Chapter III.P: Hazardous Materials Assessment – Fjord Trail North

A. INTRODUCTION

This chapter presents the existing conditions and assesses the Proposed Action's potential impacts related to hazardous materials within the Fjord Trail North 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 South is provided in Chapter IV.P, "Hazardous Materials Assessment – Fjord Trail South," of this DGEIS.

An assessment of potential hazardous materials impacts was performed for the Fjord Trail North Corridor that included an analysis of the roughly five-mile Trail Corridor extending from Long Dock Park to the northern end of the Breakneck Connector and Bridge Project (BNCB) where ground disturbance would potentially occur as a result of the proposed trail development. Soil disturbance would be required for development of Fjord Trail North related to footings for the pedestrian/bicycle bridge across Fishkill Creek, restroom buildings, grading and excavation for new trail alignments (Main Trail, Meanders, and Connectors), and the proposed Notch and Wade's Hill Lot parking areas.

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 III.P-1**.

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Trail Corridor - Fjord Trail North

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 III.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, 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

The Fjord Trail North Corridor 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.

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) – PROPOSED MAINTENANCE FACILITY

A Phase I Environmental Site Assessment (ESA) was prepared for the municipal wastewater treatment facility located at 90-96 Dennings Avenue in the City of Beacon, which would be the site of the proposed new maintenance facility for the Fjord Trail. The assessment was conducted in accordance with ASTM E1527-21 and included a site reconnaissance, a review of historical maps, and a review of federal, state, and local environmental databases.

B. EXISTING CONDITIONS

The majority of the Fjord Trail North Corridor is situated within or adjacent to the Hudson Highlands State Park Preserve (HHSPP). The existing conditions of the Fjord Trail North Corridor vary along the Hudson River shoreline. Areas along the northern portion of the Fjord Trail North Corridor are bounded by marshland and densely wooded areas, existing recreational trails, and interspersed waterfront public access areas, including Long Dock Park and Denning's Point. Areas along the southern portion of the Fjord Trail North Corridor include residential uses, Dutchess Manor, and HHSPP. Additional waterfront areas (some currently with limited public access) are present between the Notch and the Metro-North Railroad (MNR) Beacon train station, and trails near Fishkill Creek in the vicinity of the former Tioronda Hat Works facility and within Madam Brett Park. Railroad tracks, including the MNR Hudson Line commuter railroad tracks, are located adjacent to the Fjord Trail North Corridor in several areas, and an inactive rail line is present along the northern portion of the Fjord Trail North Corridor near Denning's Point and Madam Brett Park.

Based on U.S. Geological Survey mapping (West Point, Cornwall-on-Hudson, Wappingers Falls, Poughkeepsie and Newburgh, NY Quadrangles dated 2013), the project area elevations range between generally less than 10 to roughly 380 feet above mean sea level.

Several areas of bedrock outcrops are present along the Fjord Trail North Corridor and along the waterfront, and information included in Chapter III.C, "Land – Fjord Trail North," and USGS

mapping indicated that bedrock beneath the Fjord Trail North Corridor consists of pyroxene-hornblende-quartz-plagioclase gneiss; hornblende granite and granite gneiss; and Austin Glen Formation. As detailed in Chapter III.C, "Land – Fjord Trail North," soil beneath the Fjord Trail North Corridor includes well drained to somewhat excessively well drained soils, low water tables (except for the Hy Soil located around the MNR Breakneck Ridge train station) and deep bedrock, except for the occasional outcrops. The areas of the Fjord Trail North Corridor located within parks (HHSPP and Madam Brett Park) are mostly characterized by soils of Farmland Statewide Significance. The areas of Fjord Trail North Corridor within Beacon mostly consist of urban fill. 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. For areas inland, depth to the water table is anticipated to range between zero and 6.5 feet below ground surface (bgs).

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 indicated that the project area was historically primarily wooded, undeveloped land between the Beacon and Cold Spring waterfronts, with some interspersed sparse residential uses and limited commercial use, e.g., quarry operations.

In the Beacon area, historical industrial uses were present along the riverfront and nearby areas since at least the late 1880s, with some operations present through the mid-1990s. Such uses included a former major oil storage facility, coal and lumber yards, paint works, and a municipal landfill along the waterfront immediately west and northwest of the MNR Beacon train station, and a former manufactured gas plant (MGP) facility just northeast of the current train station parking lot. Additional landfilling operations were present south of the train station area, including a former municipal landfill just northeast of the Denning's Point railroad overpass, and a brick works facility formerly operated at Denning's Point circa 1881 to 1939 (subsequently a 'Durisol' factory according to regulatory database information). The former Tioronda Hat Works facility was present along the northern shore of Fishkill Creek, just west of the current parking lot for Madam Brett Park along South Avenue; this former textile and hat manufacturer operated circa the late 1870s, with subsequent use as rubber/chemical works and dye works.

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

Based on the nature and proximity of the historical industrial waterfront uses, some limited potential exists for residual contaminated soil and/or groundwater to be present within the Fjord Trail North Corridor.

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 AOCs including certain adjacent or nearby facilities with documented subsurface contamination, some with ongoing management and oversight by NYSDEC and/or USEPA. Pertinent facilities identified in the regulatory database search with some potential to have affected subsurface conditions beneath the Fjord Trail North

Corridor (e.g., from residual contamination migration to the project area) are summarized in **Table III.P-1**.

Table III.P-1
Assessment of Database Area Remediation Sites

Listing	Distance/ Direction	Assumed Hydraulic Gradient	Regulatory Database Program(s)	Regulatory Status/Available Data
Garret Storm, Inc. Long Dock Park Beacon, NY	West-adjacent to Fjord Trail North Corridor at MNR Beacon Train Station	Cross/ Downgradient	MOSF NY Spills VCP	This facility (Site ID No. 3-2500) is listed as a former Major Oil Storage Facility (MOSF) with several closed status NYSDEC Spills including a 1993 spill listing noting the presence of free-phase petroleum product and petroleum-stained soils encountered during subsurface investigations due to historic petroleum storage and fueling operations. The site was subsequently entered into the NYSDEC Voluntary Cleanup Program (VCP). The spill file notes indicated that remedial activities, including the excavation and off-site disposal of affected soil, was completed by 2003 for the facility and the site is being managed under the VCP with oversight from NYSDEC.
Beacon City Landfill/ Municipal Park Beacon, NY	Northwest-adjacent to Fjord Trail North Corridor at MNR Beacon Train Station	Crossgradient	HSWD SHWS SEMS-ARCHIVE	This facility (Site ID No. 58737) was the location of a former municipal landfill that received municipal, commercial, and industrial wastes (including former dye works wastes). NYSDEC file notes indicated that the former landfill area was covered with a plastic liner and approximately 4 feet of soil and vegetative cover was placed above the liner prior to the conversion of the site to a public park. NYSDEC file entries indicated that no evidence of leachate or surface water contamination or hazardous waste disposal was identified in previous subsurface investigations and the site was ineligible for addition to the Registry of Inactive Hazardous Waste Disposal Sites.
Central Hudson Gas & Electric (CHG&E) MGP River Street Beacon, NY	Northeast-adjacent to the MNR Beacon Train Station (~200 feet northeast of the Fjord Trail North Corridor)	Cross/ Upgradient	VCP EDR MGP	This facility (Site ID No. V00293-3) was the location of a former manufactured Gas Plant (MGP) between roughly 1871 to 1946. NYSDEC file information indicated that soil sampled as part of a real estate transaction in 2005 and 2006 was found to be contaminated with coal tar and other MGP related chemicals. Subsequent remedial activities included the removal of affected soil with oversight from NYSDEC.

Table III.P-1 (cont'd)
Assessment of DatabaseArea Remediation Sites

Listing	Distance/ Direction	Assumed Hydraulic Gradient	Regulatory Database Program(s)	Regulatory Status/Available Data
Beacon City Landfill Dennings Avenue	Northeast-adjacent to Fjord Trail North Corridor at MNR overpass to Denning's Point	Cross/ Upgradient	HSWD SHWS	This facility (Site ID No. 55967) was the location of a former municipal landfill (reported operation dates between 1968 and 1983) that received municipal, commercial, and industrial wastes including incinerator ash, and sewage waste and sludge from the north-adjacent municipal wastewater treatment plant. NYSDEC file notes indicated that limited subsurface investigations were not indicative of hazardous waste and the facility was referred to NYSDEC division of solid waste for final closure.
Beacon Terminal 555-579 South Avenue Beacon, NY	North – adjacent to Fishkill Creek inlet near the Tioronda Bridge and Madam Brett Park	Crossgradient	VCP BCP UST AST NY Spills	This facility (Site ID No. C314117) is the location of a former textile and hat manufacturer (aka Tioronda Hat Works facility) constructed circa the late 1870s, with subsequent use as rubber/chemical works and dye works. The site has reportedly been vacant since the mid 1990's and is being managed under the NYSDEC BCP related to subsurface contamination from former chemical operations and petroleum and chemical storage tanks. Prior investigations indicated elevated concentrations of VOCs including toluene, certain metals, PCBs and low-level contamination of fill related constituents in soil beneath the facility and chlorinated VOCs in soil vapor. A closed spill occurred at the facility in 2009 related to an abandoned transformer and several closed spills were reported related to leaking tanks.

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

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) – PROPOSED MAINTENANCE FACILITY

The Phase I ESA identified the following recognized environmental conditions (RECs) in connection with the 90-96 Dennings Avenue site in Beacon:

- A petroleum spill, NYSDEC Spill #8707165, was reported for the site in February 1988 associated with the removal of a 2,500-gallon underground storage tank (UST). The spill was remediated and closed the same day.

- One 1,000-gallon, No. 2 fuel-oil UST installed in 1971 was closed in-place. The closure date was reported for this tank and no tank closure or tightness tests were provided.
- A closed city landfill was present on the south-adjacent property, which may have impacted regional groundwater conditions.

Based on these findings, there is some potential for the 90-96 Dennings Avenue site to have affected subsurface conditions beneath the site of the proposed maintenance facility.

C. FUTURE WITHOUT THE PROPOSED ACTION

In the future without Fjord Trail North, the Trail would not be developed and therefore no ground disturbance in the Fjord Trail North Corridor would be expected to occur. Currently, there are no hazardous materials concerns associated with the area of the proposed Fjord Trail North, as the uplands surrounding the alignment are utilized as residences, parkland, recreational trails, and public access areas. As such, there would be no significant concerns with respect to hazardous materials in the future without Fjord Trail North.

D. FUTURE WITH THE PROPOSED ACTION

As shown on **Figure III.P-1**, Fjord Trail North may require ground disturbance and excavation in potential areas of concern adjacent to former industrial uses (some with documented subsurface contamination) and/or historic or current railroad operations, including the inactive Beacon Line railbed between Denning's Point and Madam Brett Park. Soil disturbance activities would be implemented in accordance with a Soil and Materials Management Plan that includes protocols for dust suppression and sediment and erosion controls, as detailed in Chapter III.C, "Land – Fjord Trail North," and Chapter III.D, "Water Resources – Fjord Trail North." It should be noted that the Dutchess County Transportation Council (DCTC) is conducting a feasibility study for a potential rail trail along the MNR's inactive Beacon Line.[1] Implementation of this potential rail trail will depend on the results of the feasibility study and identification of funding, and the timeline of this potential project is not known at this time. HHFT, Inc. will coordinate with DCTC and/or MTA as both projects progress.

The potential for significant adverse impacts related to hazardous materials resulting from the development and use of the Fjord Trail would be minimized or avoided through compliance with existing 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 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

[1] https://www.beaconhopewellrailtrail.com/. Accessed April 24, 2024.

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, including potentially contaminated soil associated with MNR's railbanked (inactive) Beacon Line railbed, 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.
- Soil disturbance conducted, including within the inactive Beacon Line railbed, would be subject to site-specific sediment and erosion control plans, including protocols for dust suppression, to prevent the migration of associated contaminants into the subsurface groundwater and surrounding community/environment.
- If construction of the trail involves soil disturbance within the identified VCP sites (i.e., Beacon Terminal Site), such activities would be required to be conducted in consultation with NYSDEC and in accordance with approved remediation and/or site management plans. Of note, the Garret Storm, Inc. – Long Dock Park VCP site in Beacon, New York is north-adjacent to the northernmost portion of the proposed Fjord Trail North. Although not anticipated, as this site is outside the Project's proposed limits of disturbance, should soil disturbance be extended into this site, NYSDEC VCP protocols/requirements would have to be followed.
- If evidence of contaminated soil/sand (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 North, 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. Any such materials 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 subsurface disturbance would disturb materials containing asbestos or PCBs (e.g., associated with railroad components) or covered with LBP (e.g., within potential historic fill materials) and/or unknown petroleum contamination from historic industrial operations, the potential for impacts would be avoided by licensed environmental professionals conducting these construction activities in compliance with existing regulatory requirements and best practices. These materials, if encountered, would then be managed and disposed of as required by law prior to the start of construction. The SMMP describes applicable regulatory provisions and

contingency measures to address potential unforeseen contamination 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 North, 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 North. Following construction, there would be no further potential for significant adverse impacts. ✷