary of Fiddlers Creek. This riparian area is partially vegetated and partially actively disturbed.

### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of Fiddlers Creek is classified as a trout maintenance freshwater waterbody (FW2-TM).

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas and dry crossing of streams is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

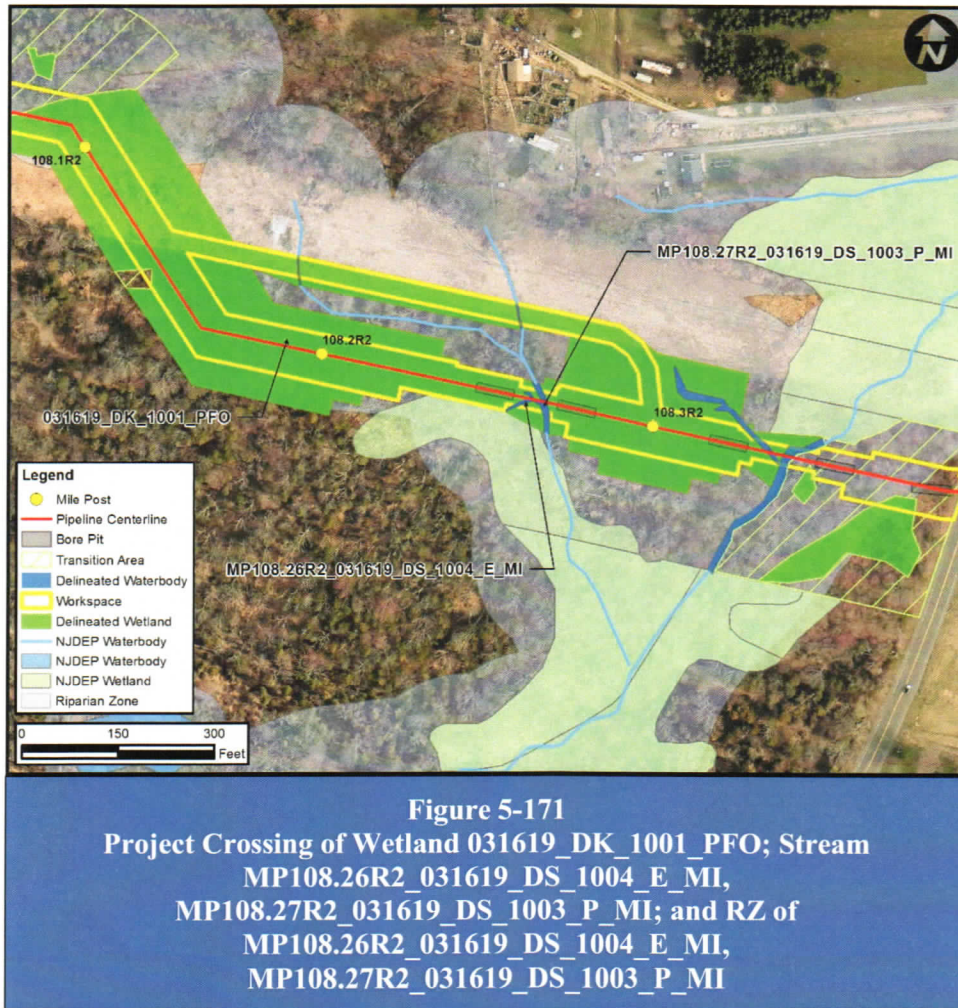
The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

## **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.

## 5.215 Regulated Crossing 171



### INVENTORY

#### Wetlands

Wetland 031619\_DK\_1001\_PFO is a field-delineated palustrine forested wetland. The feature drains downslope into a series of streams, which ultimately drain into the main stem Fiddlers Creek at the east end of the property. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

#### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

#### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.



### Public Lands

None of the regulated resources in this crossing are on public lands.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 031619\_DK\_1001\_PFO has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: wood turtle.

Stream MP108.26R2\_031619\_DS\_1004\_E\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Stream MP108.27R2\_031619\_DS\_1003\_P\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Stream MP108.26R2\_031619\_DS\_1004\_E\_MI is a field-delineated minor, ephemeral tributary of Fiddlers Creek flowing southeast through forest. It drains into a perennial stream (field-delineated as 031619\_DS\_1003\_P\_MI).

Stream MP108.27R2\_031619\_DS\_1003\_P\_MI is a field-delineated minor, perennial tributary of Fiddlers Creek flowing south from an existing, maintained utility right-of-way into forest.

### Riparian Zones

RZ of MP108.26R2\_031619\_DS\_1004\_E\_MI is the 150-foot riparian area associated with these streams. This riparian area is mostly vegetated. The riparian area within the utility right-of-way is actively disturbed.

RZ of MP108.27R2\_031619\_DS\_1003\_P\_MI is the 150-foot riparian area associated with these streams. This riparian area is mostly vegetated. The riparian area within the utility right-of-way is actively disturbed.

### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, Fiddlers Creek is classified as a trout maintenance waterbody (FW2-TM).

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas is the pipeline construction method proposed for a portion of this regulated crossing. Conventional bore is the pipeline construction method proposed at the streams

of this regulated crossing. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

#### Measures Taken to Reduce Potential Adverse Environmental Impacts

Utilizing a conventional bore avoids in-stream impacts. However, impact to environmental features above the bore cannot be avoided as compliance with FERC requirements necessitates the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline. In an effort to minimize or avoid adverse environmental impacts. Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

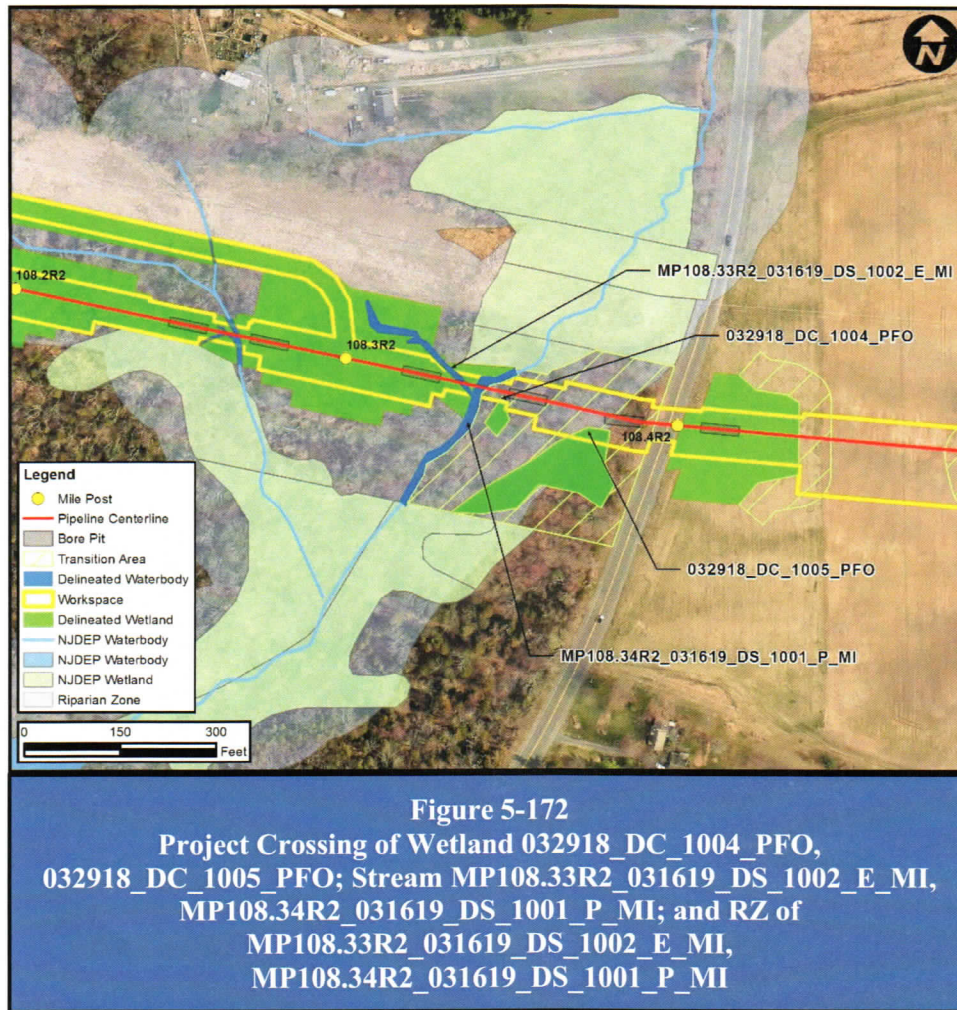
- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;

- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable; no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

## **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.

## 5.216 Regulated Crossing 172



## INVENTORY

### Wetlands

Wetland 032918\_DC\_1004\_PFO is a palustrine forested wetland located adjacent to Fiddlers Creek, delineated as 031619\_DS\_1001\_P\_MI. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 032918\_DC\_1005\_PFO is a palustrine forested wetland located adjacent to Fiddlers Creek, delineated as 031619\_DS\_1001\_P\_MI. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

### Transition Areas

The Transition Area is assumed to be 150 feet due to the proximity of mapped Threatened or Endangered Species habitat to the wetland feature.

### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

### Public Lands

None of the regulated resources in this crossing are on public lands.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 032918\_DC\_1004\_PFO has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 032918\_DC\_1005\_PFO has not been identified as potentially suitable habitat for any threatened or endangered species.

Stream MP108.33R2\_031619\_DS\_1002\_E\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Stream MP108.34R2\_031619\_DS\_1001\_P\_MI has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: golden-winged warbler.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Stream MP108.33R2\_031619\_DS\_1002\_E\_MI is a field-delineated minor, ephemeral stream flowing east from the edge of an existing, maintained utility right-of-way and into forest, where it drains into the main stem Fiddlers Creek (field-delineated as 032919\_DC\_1001\_P\_MI).

Stream MP108.34R2\_031619\_DS\_1001\_P\_MI is a field-delineated minor, perennial stream flowing south through an existing, maintained utility right-of-way and forest, adjacent to Route 579. It is a section of the main stem Fiddlers Creek.

### Riparian Zones

RZ of MP108.33R2\_031619\_DS\_1002\_E\_MI is the 150-foot riparian area associated with this unnamed tributary to Fiddlers Creek. This riparian area is vegetated.

RZ of MP108.34R2\_031619\_DS\_1001\_P\_MI is the 150-foot riparian area associated with Fiddlers Creek. This riparian area is vegetated.

### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, Fiddlers Creek is classified as a trout maintenance waterbody (FW2-TM).

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Conventional bore is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been reduced or eliminated by the use of trenchless technology. As demonstrated in the Alternatives Analysis, Attachment K, to the extent that temporary construction access and workspace for the Project includes disturbance of vegetation, those impacts are unavoidable. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline as required for compliance with FERC and Pipeline and Hazardous Materials Safety Administration requirements. Temporary matting will be utilized within regulated areas to reduce impacts to herbaceous vegetation. In place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. Based on the foregoing, it is not anticipated that the proposed conventional bore at this crossing will result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Utilizing a conventional bore avoids in-stream impacts. However, impact to environmental features above the bore cannot be avoided as compliance with FERC requirements necessitates the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline. In an effort to minimize or avoid adverse environmental impacts, PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4). Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;

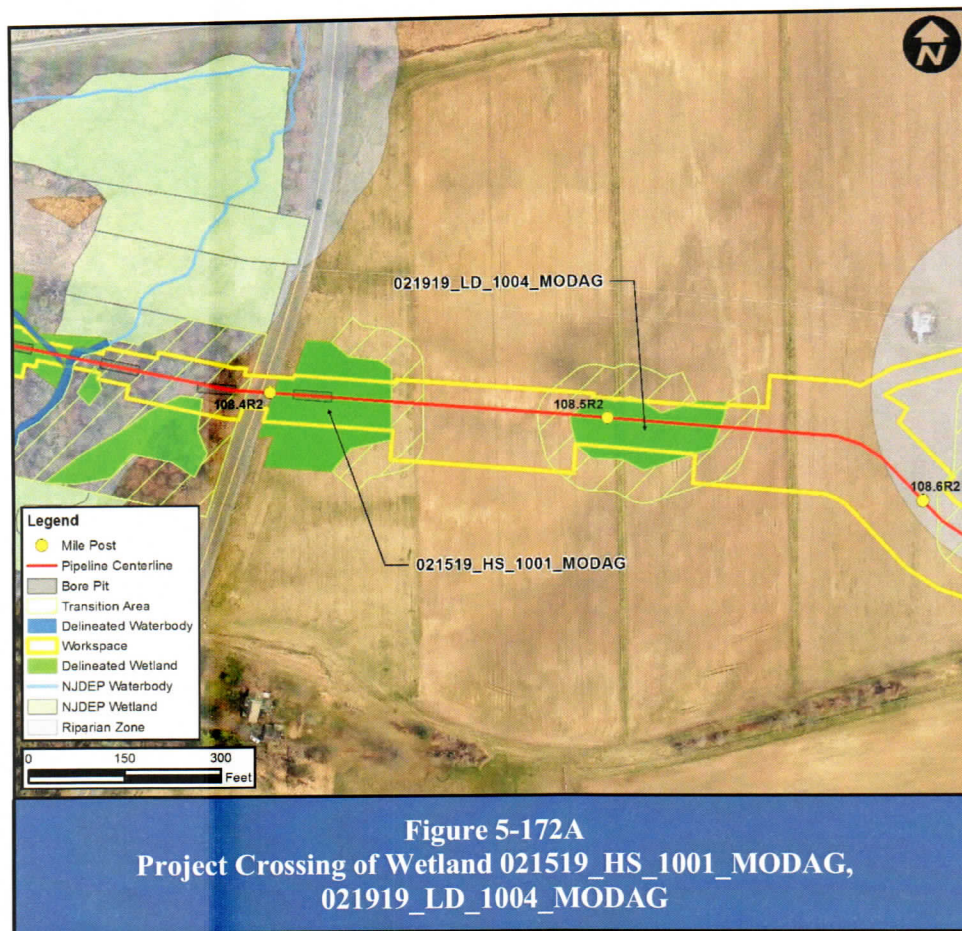
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

## **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.217 Regulated Crossing 172A



## INVENTORY

### Wetlands

Wetland 021519\_HS\_1001\_MODAG is a field-delineated modified agricultural wetland located in a grassy field adjacent to Route 579. The feature appears to receive flow from the adjacent upslope soybean fields. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 021919\_LD\_1004\_MODAG is a field-delineated modified agricultural wetland that encompasses a mowed, grassy strip and continues into a soybean field. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

### Transition Areas

The Transition Area is assumed to be 50 feet due to the lack of exceptional characteristics associated with the wetland feature.

### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

### Public Lands

None of the regulated resources in this crossing are on public lands.

### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 021519\_HS\_1001\_MODAG has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 021919\_LD\_1004\_MODAG has not been identified as potentially suitable habitat for any threatened or endangered species.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Based upon fieldwork and review of publicly available data, stream channels are not located at this regulated crossing.

### Riparian Zones

Based upon fieldwork and review of publicly available data, riparian zones are not located at this regulated crossing.

### Fishery Resources

Based upon fieldwork and review of publicly available data, fishery resources are not located at this regulated crossing.

## ASSESSMENT

### Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity

Open-cut through wetland areas is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. Temporary matting is proposed within regulated areas to reduce impacts to herbaceous vegetation. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

## Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;

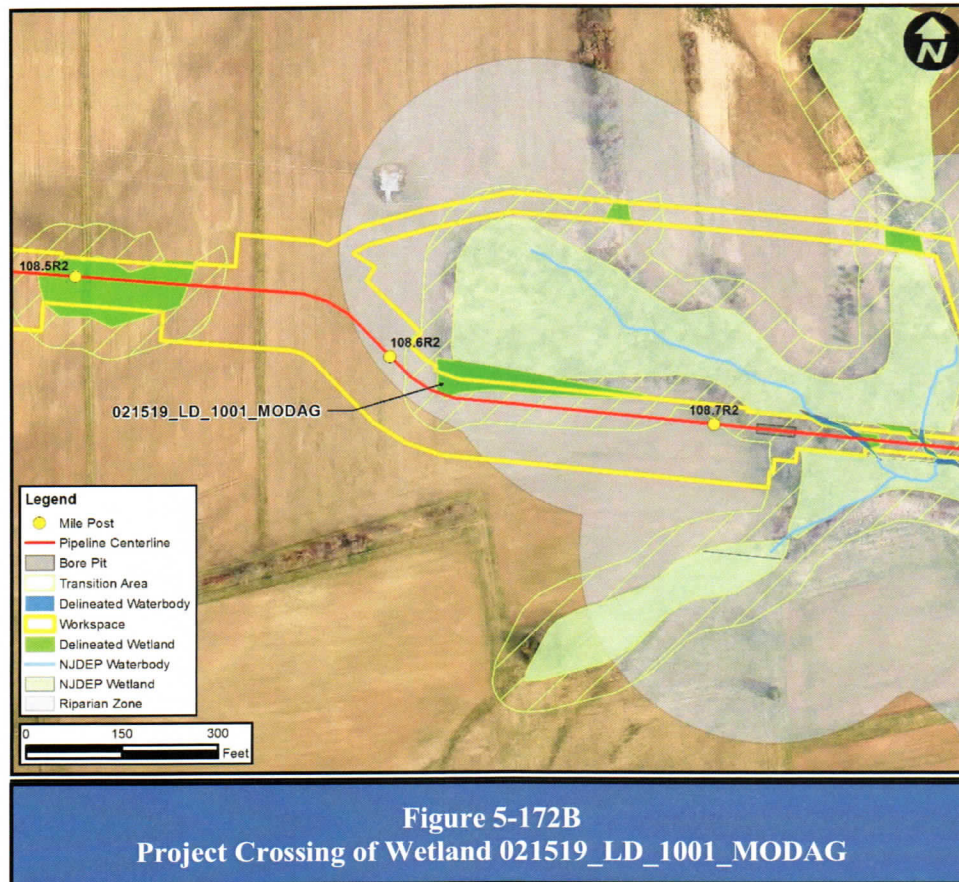
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

### **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.



## 5.218 Regulated Crossing 172B



## INVENTORY

### Wetlands

Wetland 021519\_LD\_1001\_MODAG is a field-delineated modified agricultural wetland occurring at the toe-of-slope of a soybean field. The feature receives flow from the fields and conveys it into the forest. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

### Transition Areas

The Transition Area is assumed to be 50 feet due to the lack of exceptional characteristics associated with the wetland feature.

### Special Aquatic Sites

Based upon fieldwork and review of publicly available data, special aquatic sites as defined at N.J.A.C. 7:7A-1.4 are not located at this regulated crossing.

### Public Lands

None of the regulated resources in this crossing are on public lands.



### Critical Habitat and Threatened or Endangered Species and their Habitat

Wetland 021519\_LD\_1001\_MODAG has not been identified as potentially suitable habitat for any threatened or endangered species.

Species accounts describing the natural history and habitat requirements; habitat assessment and/or targeted species survey results; study corridor documentation; potential habitat impacts; and recommended measures to avoid, minimize, and mitigate potential impacts to New Jersey State-listed species potentially occurring within regulated areas of the study corridor are provided in the HPP.

### State Open Waters and Channels

Based upon fieldwork and review of publicly available data, stream channels are not located at this regulated crossing.

### Riparian Zones

Based upon fieldwork and review of publicly available data, riparian zones are not located at this regulated crossing.

### Fishery Resources

Based upon fieldwork and review of publicly available data, fishery resources are not located at this regulated crossing.

## **ASSESSMENT**

### **Analysis Potential Temporary and Permanent Adverse Environmental Impacts of the Proposed Regulated Activity**

Open-cut through wetland areas is the pipeline construction method proposed at this regulated crossing. This crossing method is proposed at locations where the use of trenchless technology is not feasible. The Alternatives Analysis, Attachment K, documents this finding. Unavoidable temporary impacts include disturbance to vegetation for temporary construction access and workspace for the Project. Temporary disturbance of wetlands and stream channels during construction is necessary for pipeline installation. Permanent impacts include the removal of trees and shrubs located within 15 feet of the pipeline that could compromise the integrity of the pipeline in compliance with FERC requirements. In-place restoration is proposed to minimize environmental impacts at this crossing; mitigation, as required by NJDEP rules, is proposed to compensate for adverse wetland and riparian zone impacts. As a result of these considerations, proposed construction at this crossing is not anticipated to result in significant permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Where impacts could not be avoided with trenchless technology construction, PennEast sought to minimize the impacts to wetlands, State Open Waters and riparian zones with workspace modifications. A discussion of workspace modification efforts is provided in the Alternatives Analysis (Attachment K). PennEast will implement Project specific BMPs as detailed on the Project Soil Erosion and Sedimentation Control Plans (Attachment E-4) to further minimize or avoid adverse environmental impacts. Section 4 of this report details the range of proposed BMPs and mitigation measures taken to reduce potential adverse environmental impacts. These BMPs comply with the Standards for Soil Erosion and Sediment Control in New Jersey.

The following key measures will be implemented to avoid, minimize and mitigate potential adverse environmental impacts:

- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation Proposal provided Attachment N of the Multi-Permit Application;
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas where possible and permitted to minimize forest losses;
- Minimization of forest and vegetation clearing to the greatest extent practicable;
- Allowed post-construction succession of temporarily cleared forest areas and restoration of forested wetlands to a function or value greater than or equal to existing conditions where practicable;
- Restoration of grassland areas to a function or value greater than or equal to existing conditions;
- Mitigation/compensation provided offsite to potentially result in net-neutral or improved regional habitat conditions for potentially affected species populations;
- Adherence to applicable timing restrictions;
- Potential incorporation of NJDEP-reviewed and approved wildlife enhancement design features on mitigation sites and restoration areas;
- Regular (daily) clearing of work areas by agency-approved and qualified environmental monitors. Safe and appropriate wildlife relocation as needed;
- Regular inspection of protective measures such as fences by environmental monitors;
- Post-construction maintenance standards following NJDEP Integrated Vegetation Management guidance set forth in the *Strategies to Minimize Adverse Impacts to Wildlife from Management Activities on Powerline Rights-of-Way in NJ* (NJDEP ENSP 2011) (*Strategies*);
- Incorporate FERC Invasive Species Management Plan;
- Development and utilization of equipment cleaning/sterilization, and other protocols to avoid the spread of invasive species in sensitive terrestrial, wetland and aquatic habitats;
- Project-specific (SESC) standards including temporary erosion control measures such as silt fence, turbidity barriers, sediment filter bags, and erosion mats;
- Commitment not to use herbicides during post-construction maintenance activities;
- Specific seasonal restrictions and buffers will be followed for species and species groups in accordance with *Strategies*;
- Project-specific protocols on appropriate fueling station locations and prohibited areas such as streams and wetlands and transition areas; project-specific cleanup protocols and notification for any unintended spills during construction;
- Vegetation within temporary workspace areas including wetlands and transition areas will be cut flush to the ground and matted where practicable: no grubbing is proposed in these areas;
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;

- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- Post-construction restoration of stream banks and beds and downstream water quality monitoring as required (sensitive habitat areas) before, during and after construction.

### **FINDINGS**

The implementation of appropriate avoidance, minimization, and mitigating measures identified for wetlands, transition areas, species, or species group will avoid and minimize impacts to these environmental resources, State-listed wildlife and plant species. By following the key measures as listed above and in the HPP, it is anticipated that existing populations of State-listed species will not be jeopardized.