

## **17. Navigable Waterways and Coastal Zones**

### **17.1. Chapter Overview**

#### **17.1.1. Introduction**

The following chapter discusses the potential for project improvements to adversely impact navigable waterways and coastal zone areas within the Northern Branch study area. The US Coast Guard (USCG) defines navigable waterways as those “waters that are subject to the ebb and flow of the tide shoreward to the mean high water line and/or are presently used, or have been used in the past or may be susceptible to transport interstate or foreign commerce.” The U.S. Army Corps of Engineers (USACE) shares a similar definition. The USCG has regulatory authority over the construction, reconstruction, or modification of bridges and causeways across navigable waters of the United States, pursuant to Title 33 of the Code of Federal Regulations (CFR), Parts 114-115. The USACE has regulatory authority over construction of structures, except bridges, and for discharge of dredged or fill material in navigable waters of the United States, pursuant to 33 CFR 320-330.

Coastal zone areas are governed to protect coastal land and marine resources within certain distances from the coastline. According to the state’s Coastal Zone Boundary Map, the Northern Branch Corridor is not located within the Coastal Zone; therefore, conformance with the state’s coastal zone policies is not required.

This section identifies existing navigable waterways for each municipality within the Northern Branch Corridor and discusses any potential impacts and mitigation measures associated with the proposed project.

#### **17.1.2. Summary of Findings**

Light Rail to Tenafly North (Preferred Alternative) and Light Rail to Englewood 4 will result in the same potential for impact to navigable waterways. Bellmans Creek and Wolf Creek, the only navigable waterways affected by project improvements, are located in Fairview, which is a location common to both alternatives. Under either Build Alternative, proposed project improvements include a re-construction of the existing bridges over these waterways in Fairview. Construction activities are anticipated to include widening and excavation, as well as the placement of materials in and around the structure over the waterways. Applicable permitting including a Section 10 Permit from the USACE and a Section 9 Permit from the USCG would be required prior to the commencement of construction.

At Bellmans Creek the proposed work will require a temporary disturbance of the stream bed of approximately 2,650 square feet. Permanent disturbance to the stream bed is anticipated to be approximately 1,000 square feet.

Minor rehabilitation work will be performed on the two steel deck girder structures currently located at Wolf Creek. Tie replacement and minor structure rehabilitation is the only work anticipated for this bridge. Temporary disturbance to the stream bed is anticipated to be 3,600 square feet. No permanent disturbance is planned.

The construction of the bridges over Bellmans Creek and Wolf Creek are not expected to result in impacts to the navigability of the waterways as the bridges would be constructed in accordance with USCG parameters and as stipulated by the Section 10 Permit from the ACOE. The navigability of the waterways is expected to remain to the same extent as prior to construction. Additionally, no navigable waterways are located within or adjacent to proposed station sites along the Northern Branch corridor.

## 17.2. Methodology

A review of navigable waterways, as defined by the USCG and USACE, was conducted to determine the presence of existing navigable waterways that may be found within the Northern Branch study area. Additionally, the NJDEP's Head of Tides geographic information systems was utilized to identify the Head of Tide (HOT) point on tidally-influenced watercourses at mean high water. All watercourse areas seaward of this point are considered tidal and are thus navigable waterways. Watercourse areas landward of this point are under the jurisdiction of the NJDEP pursuant to a 1994 Memorandum of Agreement between the State of New Jersey and the USACE delegating Section 404 authority to NJDEP. For the purposes of compliance with those regulations concerned with the maintenance of navigable waterways under the jurisdiction of the USACE and USCG, the following sections address the waterways that are tidally influenced. Impacts to areas landward of the HOT point are addressed in Chapter 14: Water Quality.

## 17.3. Environmental Review

The following section describes the environmental review as it pertains to navigable waterways. For the purposes of this analysis this environmental analysis, area existing conditions, potential impacts and mitigation methods are addressed at the municipal level.

As seen in Figure 17-1, designated navigable waterways within the Northern Branch study area include Overpeck Creek, Cromakill Creek, Bellmans Creek and Wolf Creek. Overpeck Creek originates in Tenafly east of the railroad alignment and flows in a south-southwesterly direction through the project corridor, where it joins the Hackensack River west of the corridor in Ridgefield Park. This waterway crosses through multiple municipalities including Englewood, Leonia, Palisades Park and Ridgefield. Cromakill Creek, Bellmans Creek and Wolf Creek each cross the alignment only once.

### 17.3.1. North Bergen

#### 17.3.1.1. Existing Conditions

Cromakill Creek is located in the southern portion of the study corridor. The HOT point is approximately 1,300 feet west of the North Branch Corridor. However, there are no navigable waterways that cross or are immediately adjacent to the rail right-of-way or station or VBF in North Bergen.

#### 17.3.1.2. Potential Impacts and Mitigation

#### **No Build Alternative**

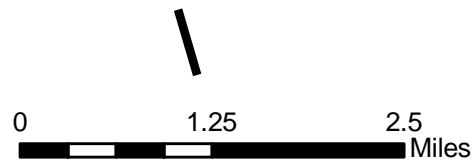
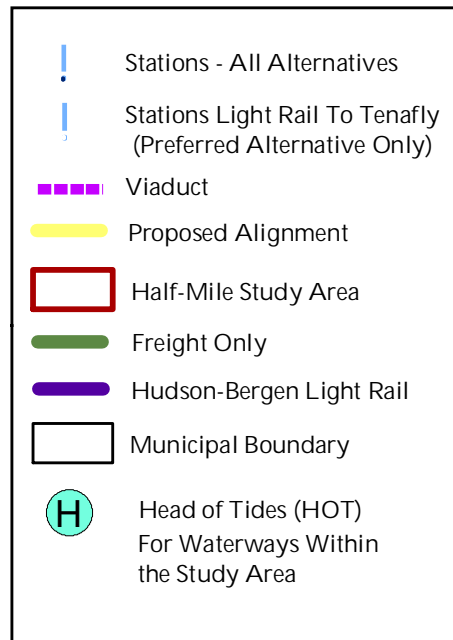
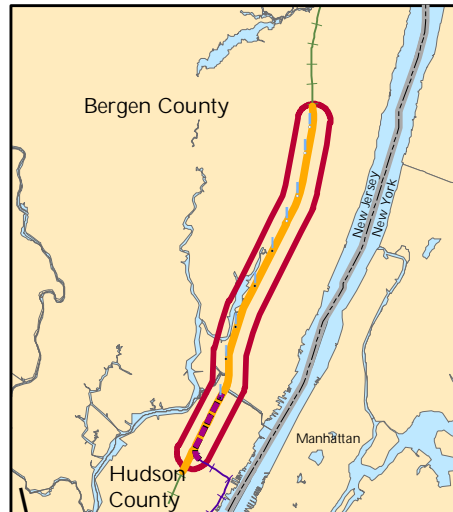
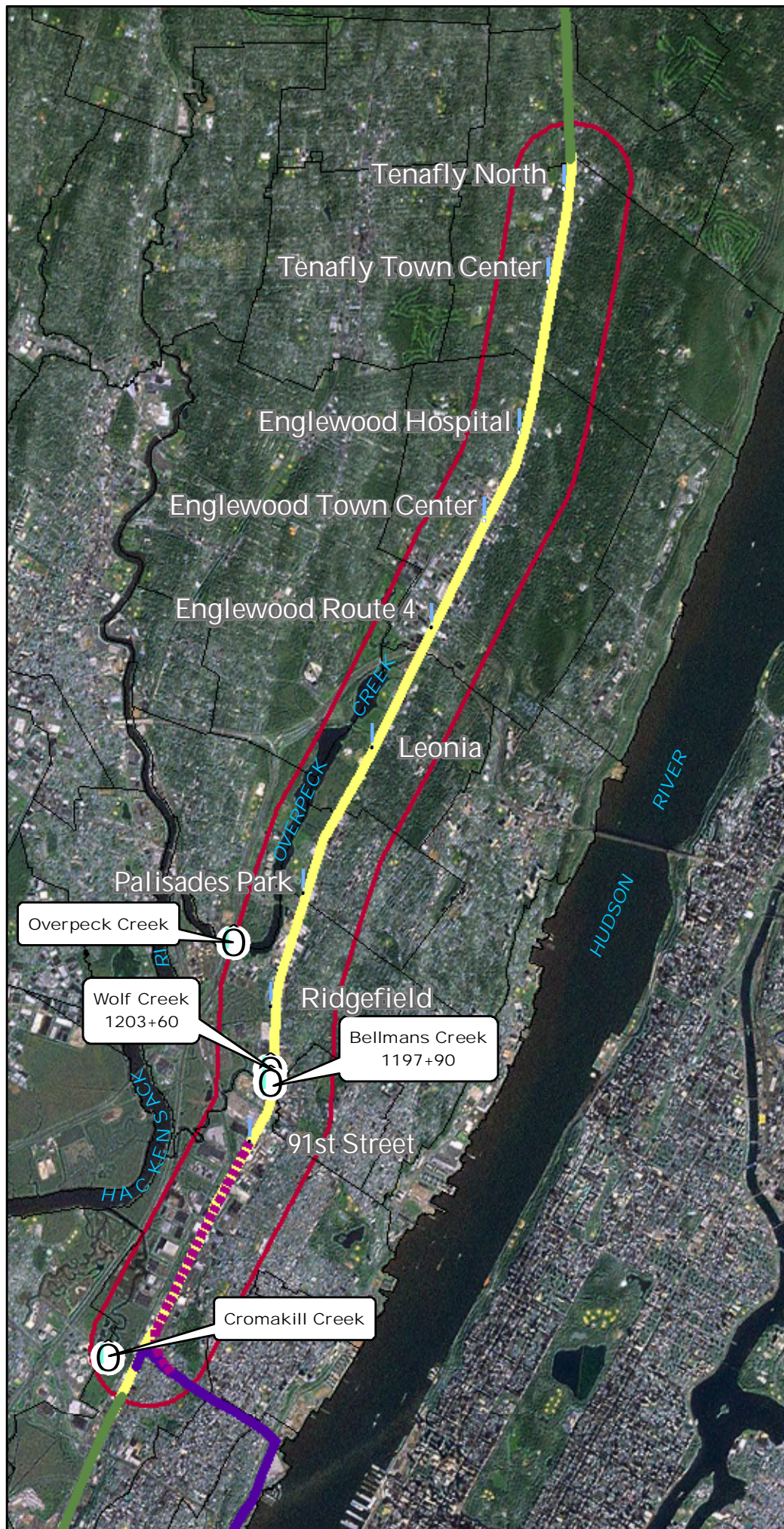
Under the No Build Alternative, no project-related impacts would occur to Cromakill Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

#### **Light Rail to Tenafly (Preferred Alternative ) and Light Rail to Englewood Route 4**

Both Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation through North Bergen. Consequently, the discussion below applies to both alternatives.

# NAVIGABLE WATERWAYS

Northern Branch Corridor  
Figure 17-1



*Impacts* – Cromakill Creek, the closest navigable waterway through North Bergen, is located more than 0.25 miles west of the right-of-way and would remain unaffected by the implementation of the proposed rail service. No significant adverse impacts are anticipated as there are no navigable waterways crossed by the rail alignment or stations or VBF in North Bergen.

*Mitigation* – None is required.

### **17.3.2. Fairview**

#### *17.3.2.1. Existing Conditions*

In Fairview, the alignment crosses two navigable waterways, Bellmans Creek and Wolf Creek. These waterways, both major tributaries of the Hackensack River, are located south of Ridgefield Station. Wolf Creek diverges from Bellmans Creek just west of the Northern Branch Corridor. South of the Ridgefield Station the alignment crosses Wolf Creek and Bellmans Creek. The HOT points for the two creeks are represented by the bridges over the two crossings just north of the 91<sup>st</sup> Street Station.

#### *17.3.2.2. Potential Impacts and Mitigation*

#### **No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to Bellmans Creek or Wolf Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

#### **Light Rail to Tenafly (Preferred Alternative ) and Light Rail to Englewood Route 4**

Both Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation through Fairview. Accordingly, the discussion below applies to both alternatives.

*Impacts* – The proposed re-construction of the existing bridges over Bellmans Creek and Wolf Creek in Fairview will involve widening, excavation, and the placement of materials in and around the structure over the waterways (Refer to Table 17-1).

**Table 17-1: Bridges Over Navigable Waters Proposed for Modification**

| <b>No.</b> | <b>Waterway</b> | <b>County</b> | <b>Location</b>                     | <b>Proposed Modifications</b> |
|------------|-----------------|---------------|-------------------------------------|-------------------------------|
| 1          | Bellmans Creek  | Bergen        | Border of North Bergen and Fairview | Add adjacent span             |
| 2          | Wolf Creek      | Bergen        | Border of Fairview and Ridgefield   | Minor rehabilitation          |

Source: Jacobs, 2009.

A Section 10 Permit from the USACE and a Section 9 Permit from the USCG would be required prior to the commencement of construction. A Section 10 Permit is required if any work is to be performed in, over, or under a navigable waterway. A Section 9 Permit is required if any bridge work is intended over a waterway that is considered navigable by the USCG. It is likely that construction activities will temporarily disrupt portions of Bellmans Creek and Wolf Creek; however, long-term impacts associated with these structures are not anticipated.

Construction activities at Bellmans Creek will consist of adding an adjacent span to the existing steel deck girders on the east side to accommodate the new track. The assumed construction procedure is to remove the existing wing-walls, build cofferdams for the new substructure and construct the new bridge. The proposed work will require a temporary disturbance of the stream bed of approximately 2,650 square feet. Permanent disturbance to the stream bed is anticipated to be approximately 1,000 square feet.

Minor rehabilitation work will be performed on the two steel deck girder structures currently located at Wolf Creek. Tie replacement and minor structure rehabilitation is the only work anticipated for this bridge. Temporary disturbance to the stream bed is anticipated to be 3,600 square feet. No permanent disturbance is planned. Railroad infrastructure modifications may be subject to change once formal structural design plans have been completed.

Construction activities along the project alignment will take place when right-of-way traffic is minimal. Waterways will not be constrained by the aforementioned construction operations.

*Mitigation* – The construction of the bridges over Bellmans Creek and Wolf Creek are not expected to result in impacts to the navigability of the waterways as the bridges would be constructed in accordance with USCG parameters and as stipulated by the Section 10 Permit from the ACOE. The navigability of the waterways is expected to remain to the same extent as prior to construction. Best management practices (BMP's) and containment mechanisms will be implemented during construction activities, as described in Chapter 27: Construction.

### **17.3.3. Ridgefield**

#### *17.3.3.1. Existing Conditions*

Overpeck Creek flows through several corridor municipalities. In Ridgefield, this waterway is situated to the west of the rail alignment. The HOT point for Overpeck Creek is located 2,000 northwest of the Ridgefield Station. There are no navigable waterways that cross or are immediately adjacent to the rail right-of-way in Ridgefield.

#### *17.3.3.2. Potential Impacts and Mitigation*

#### **No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to Overpeck Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

#### **Light Rail to Tenafly (Preferred Alternative ) and Light Rail to Englewood Route 4**

Both Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation through Ridgefield. Consequently, the discussion below applies to both alternatives.

*Impacts* – Overpeck Creek, the closest navigable waterway through Ridgefield, is located more than 0.25 miles west of the right-of-way, and would remain unaffected by the implementation of the proposed rail service. No significant adverse impacts are anticipated as there are no navigable waterways crossed by the rail alignment or station in Ridgefield.

*Mitigation* – None is required.

#### **17.3.4. Palisades Park**

##### *17.3.4.1. Existing Conditions*

In Palisades Park, Overpeck Creek is located to the west of the rail alignment. This waterway is not located immediately adjacent to or crossed by the rail right-of-way in Palisades Park.

Overpeck Creek is not located within or adjacent to the proposed Palisades Park station area.

##### *17.3.4.2. Potential Impacts and Mitigation*

#### **No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to Overpeck Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

#### **Light Rail to Tenaflly (Preferred Alternative ) and Light Rail to Englewood Route 4**

Both Light Rail to Tenaflly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation through Palisades Park. Consequently, the discussion below applies to both alternatives.

*Impacts* – Overpeck Creek, the closest navigable waterway through Palisades Park, is located more than 0.25 miles west of the right-of-way and would remain unaffected by the implementation of the proposed rail service. No significant adverse impacts are anticipated as there are no navigable waterways crossed by the rail alignment or station in Palisades Park.

*Mitigation* – None is required.

#### **17.3.5. Leonia**

##### *17.3.5.1. Existing Conditions*

In Leonia, Overpeck Creek is located to the west of the rail alignment. Overpeck Creek is not located immediately adjacent to or crossed by the rail right-of-way through Leonia.

##### *17.3.5.2. Potential Impacts and Mitigation*

#### **No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to Overpeck Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

**Light Rail to Tenafly (Preferred Alternative ) and Light Rail to Englewood Route 4**

Both Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4 are identical in their potential impacts and mitigation through Leonia. Consequently, the discussion below applies to both alternatives.

*Impacts* – Overpeck Creek, the closest navigable waterway through Leonia, is located more than 0.25 miles west of the right-of-way and would remain unaffected by the implementation of the proposed rail service. No significant adverse impacts are anticipated as there are no navigable waterways crossed by the rail alignment or station in Leonia.

*Mitigation* – None is required.

**17.3.6. Englewood***17.3.6.1. Existing Conditions*

Overpeck Creek flows west of the rail alignment through Englewood until it crosses the rail right-of-way through an open culvert near Dean Street, just north of Englewood Hospital. However, this crossing of Overpeck Creek is beyond the HOT point; therefore, it is not considered to be navigable in this area.

*17.3.6.2. Potential Impacts and Mitigation***No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to Overpeck Creek as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

**Light Rail to Tenafly (Preferred Alternative)**

*Impacts* – Overpeck Creek crosses the rail right-of-way through an open culvert in the vicinity of Dean Street, just north of Englewood Hospital. As this crossing is beyond the HOT point for Overpeck Creek, it is not navigable. Additionally, the alignment and the stations are located a more than 0.25 miles away from the HOT point. Therefore, no significant adverse impacts are to navigable waterways are anticipated.

*Mitigation* – None is required.

**Light Rail to Englewood Route 4**

*Impacts* – There are no navigable waterways that cross or are adjacent to the rail right-of-way in Englewood south of Route 4. Overpeck Creek, the closest navigable waterway through Englewood, is located more than 0.25 miles west of the right-of-way that it would remain unaffected by the implementation of the proposed rail service. No significant adverse impacts are anticipated as there are no navigable waterways crossed by the rail alignment through Englewood up to Route 4.

*Mitigation* – None is required.

### **17.3.7. Tenafly**

#### *17.3.7.1. Existing Conditions*

Overpeck Creek originates in Tenafly east of the railroad alignment until it crosses the rail right-of-way just north of Englewood Hospital. However, this crossing of Overpeck Creek is beyond the HOT point; therefore, it is not considered to be navigable in this area.

#### *17.3.7.2. Potential Impacts and Mitigation*

##### **No Build Alternative**

Under the No Build Alternative, no project-related impacts would occur to navigable waterways as the proposed project would not be implemented. Continued rail operations within the CSX right-of-way would not result in adverse impacts to navigable waterways. It is probable that the limits of navigable waterways and designated Coastal Zone Boundaries may change in the absence of the proposed action due to overall growth and natural ecological processes within the study area. All proposed developments within the study area would be reviewed on a case-by-case basis to ensure the protection of federally-regulated navigable waterways and to ensure concurrence with the state's coastal zone management program.

##### **Light Rail to Tenafly (Preferred Alternative)**

*Impacts* – The alignment and the stations are located more than 0.25 miles away from the HOT point of Overpeck Creek; therefore, no significant adverse impacts to navigable waterways are anticipated.

*Mitigation* – None is required.

##### **Light Rail to Englewood Route 4**

*Impacts* – No significant adverse impacts are anticipated as Light Rail to Englewood Route 4 would not extend to Tenafly.

*Mitigation* – None is required.

### **17.4. Summary of Potential Environmental Effects**

There is no difference between the two Build Alternatives under consideration, Light Rail to Tenafly (Preferred Alternative) and Light Rail to Englewood Route 4, in terms of their potential to impact navigable waterways. The same navigable waterways, Bellmans Creek and Wolf Creek, would be crossed by the rail alignment in the section of the proposed project common to both which extends between North Bergen and the proposed Englewood Route 4 Station. A re-construction of the existing bridges proposed for the two above-referenced waterways will involve widening, excavation, and placement of materials in and around the structure over the waterways. The re-construction effort is not anticipated to result in impacts to the navigability of the waterways as the bridges would be constructed in accordance with applicable USCG and ACOE regulations. The navigability of the waterways is expected to remain similar to existing conditions. In addition, there are no navigable waterways within or adjacent to proposed station sites along the Northern Branch Corridor. As such, no navigable waterways impacts are anticipated under either Build Alternative.