

directly to the adverse effects resulting from the GSB Project, and have support among most of the agencies and Consulting/Interested Parties. Note that other measures will be considered in response to public comments on this DSEIS. The draft mitigation measures, entitled “*Newington-Dover 11238S, Section 106 – Draft Mitigation Stipulations*,” dated March 31, 2021, are detailed in **Appendix I**, and currently include the following:

- › Marketing the GSB for re-use in compliance with 23 USC Section 144;
- › Documentation of the GSB in accordance with the Historic American Engineering Record standards;
- › Promotion and providing access to the NHDOT Historic Bridge Inventory and Management Plan;
- › Development of an interpretive program including on-site interpretive panels and an installation at the Woodman Museum in Dover;
- › Development of a plan for the rehabilitation of the Newington Railroad Depot and possible transfer of the building along with the state-owned land on Bloody Point to the Town of Newington; and
- › Completion of a feasibility study of a future link between the Dover Community Trail and the new/rehabilitated GSB, including development of interpretive signage to highlight the history of the Newington-Dover Branch Line.

The significance of the GSB is tied to its design and engineering, parts of which are invisible to observers, and its role in the development of the regional transportation network, much of which has been overlain by subsequent modernizations in this still-evolving landscape. Thus, the institution of an educational interpretive program has been discussed as particularly apt, as it allows the presentation of historic themes that are not readily apparent. Bloody Point and Hilton Park offer views of the bridge crossing, which would allow a direct visual connection between these areas and the site of the GSB, strengthening the message of an interpretive program. Other benefits include the ability to build upon mitigation carried out to resolve adverse effects resulting from the replacement of the Lake Champlain Bridge, which had a similar history and significance, and the potential use of the proposed new bridge as an additional location for interpretive materials.

Understanding the specific maintenance and preservation needs of each bridge type is essential to their long-term care and would better inform the public agencies that serve as their stewards amid changing needs and transforming land use. The NHDOT is preparing a historic bridge inventory and management plan to address these needs. The education potential of the conclusions and guidelines is pertinent to the story of the GSB over the last 90 years and would allow municipalities and agencies to better program their maintenance into annual budgets and long-term planning. Utilizing mitigation measures that expand the reach of this educational potential is a meaningful use of resources.

The Newington Railroad Depot and Toll House (NWN0168/ NR #10000187) property on Bloody Point is underutilized. Although it is currently owned by the State, it has previously been leased by the Town of Newington, and discussions regarding a renewed lease or a transfer of ownership to the Town have occurred sporadically over the last few decades. Multiple parties are supportive of rehabilitating the Depot building and developing the recreational space surrounding it, which

extends to the waterfront overlooking the bridge crossing. Logistical complications include ensuring rehabilitation is carried out in a historically-sensitive manner; the identification of a feasible use for the building; initial and operational costs associated with improving the property, and the legal complications of land transfer.

While other off-site mitigation ideas have been discussed, there is ample opportunity to develop appropriate and relevant mitigation that have a close connection to the effects of the Project. Thus, consideration of measures that are geographically distant from the GSB may not be necessary or appropriate.

The mitigation measures continue to be refined through the Section 106 consultation process, including input by stakeholders, Consulting and Interested Parties, and the public. Once finalized, the measures will be incorporated into a new MOA.

3.11 Contamination and Hazardous Materials

As defined by the US Environmental Protection Agency, hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. The NHDES defines hazardous waste as a waste which may pose a present or potential threat to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Federal polices, regulations, and guidance that may pertain to hazardous materials include:

- › Toxic Substances Control Act Polychlorinated Biphenyl regulations, Title 40 CFR 761;
- › Toxic Substances Control Act, 15 USC 2601-2692 including the Asbestos Hazard Emergency Response Action;
- › Occupational Safety and Health Administration (OSHA) Lead in Construction Standard, Title 26 CFR 1926.62;
- › OSHA Standards for Hazardous Materials, Title 29 CFR 1910 and 1926;
- › Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended, 42 USC 9601 *et seq.*; and RCRA and Superfund Amendments and Reauthorization Act, 42 USC 6901 *et seq.*;
- › USDOT Hazardous Materials Transportation act of 1975 as amended, 49 USC 5101-5127.

State polices, regulations and guidance that may pertain to hazardous materials include:

- › NHDES Env-Or 600 Contaminated Site Management
- › New Hampshire Statues Title X Chapter 147-A Hazardous Waste Management

3.11.1 Affected Environment

An assessment of potential petroleum and hazardous materials sites at the corridor level was reported in the 2007 FEIS to identify existing conditions including the release or threat of release of oil and/or hazardous materials (OHM) within the Study Area. An online file review was conducted in 2021 to identify properties within the Study Area that have had a release or pose a threat of release of OHM, and which may impact the environmental quality of the Study Area.

Included in these reviews were federal and state environmental databases from EDR® and the NHDES.

Based on a review of the 2007 assessment and online file review in 2021, no properties impacted by hazardous materials were identified within the Study Area. However, there are four properties near the Study Area that based on their regulatory listing have the potential to impact environmental conditions within the Study Area. A description of these properties is provided in **Table 3.11-1** below. The location of these NHDES listed properties and associated Groundwater Management Zone (GMZs) are included in **Figure 3.11-1**.

Table 3.11-1 NHDES Listed Properties within 1,000 feet of the Study Area

Address	Property Name	City	NHDES ID	Databases	Spill Status
410 Shattuck Way	Tradbe Treatment & Recycling of Newington	Newington	17240	Hazardous Waste Generator, Solid Waste Storage Tank Program, Initial Response Spill Site, Leaking underground storage tank	Closed
1149 Spaulding Turnpike	Mitchell's Gulf	Newington	4342	Hazardous Waste Generator, Underground Storage Tank Program, Leaking underground storage tank	Active
430 Dover Point Road	K-9 KAOS	Dover	60233	Initial Response Spill Site	Closed
NH 16	Former Newington Country Store	Newington	17190	Leaking Underground Storage Tank	Active

In October 2008, marine sediments within Little Bay were sampled as part of the larger Newington-Dover Spaulding Turnpike Improvement Project for purposes of complying with Clean Water Act Section 401 Certification requirements. Sediment analytical results from the sampling event indicating that eight contaminants detected in marine sediments were above the threshold effect concentrations and four contaminants were identified above probable effect concentrations. These contaminants included polyaromatic hydrocarbons such as 2-methylnaphthalene, fluoranthene, naphthalene and pyrene as well as metals including copper, lead, mercury, and nickel. However, it should be noted that all concentrations of contaminants detected in marine sediments were below the NHDES Contaminated Soil Disposal and Reuse Criteria.

In 2009, soil and groundwater within the vicinity of the larger Newington-Dover, Spaulding Turnpike Improvements Project were sampled in order to assess potential OHM concerns

associated with the Spaulding Turnpike Improvements Project. With the exception of arsenic, all soil and groundwater results were below the applicable NHDES regulatory thresholds. Arsenic was detected above the NHDES Soil Category 1, 2, and/or 3 standards. The elevated arsenic concentrations were attributed to the nature of the native marine deposits throughout the area.

In 2018, NHDES initiated rulemaking to establish Maximum Contaminant Levels and Ambient Groundwater Quality Standards (AGQS) for four PFAS: perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid and perfluorohexane sulfonic acid. The current standards, ranging from 11 to 18 nanograms per liter, became effective on September 30, 2019. Under these rules, groundwater that has the potential to have PFAS-impacted groundwater above AGQs may be subject to management through a GMP.

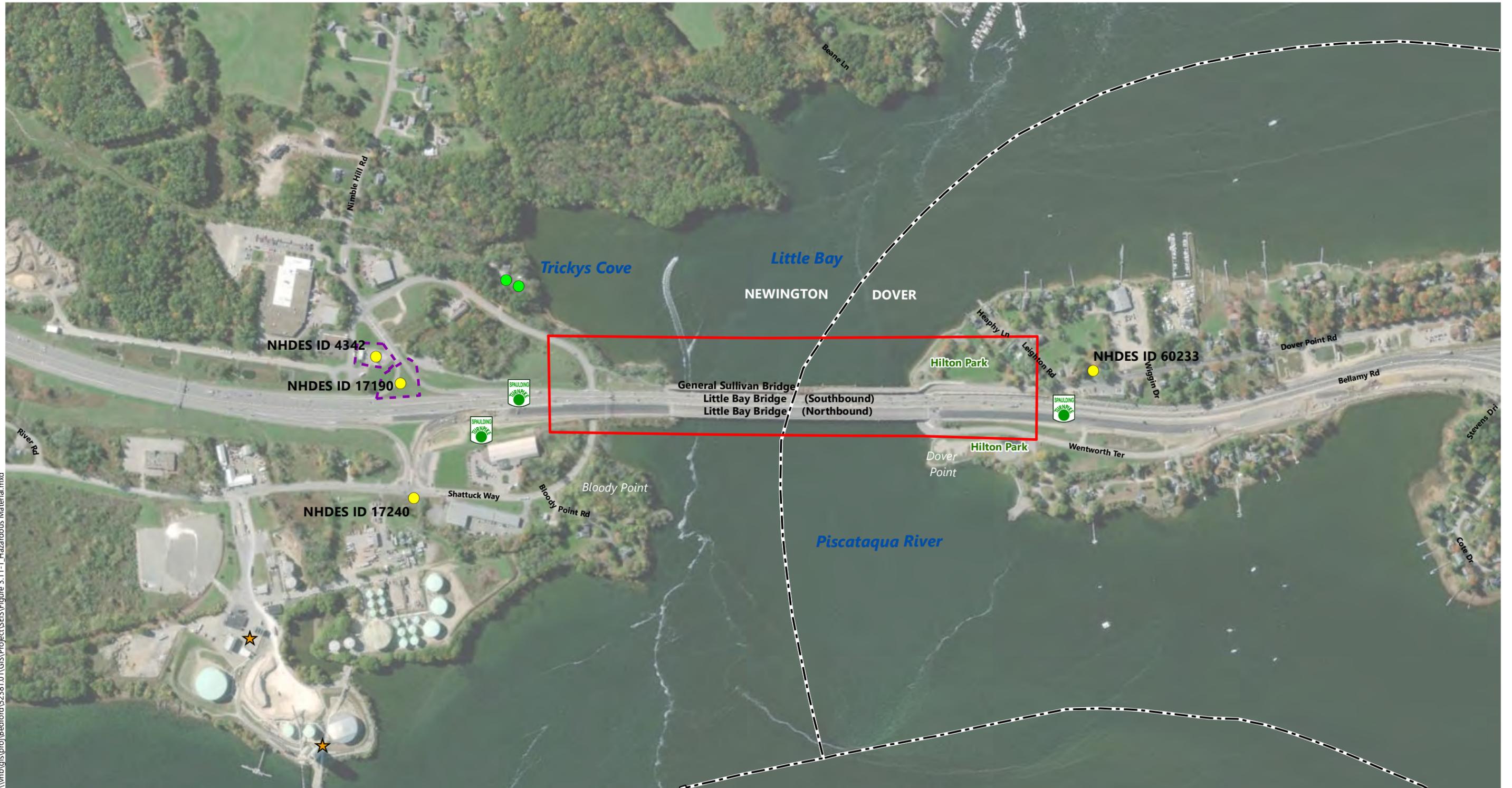
The Pease Airforce Base EPA Superfund Site is a remediation site being addressed by the United States Air Force for the presence of various petroleum plumes associated with the historical use of the property. In 2012, initiatives begun to assess for the presence of PFOS and PFOA at the Pease Airforce Base, which subsequently identified elevated concentrations of PFOS and PFOA across a portion of the Air Force Base. The petroleum plumes present at the Pease Air Force Base are actively being monitored under a GMZ located along the flight line of the Air Force Base. According to the 2018 Annual Report, an Airfield Interim Mitigation System is being constructed to treat the PFOS and PFOAs in groundwater within the Air Force Base. The GMZ associated with the Pease Air Force Base is located more than 1.5 miles south of the Site. Therefore, although elevated concentrations of PFOS and PFOAs are present at the Pease Air Force Base, due to the location of the GMZ greater than 1.5 miles from the Project Area and the location of sampling points in close proximity to the Project Area, it is unlikely PFOS or PFOAs emanating from the Pease Air Force Base would be encountered during construction of the Project.

According to information obtained from the available online database, sampling was conducted south of the Study Area in September 2014 and 2017 that identified concentrations of PFOS and perfluorohexane sulfonic acid below the current AGQS standards. Additional PFAS sampling conducted in the vicinity of the NHDES site at 372 Shattuck Way detected select PFAS below the current AGQS standards; however, NHDES has requested additional sampling be conducted to evaluate the presence of the remainder of the regulated PFAS compounds. The PFAS sampling locations are shown in **Figure 3.11-1**.

In December 2015, Coating Condition Assessment was performed for the GSB to evaluate the condition of the existing coating system applied to the structure.⁴⁹ The results of the assessment determined that the coating system was in poor conditions with widespread corrosion and rust observed throughout the bridge components. Laboratory analysis identified lead in the existing coating on the bridge. Based on the presence of lead paint on the bridge, the OSHA Lead in Construction Standard (29 CFR 1926.62) must be invoked during any activities that disturb the paint. It should also be noted that other hazardous materials such as heavy metals may be present in the coating which will also require management under the applicable OSHA Standards.

⁴⁹ KTA-Tator, Inc. 2016. Coating Condition Assessment of the General Sullivan Bridge over the Little Bay, Dover, NH. Technical Report issued to VHB, Inc., April 1, 2016.

Figure 3.11-1



\\vhb\gis\proj\Bedford\52381.01\GIS\Project\SEIS\Figure 3.11-1_Hazardous Material.mxd



- Legend**
- Study Area
 - Town Boundaries
 - Approximate Location of NHDES Listed Property
 - ★ Select PFAS < NHDES 9/30/2019 AGQS; Additional Sampling Required
 - PFAS < NDHES 9/30/2019 AGQS
 - Approximate NHDES GMZ Boundary

Newington-Dover 112385

Newington and Dover, NH

General Sullivan Bridge Supplemental EIS

Hazardous Materials



Source: NHGRANIT, VHB

3.11.2 Environmental Consequences

This section discusses the direct and indirect effects of the No-Action Alternative and the Action Alternatives on the generation and handling of potential contamination and hazardous materials within the Study Area.

3.11.2.1 Direct Impacts

No-Action Alternative

The No-Action Alternative would have no adverse direct impacts on the environment and human health relative to hazardous materials. Because the No-Action Alternative would not change current infrastructure or operations, it would have no permanent impact on known contaminated properties.

Alternative 1

Alternative 1 would have minor direct impacts on the environment and human health relative to contamination and hazardous materials.

Construction of Alternative 1 would generate construction debris associated with the rehabilitation of the GSB. Asbestos-containing materials may be encountered during demolition activities in a number of components associated with the bridge or within unidentified conduits beneath the roadway, depending on their age. Based on the findings of the Coating Conditions Assessment, lead-based paint is present within the Project Area and due to the poor condition of the paint, total coating removal and replacement would likely be conducted during the rehabilitation of the GSB. In addition, mercury, polychlorinated biphenyls (PCBs), and other special wastes may also be present in conduits and bridge structures. The abatement of these materials would be performed in accordance with appropriate regulations in order to ensure that there would be no adverse effect such as releases or misdirected wastes.

Construction-related equipment contains mechanical fluids that have the potential to result in spills or leaks when not maintained in good working order. Contractors may also employ the use of supplies containing hazardous materials in order to conduct their work. Although the spill or release of OHM in the process of construction is an unlikely event, spill prevention plans would be required to prevent and control any such spills. Therefore, construction-related equipment being used during construction phases of the Project is not anticipated to result in an adverse effect.

Based on soil analytical results collected from within the Project Area, there is the potential to encounter arsenic-impacted soils during construction phases of the Project. Although the concentrations of arsenic are likely attributed to the native marine deposits throughout the area, arsenic-impacted soils will be managed in accordance with a Project-specific Soil Management Plan as outlined in **Section 3.11.3**. There is also the potential that undocumented releases of OHM will be encountered during construction phases of the Project. These releases would be reported to NHDES as appropriate and remediated per applicable regulations. The removal of a percentage of contaminated environmental media from within the Project area would likely have a beneficial effect.

Alternative 3

Alternative 3 would have minor direct impacts on the environment and human health relative to contamination and hazardous materials.

Alternative 3 retains the GSB substructure, rehabilitates the central span, but replaces the approach spans. It would therefore generate more construction debris than Alternative 1. However, the abatement of these materials would be performed in accordance with appropriate regulations in order to ensure that there would be no adverse effects, such as releases or misdirected wastes. Therefore, this would be considered a minor direct impact.

Additionally, the existing piers would be maintained. Therefore, marine sediments would not be generated under this Alternative and there are no impacts to marine sediments under this alternative.

Impacts related to releases from construction-related equipment and potential to encounter impacted soils and/or groundwater would be similar to Alternative 1.

Alternative 6

Alternative 6 would have minor direct impacts on the environment and human health relative to contamination and hazardous materials.

During the demolition of the superstructure, a moderate to high volume of construction debris would be generated. However, the abatement of these materials would be performed in accordance with appropriate regulations in order to ensure that there would be no adverse effects such as releases or misdirected wastes. Therefore, this would be considered a minor direct impact.

A new pier would be constructed within Little Bay and Hilton Park as part of Alternative 6, which would generate sediments that would require proper disposal. Based on the October 2018 sediment sampling analytical data, sediment is impacted by low levels of polyaromatic hydrocarbons and metals. Although there is the potential for adverse ecological impacts associated with sediment disturbances during the installation of piers, based on the low levels of contaminants identified in sediments in conjunction with the implementation of proper sediment containment measures that limit turbidity in marine waters during construction, the direct impacts of removing sediment from Little Bay would be considered minor.

Impacts related to releases from construction-related equipment and potential to encounter impacted soils and/or groundwater would be the same as Alternative 1.

Alternative 7

Direct impacts to contamination and hazardous materials would be the same as outlined under Alternative 6.

Alternative 9 (Preferred Alternative)

Alternative 9 would have minor direct impacts on the environment and human health relative to contamination and hazardous materials. Under Alternative 9, the bridge superstructure would be replaced, generating a moderate to high volume of construction debris, similar to Alternatives 6

and 7. The abatement of these materials would be performed in accordance with appropriate regulations to ensure that there would be no adverse effects such as releases or misdirected wastes. Therefore, this would be considered a minor direct impact.

No new piers would be installed under Alternative 9 and no sediments would be generated. Therefore, there would be no permanent impacts to marine sediments under this alternative.

Impacts related to releases from construction-related equipment and potential to encounter impacted soils and/or groundwater would be the same as Alternative 1. As with all alternatives, new materials would be used as applicable during construction, and standard marine construction BMPs would be implemented wherever feasible to mitigate the potential for suspension of sediments and consequent siltation.

3.11.2.2 Indirect Impacts

No-Action Alternative

There would be no indirect impacts to hazardous materials for the No-Action Alternative.

Action Alternatives

Minor indirect impacts are possible under the Action Alternatives due to the potential amount of construction debris generated. Construction debris would require proper disposal; the movement of contaminated materials could have a minor adverse indirect impact during the transportation, disposal, and management of contaminated media due to the potential for improper handling or misdirection of wastes. This potential effect is proportionate to the amount of waste generated by each alternative. Alternatives 1 and 3 would have the least potential for such effects, whereas Alternatives 6 and 7 would have the most due to the work related to the replacement of GSB Pier 1.

3.11.3 Mitigation

As noted throughout this section, the primary impacts associated with the Action Alternatives is the generation of potentially hazardous building materials. Hazardous materials (asbestos, lead-based paint, PCBs, mercury, etc.) will be inventoried prior to any structural demolition or renovation work in accordance with Section 5.2 of the NHDOT *Standard Specifications for Road and Bridge Construction*. If these hazardous materials are found to be present in the structures, they would be properly abated by a licensed contractor in accordance with state and local regulations and shipped to a receiving facility licensed to handle the specific type of solid waste under the appropriate shipping documents such as manifests.

A Soil Management Plan (SMP) shall be developed in accordance with NHDOT specifications that would be based upon the results of subsurface investigations for the Project. These investigations should be conducted in order to pre-characterize soils that are designated for excavation during construction phases of the Project. A typical SMP outlines standards and procedures for the identification and disposal of contaminated materials that may be encountered during construction. Tracking protocols for contaminated soils will be detailed from the point of excavation to designated testing areas and to the ultimate disposal site.

Furthermore, a Health and Safety Plan shall be developed which provides the minimum health and safety specifications that contractors must meet during construction including requirements for environmental monitoring, personnel protective equipment, site control and security, and training.

The Project would also require excavation of Limited Reuse Soils (LRS), which are soils that are likely (based on "generator knowledge") and/or demonstrated (through laboratory analyses) to contain contaminant concentrations in the range of the NHDOT specific Acceptable Reuse Concentrations. Roadside LRS commonly encountered at NHDOT construction projects include:

- › Soils with elevated concentrations of several polynuclear aromatic hydrocarbons and a few common metals; and
- › Soils with petroleum residue (total petroleum hydrocarbons) related to the normal operation of motor vehicles and asphalt pavement.

The NHDOT has determined that roadside LRS may be encountered in all topsoil within the limits of the existing right-of-way, regardless of its depth. In instances where topsoil is not present, soil from the top of ground to a depth of 6 inches is considered to be LRS. Soils excavated from beyond and/or below the specified LRS limits that do not exhibit visual or olfactory evidence of potential contamination shall not require handling as impacted material.

Contractors will be advised that roadside LRS occurs within the limits of disturbance. The previously mentioned SMP will provide guidance for the identification, handling, storage, reuse, and disposal of LRS soils generated during construction activities.

In the event that PFAS-impacted groundwater is encountered during construction phases, dewatering activities shall be conducted in accordance with applicable NHDES rules and/or Groundwater Management Plans.

The Contractor will develop a Project Operations Plan, which shall specify the Contractor's means and methods for handling and managing LRS, and Contaminated Soil and Groundwater. This will include the implementation of the BMPs described in the SMP. No excavation would take place until the Project Operations Plan has been approved by the NHDOT. In addition, following approval of the Project Operations Plan, the Contractor shall be required to notify the NHDOT's Bureau of Environment at least two weeks prior to beginning excavation.

3.12 Visual Resources

Visual and aesthetic resources include naturally occurring landscape features as well as man-made resources or structures. The anticipated visual and aesthetic impacts of the Project - both beneficial and adverse - are discussed in this section. Both impacts to visual resources and viewers (the population affected by the Project) are considered. The visual resources analysis is consistent with the following list of laws, regulations, guidance and plans pertaining to the protection and enhancement of scenic qualities.

- › Federal-aid Highway Act of 1970
- › FHWA's Guidelines for Visual Impact Assessments of Highway Projects (2015)
- › FHWA's NEPA procedures codified in 23 CFR 771