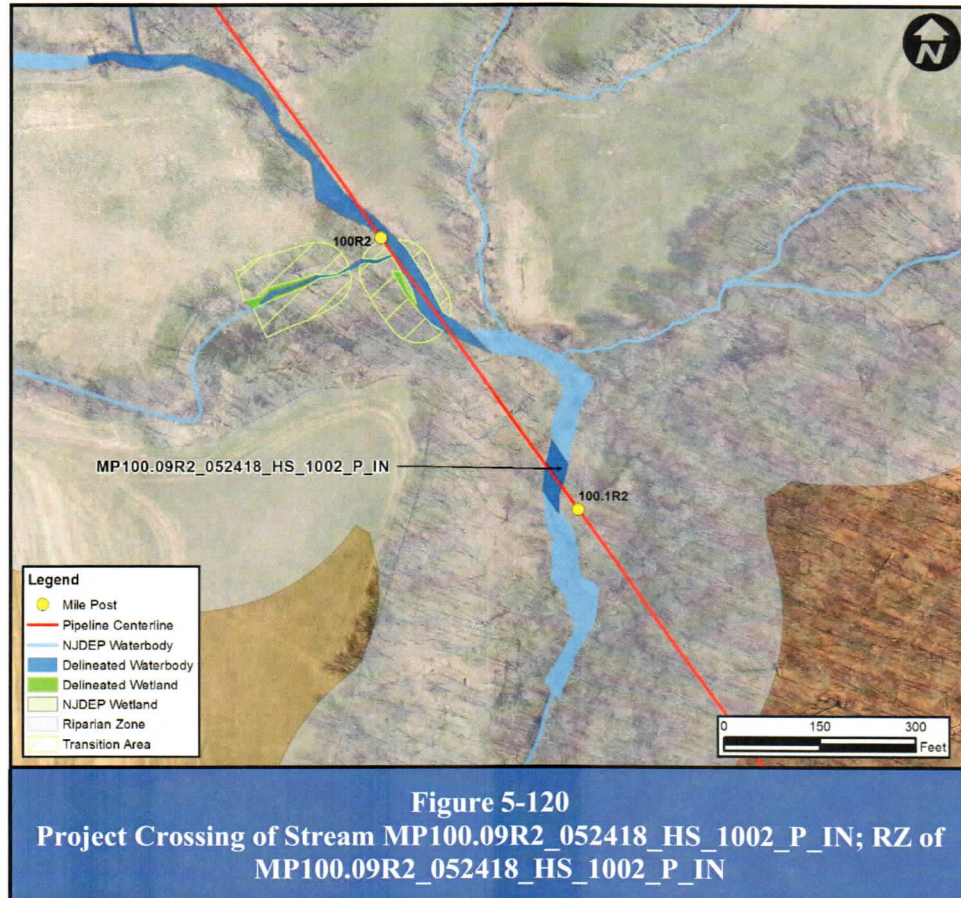


## 5.140 Regulated Crossing 120



### 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

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

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

Stream MP100.09R2\_052418\_HS\_1002\_P\_IN 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 MP100.09R2\_052418\_HS\_1002\_P\_IN is a perennial intermittent stream that drains south to an unnamed tributary of Alexauken Creek.

#### Riparian Zones

RZ of MP100.09R2\_052418\_HS\_1002\_P\_IN is the 300-foot riparian area associated with an Alexauken Creek unnamed tributary. This riparian area is vegetated.

#### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of Alexauken Creek is classified as a trout maintenance freshwater body (FW2-TM(C1)).

### ASSESSMENT

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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

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

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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;

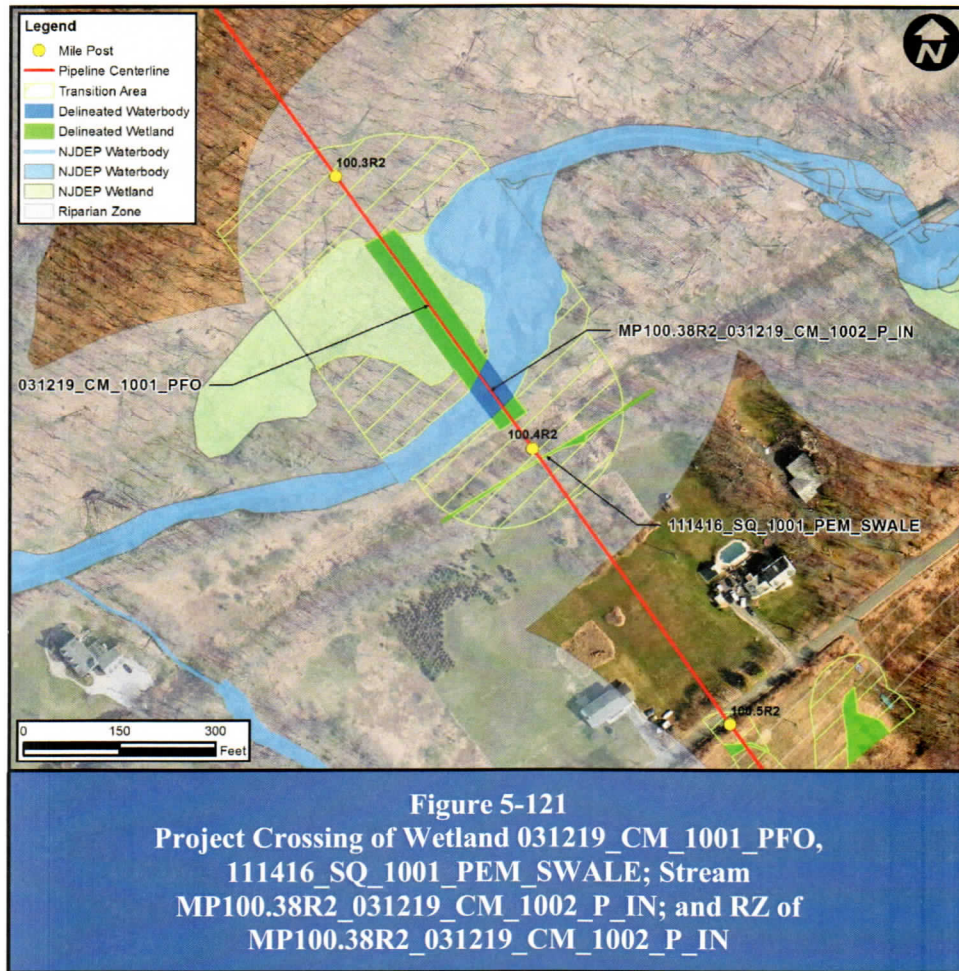
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas 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



## 5.141 Regulated Crossing 121



## INVENTORY

### Wetlands

Wetland 031219\_CM\_1001\_PFO is a field-delineated palustrine forested wetland, which is crossed by the main stem Alexauken Creek (031219\_CM\_1002\_P\_IN). Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 111416\_SQ\_1001\_PEM\_SWALE is a field-delineated palustrine emergent wetland swale. It occurs along the toe of slope of an abandoned railroad bed. 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 031219\_CM\_1001\_PFO has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: bald eagle.

Wetland 111416\_SQ\_1001\_PEM\_SWALE has not been identified as potentially suitable habitat for any threatened or endangered species.

Stream MP100.38R2\_031219\_CM\_1002\_P\_IN has been identified as suitable or potentially suitable habitat for the following State-listed endangered or threatened species: bald eagle.

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 MP100.38R2\_031219\_CM\_1002\_P\_IN is a field-delineated intermediate, perennial stream that flows west through a forested wetland. It is a section of the main stem Alexauken Creek.

### Riparian Zones

RZ of MP100.38R2\_031219\_CM\_1002\_P\_IN is the 300-foot riparian area associated with the stream. This riparian area is vegetated.

### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of Alexauken Creek is classified as a trout maintenance freshwater body (FW2-TM(C1)).

## ASSESSMENT

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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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;

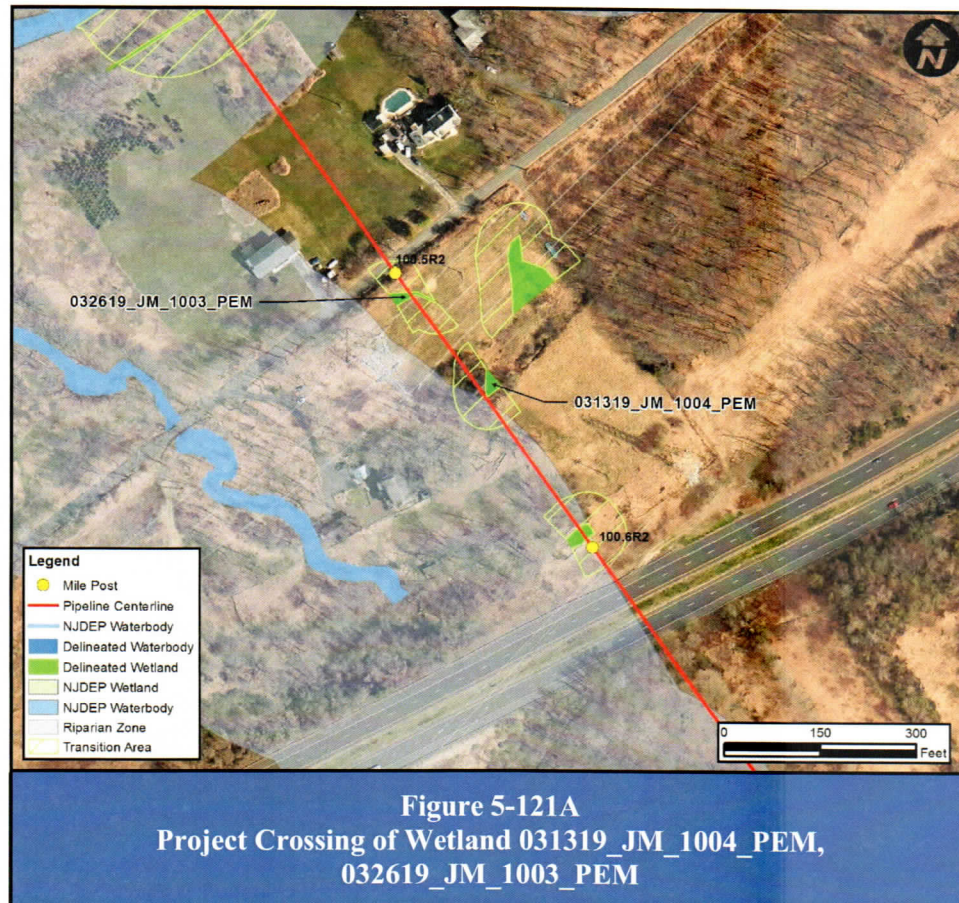
- Regular inspection of construction equipment to ensure proper functioning with appropriate filters and air quality controls;
- Adherence to agency-approved blasting plan;
- Avoidance of work personnel outside of the workspace in adjacent naturalized areas (sensitive habitat areas will be posted); and
- 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.



## 5.142 Regulated Crossing 121A



## INVENTORY

### Wetlands

Wetland 031319\_JM\_1004\_PEM is a field-delineated palustrine emergent wetland occurring adjacent to a forest hedgerow, at the toe of a man-made berm. The feature appears to continue beneath an existing, open-floor shed. Additional information on this wetland can be found in the WDR provided in Attachment F of the Multi-Permit Application.

Wetland 032619\_JM\_1003\_PEM is a field-delineated palustrine emergent wetland occurring 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.

### 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 031319\_JM\_1004\_PEM has not been identified as potentially suitable habitat for any threatened or endangered species.

Wetland 032619\_JM\_1003\_PEM 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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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:

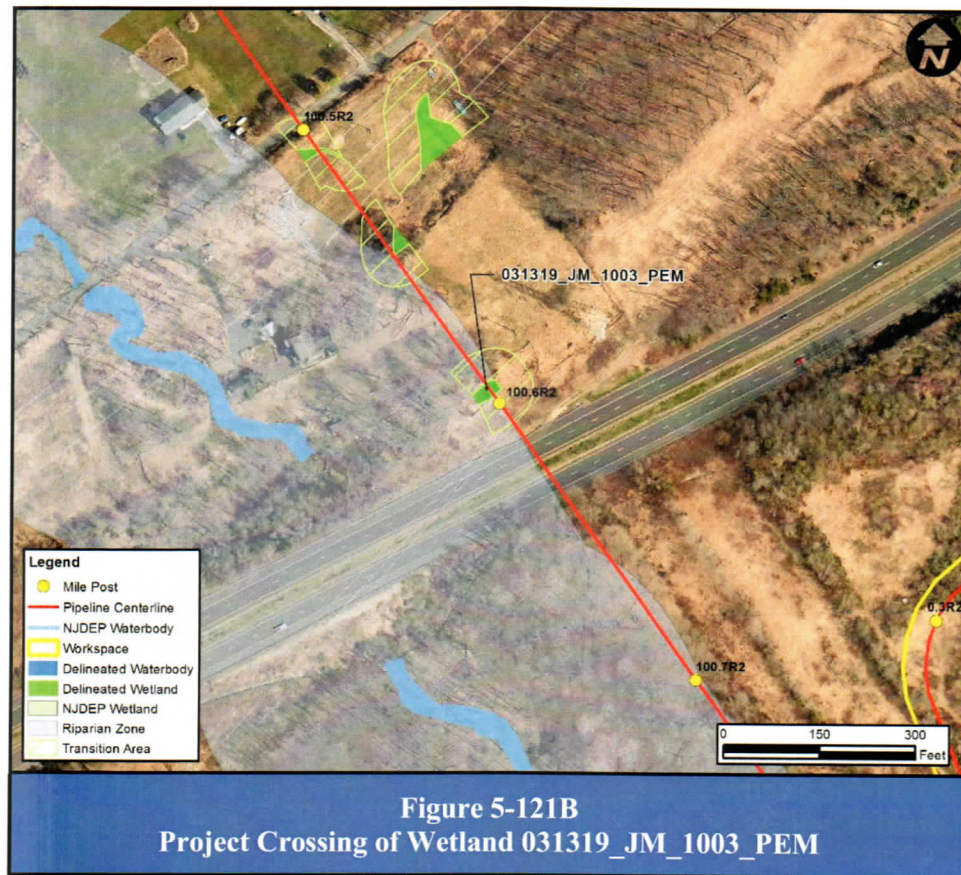
- Delineation of all wetlands in the Project area;
- Avoidance, and minimization of impacts to wetlands to the greatest extent practicable as described in the Alternatives Analysis provided in Attachment K of the Multi-Permit Application;
- Mitigation of unavoidable impacts as described in the Mitigation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

### 5.143 Regulated Crossing 121B



## INVENTORY

### Wetlands

Wetland 031319\_JM\_1003\_PEM is a field-delineated palustrine emergent wetland occurring in a fallow field at the edge of a forest corridor and 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 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 031319\_JM\_1003\_PEM 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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

### Measures Taken to Reduce Potential Adverse Environmental Impacts

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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:

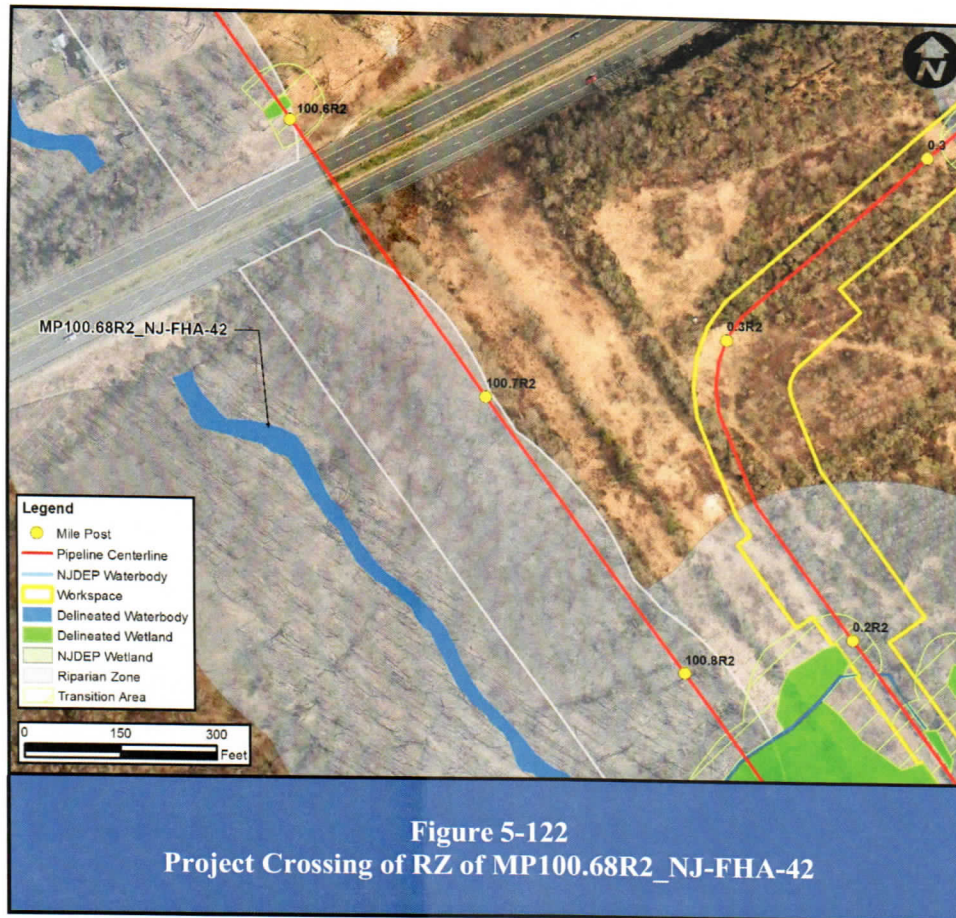
- Delineation of all wetlands in the Project area;

- 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.

#### 5.144 Regulated Crossing 122



#### 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

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

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

RZ of MP100.68R2\_NJ-FHA-42 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

RZ of MP100.68R2\_NJ-FHA-42 is the 300-foot riparian area associated with an off-site unnamed tributary of Alexauken Creek. This riparian area is vegetated.

#### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of Alexauken Creek is classified as a trout maintenance freshwater body (FW2-TM(C1)).

### ASSESSMENT

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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

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

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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;

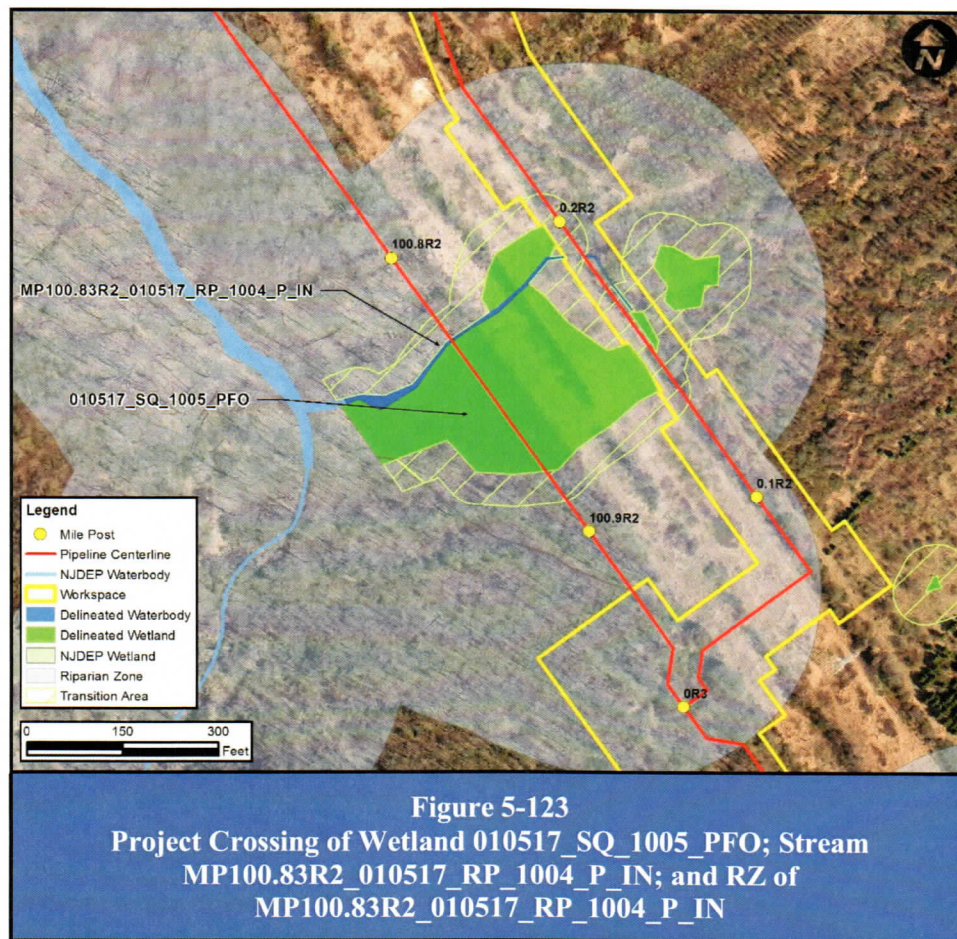
- Minimization of the operational easement width in wetlands;
- Implementation of trenchless technology construction techniques;
- Follow the site-specific *Inadvertent Returns and Contingency Plan* to avoid and minimize potential impacts from inadvertent return;
- Collocation with existing ROW areas 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.

#### 5.145 Regulated Crossing 123



#### 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

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

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

Stream MP100.83R2\_010517\_RP\_1004\_P\_IN 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 MP100.83R2\_010517\_RP\_1004\_P\_IN is a minor ephemeral stream flowing southwest, with a bank width of four feet. The streambed substrate is made up of gravel, sand, and silt. A metal pipe (unburied) occurs in the streambed at the northeastern end of the study corridor.

#### Riparian Zones

RZ of MP100.83R2\_010517\_RP\_1004\_P\_IN is the 300-foot riparian area associated with this stream. This riparian area is vegetated.

#### Fishery Resources

According to the Surface Water Quality Standards N.J.A.C.7:9, this tributary of Alexauken Creek is classified as a trout maintenance freshwater body (FW2-TM(C1)).

### ASSESSMENT

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

HDD is the pipeline construction method proposed at this regulated crossing. Adverse environmental impacts have been 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 impact regulated resources those impacts are both unavoidable and temporary. In consideration of these observations, it is not anticipated that the proposed HDD at this crossing will result in permanent adverse environmental impacts.

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

Utilizing HDD technology minimizes direct impacts to environmentally sensitive areas. To mitigate the inherent risks in HDD construction, PennEast prepared a design for the proposed HDD based on information from a site specific geotechnical investigation and developed a HDD IRCP (Attachment R). 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 3 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.