

APPENDIX K: Floodplains Technical Report

K.1 Existing Conditions

Floodplains are lowland areas adjacent to rivers, lakes or oceans that become inundated when irregular water levels occur. Their value to the natural environment includes water quality, wildlife habitat and flood water control. Floodplains are divided into two zones, the 100-year flood zone and the 500-year flood zone. The 100-year flood zone represents the areas that have a 0.1 percent chance of being inundated within a given year. The 500-year flood zone represents the areas that have a 0.2 percent chance of being inundated within a given year.

Pennsylvania

The Pennsylvania Department of Environmental Protection (PADEP) is the regulating agency responsible for floodplain activities throughout the state. Federal and state legislation protecting floodplains include the National Environmental Policy Act of 1969, Executive Order 11988, Floodplain Management, Clean Water Act, Section 404, Dam Safety and Encroachment Act (PL 1375, No. 325), Clean Streams Law (PL 1987, No. 3941) and the Floodplain Management Act (PL 851, No. 166).

Floodplains along the project corridor in Pennsylvania were identified using the Pennsylvania Department of Environmental Protection (PADEP) Geographic Information Systems (GIS) Floodplains of Northampton, Monroe, Wayne and Lackawanna Counties. FEMA Flood Insurance Rate Maps (FIRM) were additionally used to identify floodplains throughout the study corridor.

New Jersey

The New Jersey Department of Environmental Protection (NJDEP) is the governing body that regulates floodplain activities throughout the state. New Jersey's floodplains are protected by several state and federal acts including the National Environmental Policy Act of 1969, Executive Order 11988, Floodplain Management, Clean Water Act, Section 404 and the Flood Hazard Control Act (NJAC 7.13).

Floodplains along the project corridor in New Jersey were identified using the Federal Emergency Management Agency (FEMA) Flood Insurance Program Geographic Information Systems (GIS) Q3 Flood Data. FEMA Flood Insurance Rate Maps (FIRM) were additionally used to identify floodplains throughout the study corridor.

K.2 Environmental Effects

Pennsylvania

The alignment in Pennsylvania is the existing Lackawanna freight rail line from Scranton, Lackawanna County to the connection point at Slateford Junction, Upper Mount Bethel Township, Northampton County. The inactive right-of-way section is approximately 1 mile from the Delaware Water Gap bridge to the connection point with the Lackawanna freight line at Slateford Junction.

The alignment is located intermittently within the 100-year flood zone of several different water bodies throughout the alignment. Construction and staging area activities will be contained within the existing right-of-way. Disturbances to floodplains would be minimal along the corridor because the alignment is

within an active freight railroad right-of-way corridor. The following locations along the project corridor are potential areas of concern:

Potential Station and Yard Locations:

- Scranton Yard, Lackawanna County – This potential yard facility location is not situated within a 100-year floodplain area.
- Scranton Station, Lackawanna County – This potential station location is not situated within a 100-year floodplain area.
- Tobyhanna Station, Coolbaugh Township, Monroe County – This potential station location is not located within a 100-year floodplain. The property includes former railroad station buildings adjacent to the right-of-way.
- Pocono Mountain Station, Coolbaugh Township, Monroe County – This potential station location is not situated within a 100-year floodplain area.
- Analomink Station, Stroud Township, Monroe County - This potential station location is not situated within a 100-year floodplain area. The potential station location is however located within the 500-year flood zone of Brodhead Creek, which is adjacent to the right-of-way.
- East Stroudsburg Station, East Stroudsburg Borough, Monroe County - This potential station location is not situated within a 100-year floodplain area. It is located in the town of East Stroudsburg adjacent to the rail right-of-way and is sited on an open grass field.
- Delaware Water Gap, Smithfield Township, Monroe County – This potential station site is located within the 100-year floodplain of Brodhead Creek adjacent to the rail right-of-way. The site consists of active recreational fields for the township.

Structures:

- MP 127.03 - Concrete and Stone Arch Bridge – Roaring Brook apron may need to be replaced. Temporary disturbances may occur to the surrounding area.
- MP 119.59 - Concrete Arch Bridge – The crib wall may need to be replaced, and if so temporary disturbances may occur to surrounding areas.
- MP 117.76 - Concrete Arch / Culvert - Temporary stream diversion may be done during rehabilitation activities. Temporary disturbances may occur to the surrounding area.
- MP 112.17 - Stream Spillway minor disturbances may occur during rehabilitation of headwall and wing wall.
- MP 77.50 Bridge - The wing wall of this bridge would need repair and is within the 100- year flood zone. Temporary disturbances would occur to the surrounding area.
- MP 73.10 Delaware River Bridge – Extensive rehabilitation would be performed temporary disturbances to the surrounding area may occur.

New Jersey

The railroad right-of-way in New Jersey crosses and is adjacent to 100-year flood zone areas in Warren, Sussex and Morris Counties. The alignment crosses the Delaware River into New Jersey from Upper Mount Bethel Township, Northampton County, Pennsylvania. The alignment is in an existing abandoned right-of-way beginning in Knowlton Township, Warren County and ending at Port Morris yard in Roxbury Township, Morris County.

The alignment is located intermittently within the 100-year flood zone of several different water bodies throughout the alignment. In some locations, the right-of-way is elevated and the associated river/stream flows underneath the alignment through a bridge or culvert. The following locations along the project corridor are potential areas of concern where the alignment crosses or is within an existing floodplain:

- MP 73.00 - Delaware Water Gap, Knowlton Township, Warren County – rehabilitation of the existing bridge may cause minimal disturbances to surrounding floodplain areas.
- MP 70.63 - Paulins Kill, Knowlton Township, Warren County - The Paulins Kill Viaduct is a reinforced concrete bridge that crosses over the Paulins Kill River and associated floodplain. The bridge is an elevated structure that crosses the floodplain at Right-of-way construction activities would be contained within the bridge boundaries. Minimal disturbances may occur due to the rehabilitation efforts.
- MP 57.03 - Pequest River # 2 areas in Green Township, Sussex County - A tributary of the Pequest River crosses underneath the right-of-way that is elevated from the surrounding area along this section of the corridor. A culvert is located beneath the right-of-way providing the rivers passage.
- MP 55.85 - Pequest River # 1 areas in Green Township, Sussex County - The Pequest River crosses underneath the right-of-way at approximately. The right-of-way is elevated from the surrounding area along this section of the corridor. A culvert is located beneath the right-of-way providing the rivers passage.
- MP 46.27 - Musconetcong River, Roxbury Township, Morris County and Byram Township, Sussex County. The Mustconetcong River crosses under the railroad right-of-way and is approximately 50 feet higher in elevation than the river crossing. Disturbances are not expected to occur to this 100-year floodplain.

Potential Station Locations:

- Blairstown Station, Blairstown Township, Sussex County – This potential station location is not situated within a 100-year floodplain area.
- Andover Station, Andover Township - Roseville Road, Sussex County - This potential station location is not situated within a 100-year floodplain area.

K.3 Mitigation

Executive Order 11988 requires measures to minimize restore and preserve natural floodplain values. Measures would include using structures to cross floodplains instead of fill material, providing adequate flow circulation, reducing grading requirements and preserving natural drainage when possible.

Pennsylvania

A Water Obstruction and Encroachment Permit would be required for activities in floodplain areas from the Pennsylvania Department of Environmental Protection. Construction and staging area activities are anticipated to be contained within the existing right-of-way. Minimal disturbances to floodplains are anticipated along the corridor. Bridge and culvert replacement along the corridor may temporarily disturb floodplain areas.

New Jersey

Mitigation for impacts to floodplain areas would require a New Jersey Department of Environmental Protection Stream Encroachment Permit issued from the Land Use Regulation Program under the Flood Hazard Area Control Act, N.J.S.A. 58:16A. The Stream Encroachment permit may be applied for in conjunction with an Individual Freshwater Wetlands Fill Permit.