# Chapter IV.P: Hazardous Materials Assessment – Fjord Trail South

## A. INTRODUCTION

This chapter presents the existing conditions and assesses the Proposed Action's potential impacts related to hazardous materials within the Fjord Trail South Corridor by identifying potential issues of concern that could pose a hazard to workers, the community, and/or the environment during or after development of the project. An evaluation of Fjord Trail North is provided in Chapter III.P, "Hazardous Materials Assessment – Fjord Trail North," of this DGEIS.

An assessment of potential hazardous materials impacts was performed for the Fjord Trail South Corridor that included an analysis of areas where ground disturbance would potentially occur as a result of the proposed trail. Soil disturbance would be required to develop Fjord Trail South related to footings associated with the elevated Trail, restroom buildings, Washburn Lot expansion, and grading and excavation for the trail alignment. Additionally, ground disturbance is anticipated for shore stabilization features along Fjord Trail South and surface disturbance to allow construction of the Trail in the areas where the trail would be at grade, which may also require the removal of rail ballasts. The installation of piles would be required for the elevated portions of the trail, including along the shoreline of and in the Hudson River requiring some disturbance of river bottom sediment.

A hazardous material is typically defined as any substance that poses a threat to human health or to the environment. Hazardous materials include (primarily historical) building materials and fixtures and/or historic fill materials including asbestos-containing materials (ACM), lead-based paint (LBP), and mercury, lead, or other heavy metals. Subsurface hazardous materials include, but are not limited to: volatile organic compounds (VOCs), commonly found in petroleum products and solvents; semi-volatile organic compounds (SVOCs), typically associated with petroleum products, coal, and ash; coal tar and other non-aqueous phase liquid (NAPL), byproducts of the manufactured gas plants (MGPs) historically in the area; heavy metals, including lead; polychlorinated biphenyls (PCBs), usually associated with electrical transformers and/or railroad track ballasts and other rail components; and perfluoroalkyl and polyfluoroalkyl substances (PFAS), a group of chemicals used in manufacturing and consumer products since the 1940s. The presence of hazardous materials does not necessarily indicate a threat to human health or the environment; rather an exposure pathway, the presence of a receptor, and an unacceptable dose must also be present to cause a threat. Without proper controls hazardous materials could be released during demolition or renovation of existing structures, or during excavation or dewatering of a site. The most likely routes of human exposure from the hazardous materials evaluated would occur during construction and are the inhalation of VOCs, the ingestion of particulate matter containing SVOCs or metals, or dermal (skin) contact with hazardous materials.

Areas of concern (AOCs) identified by this assessment were primarily related to (1) historic industrial uses, (2) railroad operations, and (3) historic fill. The findings, described in detail in the following sections, are shown on **Figure IV.P-1**.

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*Trail Corridor - Fjord Trail South*

0 2,000 FEET

AOC #1 Historic Industrial Uses

*Potential releases or buried wastes from former manufacturing, lumber yards, coal and petroleum storage, etc.*

AOC #2 Railroad Operations

*Potential contamination or buried wastes from track ballasts, railroad ties, track maintenance, transformers, etc.*

AOC #3 Historic Fill (Site-wide)

*Potential historic buried material of an unknown origin associated with infilling, residential, railroad and industrial construction and operations.*

Hazardous Materials

**HUDSON HIGHLANDS FJORD TRAIL**

**Figure IV.P-1**

## METHODOLOGY

*STUDY AREA*

To identify potential sources of subsurface hazardous materials, this assessment included: a review of historical land use maps (e.g., Sanborn maps), historical topographic maps and aerial photographs; and a review of state and federal regulatory databases relating to use, generation, storage, treatment and/or disposal of hazardous materials. The databases searched were in accordance with the American Society for Testing and Materials (ASTM) Designation E 1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-21). However, due to the size of the project area, off-site database searches were limited to a 400-foot distance from the potential areas of disturbance, which is a standard approach for larger project areas. This information included records from databases maintained by the U.S. Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (NYSDEC).

A standard list of federal and state regulatory databases (per ASTM E1527-21) related to the potential for hazardous materials was reviewed, including the following:

- Superfund Enterprise Management System (SEMS) – the SEMS list, formerly known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list, is a compilation of known and suspected uncontrolled or abandoned hazardous waste sites which are, or were, under investigation by USEPA, but have not been elevated to the status of a Superfund (NPL) site. Former CERCLIS sites that have been granted the status of No Further Remedial Action Planned (NFRAP), currently known as Superfund Enterprise Management System Archive (SEMS-ARCHIVE) sites, are also included in this database.
- The New York State SPILLS database – sites where petroleum or chemical releases have been reported to the NYSDEC since April 1, 1986.
- The NYSDEC chemical bulk storage (CBS) database – registered (since July 15, 1998) facilities that store (non-petroleum) hazardous substances—as defined by 6 New York Codes, Rules and Regulations (NYCRR) Part 597—in aboveground storage tanks (ASTs) with capacity equal to or greater than 185 gallons and/or in underground storage tanks (USTs) of any size.
- The NYSDEC Petroleum Bulk Storage (PBS) and Major Oil Storage Facility (MOSF) databases – properties that store greater than 1,100 gallons in aggregate of petroleum products.
- The NYSDEC Leaking Storage Tank Incident Reports (LTANKS) – leaking ASTs or USTs incidents reported after April 1, 1986; the causes of releases may be tank test failures, tank failures, or tank overfills.
- The Hazardous Waste Generators database, which uses both the NYSDEC manifest system for hazardous waste handlers and the EPA records pursuant to the Resource Conservation and Recovery Act (RCRA), also referred to as the Resource Conservation and Recovery Information System (RCRIS) database, includes information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA.
- An air discharge facility database (ADF) – air pollutant sources that are permitted with the EPA and NYSDEC.
- New York State Brownfield Cleanup Sites (the successor to the Voluntary Cleanup Program) – sites on record with the NYSDEC as abandoned, idle, or under-used industrial and

commercial sites where redevelopment is being contemplated under the NYSDEC Brownfield Cleanup Program.

- Solid Waste Facilities (SWF) sites, which are included in a NYSDEC database with certain landfills, incinerators, transfer stations, recycling centers, and other sites that manage or managed solid waste.
- State Inactive Hazardous Waste Disposal Site Registry (SHWS), which is a program (also known as State Superfund) listing information regarding a variety of sites likely requiring cleanup.
- Hazardous Substance Waste Disposal Site Inventory (HSWDS); this database tracks certain sites that were not listed on SHWS but may still require investigation and/or cleanup.
- An inventory of historical manufactured gas plant (MGP) facilities compiled by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut.

*SITE RECONNAISSANCE*

Fjord Trail South and nearby upland properties were observed (from publicly accessible areas) on two separate occasions in an attempt to verify and potentially supplement literature and database records, and to identify any existing environmental conditions and note any potential evidence of historical conditions.

## B. EXISTING CONDITIONS

The majority of the Fjord Trail South Corridor is situated within or adjacent to the Metro-North Railroad (MNR) right-of-way and along the Hudson River shoreline. Wooded hiking trails with scenic riverfront viewing areas are present on Little Stony Point (HHSPP), and Dockside Park (HHSPP; owned by OPRHP and managed by the Village of Cold Spring) consists of a municipal open area park with primarily landscaped grass-covered areas along the riverfront. The Fjord Trail South Corridor also includes portions of West Street, Main Street, and Fair Street, which meets NYS Route 9D at a wide intersection. Much of the Fjord Trail South Corridor encompasses the MNR ballast and rip-rap along the Hudson River shoreline.

The project area ground surface elevations range between the water level of the Hudson River (tidal in this area) to roughly 45 feet above mean sea level on Little Stony Point.

Several areas of bedrock outcrops are present along the Fjord Trail South Corridor, including at Little Stony Point and Breakneck Ridge. Information included in the initial review and analysis report and USGS mapping indicated that bedrock beneath the Fjord Trail South Corridor is composed of hard granites and gneisses, with softer biotites and gneisses present beneath Cold Spring. As further detailed in Chapter IV.C, "Land – Fjord Trail South," soil along the Trail Corridor includes loam with varying amounts of sand and gravel. Certain areas are shallow to bedrock with bedrock outcrops, exposed boulders, and gravel. In the Fjord Trail South Corridor along the shoreline and in the MNR right-of-way, these areas are almost entirely comprised of fill and at the surface are covered with rip-rap, crushed stone, and railroad ballast. Groundwater is anticipated to be first encountered at an elevation at or near the high tide level and is likely tidally influenced in areas close to the Hudson River shoreline.

### HISTORICAL SANBORN MAP AND AERIAL PHOTOGRAPH REVIEW

Historical Sanborn® fire insurance maps (map availability was limited for the project area), topographic maps, and aerial photographs indicate that the project area was historically primarily

wooded, undeveloped land along the Cold Spring and Philipstown waterfronts, with some interspersed sparse residential uses and limited commercial use, e.g., quarry operations.

Industrial uses were present along the Village of Cold Spring waterfront since at least 1887, including coal and lumber storage yards, foundries, a former furnace factory at the current location of Dockside Park with a south-adjacent railroad spur, and a lumber yard and a manufactured gas works plant on blocks east of the southern terminus of Main Street. Some of these facilities also historically contained petroleum bulk storage tanks (some with listed spills) and/or utilized chemicals, paints, and/or wood treatment products. Additionally, historical quarry operations were present north of the Village of Cold Spring, including a former quarry on Bull Hill (aka Mt. Taurus) which operated an ancillary stone storage yard at Little Stony Point and ceased operations in the late 1960s.

Historical petroleum and chemical uses in prior industrial operations, wastes associated with manufactured gas plant operations and landfilling has resulted in several areas of discrete contamination at certain properties adjacent to or in close proximity to the Fjord Trail South Corridor, some with ongoing remedial oversight and management by the NYSDEC, as noted in the regulatory database information (refer to **Table IV.P-1**).

Based on the nature and proximity of the historical industrial waterfront uses, some limited potential exists for contaminated soil and/or groundwater to be present within the Fjord Trail South Corridor. Additionally, any potential excavation in areas regulated by NYSDEC would require coordination with the agency prior to any disturbance.

Buried foundation elements and debris from former structures and railroad components, if present, could include underground storage tanks (USTs), PCB-containing materials, LBP, asbestos-containing materials (ACM), and/or creosote-treated wood.

**REGULATORY DATABASE REVIEW**

The findings of the regulatory database review identified several areas of concern (AOC) including certain adjacent or nearby facilities with documented subsurface contamination, some with ongoing management and oversight by the NYSDEC. Pertinent facilities identified in the regulatory database search with some potential to have affected subsurface conditions beneath the project site (e.g., from migration of residual contamination to beneath the proposed action) are summarized in **Table IV.P-1**.

**Table IV.P-1**
**Assessment of Database Area Remediation Sites**

| Listing | Distance/ Direction | Assumed Hydraulic Gradient | Regulatory Database Program(s) | Regulatory Status/Available Data |
|---|---|---|---|---|
| Cold Spring MGP<br>5 New Street<br>Cold Spring, NY | ~200 feet southwest of Fjord Trail South fronting the Cold Spring marina | Cross/ Downgradient | SHWS<br>EDR MGP | This facility (Site ID No. 340026) was the location of a former manufactured Gas Plant (MGP) prior to 1887 and the current location of the Cold Spring Boat Club. Subsurface investigations indicated certain coal tar-related contaminants in soil, groundwater and sediment. NYSDEC file information indicated that remediation of the site is complete and residual contamination at the facility is being managed under a Site Management Plan (SMP) with NYSDEC oversight. |
| Former H.W. Smith Oil Company<br>35 Market Street<br>Cold Spring, NY | West-adjacent to the Cold Spring Train Station | Cross/ Downgradient | MOSF | Former Major Oil Storage Facility (MOSF) 3-1560, listed as an inactive facility. No additional pertinent information was listed for the facility in the database search. |
| Former Lumber Yard<br>2 Main Street<br>Cold Spring, NY | ~150 feet southwest of Fjord Trail South just east of the terminus of Main Street | Cross/ Downgradient | NY Spills | Several closed spills were listed for the facility between ~1989 and 2006 due to petroleum contaminated soil discovered during excavation activities. The spills were addressed and closed by NYSDEC. |

Based on information provided in the regulatory database listings, including the nature and extent of contamination from former operations and/or inferred hydraulic gradient with respect to the Fjord Trail South Corridor, some limited potential exists for contaminated soil and/or groundwater to be encountered during construction. Excavation or disturbance in areas regulated by NYSDEC would require coordination with the agency prior to any disturbance.

## C. FUTURE WITHOUT THE PROPOSED ACTION

In the future without Fjord Trail South, envisioned to connect Cold Spring and Breakneck Ridge, Fjord Trail South would not be developed, and therefore no ground disturbance in the Fjord Trail South Corridor would be expected to occur. Currently, there are no hazardous materials concerns associated with the area of this section of the Fjord Trail, as the uplands surrounding the alignment are utilized as parkland, recreational trails, and public access areas. As a result, there would be no significant concerns with respect to hazardous materials in the future without Fjord Trail South.

## D. FUTURE WITH THE PROPOSED ACTION

As shown on **Figure IV.P-1**, Fjord Trail South would require limited ground disturbance and excavation for the development of the new trail alignment in potential areas of concern adjacent to former industrial uses (some with documented subsurface contamination) and/or historic or current railroad operations. Specifically, this would include the installation of piles for the elevated portions of the Trail along the Hudson River shoreline and along the existing MNR tracks, as well as surface disturbance to allow the construction of an Accessible trail in the areas where the trail would be at grade. Notwithstanding, it is not anticipated that the installation of the pile-supported

superstructure would result in significant soil/sediment disturbance. To the extent that soil and/or sediment is displaced during pile installation, excess soil/sediment would be handled and/or disposed of in accordance with applicable regulations, as outlined below. Soil disturbance activities would include protocols for dust suppression and sediment and erosion controls, as detailed in Chapter IV.C, "Land – Fjord Trail South," and Chapter IV.D, "Water Resources – Fjord Trail South."

In the future with Fjord Trail South, certain measures would be implemented during subsurface disturbance to ensure proper soil handling procedures and prevention of exposure to subsurface hazardous materials. All excavated soil requiring off-site disposal would be managed in accordance with applicable regulatory requirements described in a Soil and Materials Management Plan. All soil and any other materials intended for off-site disposal would be tested in accordance with the requirements of the intended receiving facility. Transportation of material leaving the site for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. Any unforeseen petroleum tanks or contamination encountered during disturbance would be properly characterized and removed in accordance with applicable requirements. Off-site disposal of excess soil/fill would be conducted in accordance with applicable federal and state requirements.

Although no significant potential for adverse impacts related to hazardous materials would be anticipated, the potential would be minimized by compliance with relevant regulatory requirements and incorporating best practices and the following protocols into the project's construction:

- Any proposed disturbance on or adjacent to facilities regulated by NYSDEC (e.g., former municipal landfill sites, former MGP facilities and those subject to remedial oversight by NYSDEC) would require coordination with the agency prior to any subsurface disturbance to ensure the work would be conducted in accordance with applicable regulatory requirements.
- For construction areas where soil disturbance/excavation is planned, a site-specific Soil and Materials Management Plan (SMMP) would be implemented during construction. A proposed SMMP is provided in **Appendix III/IV.P**, which may be refined as design advances, depending on site specific conditions. The SMMP addresses requirements for items such as: soil stockpiling, soil disposal and transportation; dust control; quality assurance; and contingency measures should petroleum storage tanks or contamination be unexpectedly encountered. The SMMP includes measures for worker and community protection, including personal protective equipment and dust control/suppression. The requirement to comply with the SMMP will be included in contract documents, including contractor specifications.
- Per regulations, any materials intended for off-site disposal would be tested in accordance with the requirements of the receiving facility. Transportation of these materials would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.
- If evidence of contaminated soil/sand or sediment (e.g., stains or odors) is encountered, these materials (and all other materials requiring off-site disposal) would be segregated and disposed of in accordance with applicable federal, state, and local regulations. If any underground storage tanks (USTs) are encountered, they would be properly assessed, closed, and removed in accordance with state and local regulatory requirements (including NYSDEC tank registration and spill reporting requirements, as warranted).

- If dewatering is needed for construction of Fjord Trail South, testing would be performed to ensure compliance with proper regulatory discharge requirements including local requirements and NYSDEC requirements for discharges to surface water either directly or via an outfall and/or State Pollutant Discharge Elimination System (SPDES) Permit Program. If required by the regulatory permit/approval process, pre-treatment would be conducted prior to the discharge.
- Fill materials containing ACM, LBP and/or PCBs and creosote-treated wood could be encountered during excavation, especially where there were previously structures or railroad uses. The Hudson River is also known to be contaminated by PCBs released from upgradient electrical capacitor manufacturing plants in the mid-1900s. Any such materials encountered would be properly characterized, managed, and disposed of in accordance with applicable regulations.
- Construction activities occurring within 200 feet of MNR right-of-way must file their plans with the MTA to protect and preserve their infrastructure. Additionally, MNR health and safety requirements/protocols for contractors will be followed when conducting construction activities on their property.

To the extent limited anticipated subsurface disturbance would disturb materials containing asbestos or PCBs (e.g., associated with railroad components and the Hudson River) or covered with LBP (e.g., within potential historic fill materials) and/or unknown petroleum contamination from historic industrial operations, the potential for impacts will be avoided by licensed environmental professionals conducting these construction activities in compliance with existing regulatory requirements and best practices. These materials would then be managed and disposed of as required by law prior to the start of construction. The SMMP describes applicable regulatory provisions that would be included in construction specifications to ensure contractors are aware that required protocol and procedures are followed. Following construction associated with Fjord Trail South, there would be no further potential for significant adverse impacts.

## E. MITIGATION

With the incorporation of protocols described above, no significant adverse impacts related to hazardous materials would be anticipated to result from construction activities related to Fjord Trail South. Following construction, there would be no further potential for significant adverse impacts. ✷