

Frequently Asked Questions (FAQ) about the Reuse of the Troy Mills Landfill Superfund Site

Troy, New Hampshire

August 2022

Introduction

This FAQ document addresses frequently asked questions about the Troy Mills Landfill Superfund Site from local governments, stakeholders and partners, prospective purchasers, interested developers and the larger community.

Site Overview

From 1967 to 1978, Troy Mills, Inc. disposed of hazardous substances, pollutants and contaminants from its acrylic fabric manufacturing facility in Troy. Today, the Troy Mills Landfill (the Site) comprises a 16.9-acre groundwater management zone (GMZ) in which there is a 2-acre former drum disposal area. This area abuts the southern edge of a separate solid waste landfill regulated by the New Hampshire Department of Environmental Services (NHDES). The Site is located within a greater undeveloped parcel (the Property), formerly owned by Troy Mills, Inc., that covers about 270 acres. There is a small, one-acre parcel, owned by the State of New Hampshire Department of Transportation (NHDOT), within the solid waste landfill (see figure 1).

The Property includes the Site, the State-regulated solid waste landfill, the NHDOT property, wetlands, a flat area adjacent to the wetlands, former gravel pits, and a steep-sloped upland area (see Figure 1).

To the north, Rockwood Brook flows into Sand Dam Pond and a Town recreation area that adjoins the Property. A former railroad bed located to the east is now the state-owned Cheshire Branch Rail Trail. It is used as a walking, non-motorized vehicle, horseback riding, and all-terrain vehicle (ATV) and snowmobile trail (in the wintertime). The eastern branch of Rockwood Brook, undeveloped land, a utility right of way and several residential trailers are located south of the Property. The Property abuts Troy's municipal boundary with the neighboring Town of Fitzwilliam; private owners and trusts own abutting properties south of the Property. Areas west of the Property include a forested ridge line and large open space uses.

The Property is accessible to the State and EPA from the south via Rockwood Pond Road in Fitzwilliam, New Hampshire by agreement through the land of an abutter. In the event of a need for other site access, a potential access point is from the north via Morse Street, although not currently developed. In 2005, EPA conducted a reuse assessment to identify reuse options for the Property. The community expressed interest in a passive recreation area at the time. However, the Property was, and continues to be, abandoned through the bankruptcy of Troy Mills, Inc. Largely due to lack of ownership, the Property has remained undeveloped, and the long-term remedial actions have continued to operate since 2005. Reuse research efforts were re-initiated by EPA's Superfund Redevelopment Program (SRP) in 2021.



*The Cheshire Branch Rail Trail in the fall.
(Source: www.traillink.com, User: dcsunrise)*

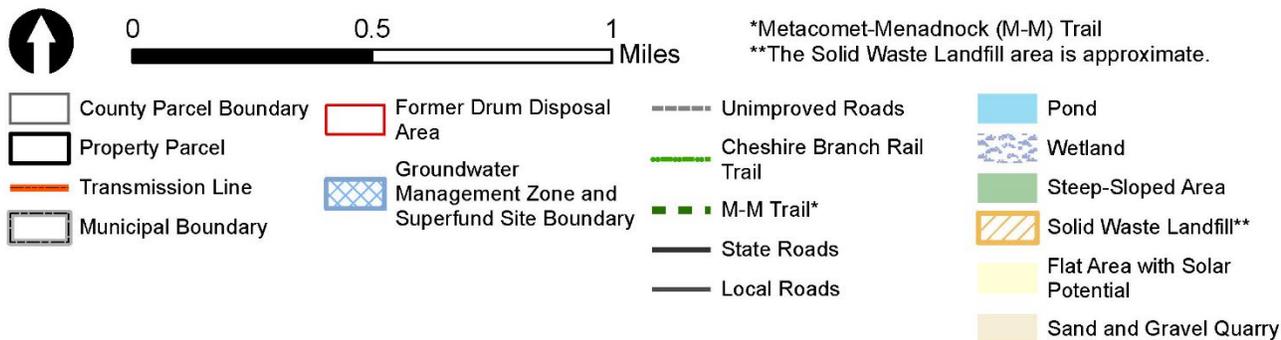
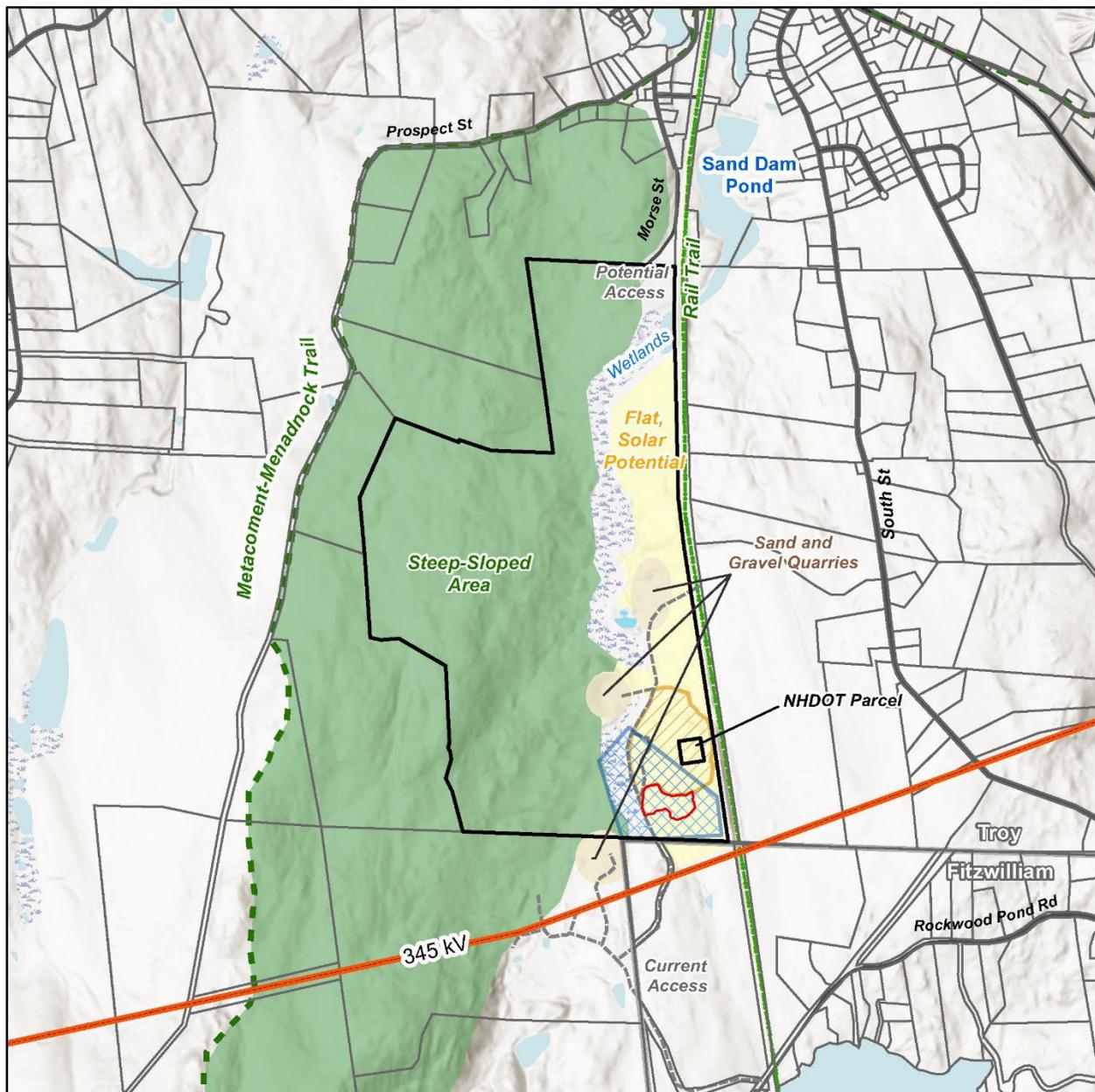


Figure 1. Map showing the Property, major Site areas and features, and local jurisdictional boundaries.

What is the Site's cleanup status?

In the 1980s and 1990s, environmental investigations confirmed soil, groundwater, surface water and sediment contamination at the Site. Troy Mills filed for bankruptcy in 2001. EPA added the Site to the Superfund program's National Priorities List (NPL) in 2003. Initial cleanup actions by EPA included removal of drums containing flammable liquid waste, waste sludge and contaminated soil, and placing a 2-foot-thick permeable soil cap over the excavation area (see the Former Drum Disposal Area in Figure 1). The cleanup also included installation of an interceptor trench system to collect hazardous materials from the groundwater. However, the interceptor trench system was decommissioned by removal in late 2013 as recoverable floating free product was no longer present.

EPA selected a long-term remedy in the Site's 2005 [Record of Decision](#) and updated it in the Site's 2014 [Explanation of Significant Differences](#). The Site's long-term remedy includes:

- Monitoring and maintenance of the groundwater cleanup plan. The plan consists of Monitored Natural Attenuation (MNA) which relies on natural processes to reduce contaminant concentrations over time. To learn more about MNA, visit semspub.epa.gov/work/HQ/401611.pdf.
- Monitoring of sediment, leachate discharging into the wetland and wetland soil quality.
- Maintenance of the soil cap.
- Maintenance of security measures (fencing, padlocks) used to prevent public exposure to the capped former drum disposal area.
- Institutional controls that restrict activities on the soil cap and the use of contaminated groundwater.
- Ongoing monitoring and sampling to evaluate groundwater and surface water conditions.

The Site's most recent [Five-Year Review Report](#) (2020) found that response actions are in accordance with the remedy selected by EPA and that the remedy remains protective of human health and the environment. In 2017, NHDES took over responsibility for the activities listed above.

Are land uses restricted at the Site?

As part of the cleanup, EPA and NHDES placed institutional controls on the Site to make sure the remedy remains protective of public health over time. They are listed below.

1. Groundwater:
 - Restrict the use of contaminated groundwater for drinking water purposes until restoration to drinking water standards is achieved.
2. Surface and subsurface soils:
 - Prevent direct exposure to and protection from exposure to contaminants through access limitations (e.g., fencing, warning signs and structures blocking ATV access).
3. Soil Cap:
 - Restrict activities that would disturb the soil cap (e.g., recreation activities on the cap).
4. Facilities associated with any environmental investigation, response action or other corrective action:
 - Prevent disturbing, moving, damaging, marring, tampering with, interfering with, obstructing or impeding any monitoring wells, treatment facilities, piping and other facilities associated with any environmental investigation, response action or other corrective action.

Table 1 of the 2020 [Five-Year Review Report](#) provides more information.

Who owns the Property?

Troy Mills, Inc. owned the 270-acre Property containing the 16.9-acre Superfund Site. The company filed for bankruptcy in 2010 and the bankruptcy trustee has indicated that the property was not transferred as part of the bankruptcy. Today, the property is functionally abandoned. This situation presents challenges for EPA and NHDES's activities at the site as there is no landowner for regulatory authorities to work with. In addition, there is no engaged owner who can work with local stakeholders and partners, authorize the sale of the Property or help return it to beneficial reuse. EPA is undertaking further research to obtain title documentation and coordinate with the State of New Hampshire to identify the steps necessary to establish a viable owner.

What are the roles of EPA and NHDES at the Site and Property?

NHDES's Hazardous Waste Remediation Bureau (HWRB) maintains and monitors the 16.9-acre Site, including the GMZ and remedial infrastructure. The NHDES-HWRB maintains the Site, performs annual inspections, and is responsible for remedy operation and maintenance requirements. The Site's 2020 Five-Year Review Report (see pages 14 and 15) provides a complete list of operation and maintenance requirements for the Site's remedy. EPA's Superfund cleanup removed and stabilized soils across the 2-acre Former Drum Disposal Area (identified in Figure 1). EPA reviews the Site's remedy every five years to make sure it continues to function effectively and remains protective of human health and the environment.

The approximately 9-acre solid waste landfill north of the Site is regulated by the NHDES's Solid Waste Management Bureau (SWMB). The solid waste landfill is currently in a state of abandonment. NH's solid waste laws and rules do not currently compel a successive landowner to take over responsibility for the landfill's post-closure care. To use the landfill for projects such as a solar array or nature trails, the NH solid waste rules would require an interested party to become the permittee and take over responsibilities for the landfill's post-closure care, including inspection, monitoring and maintenance.

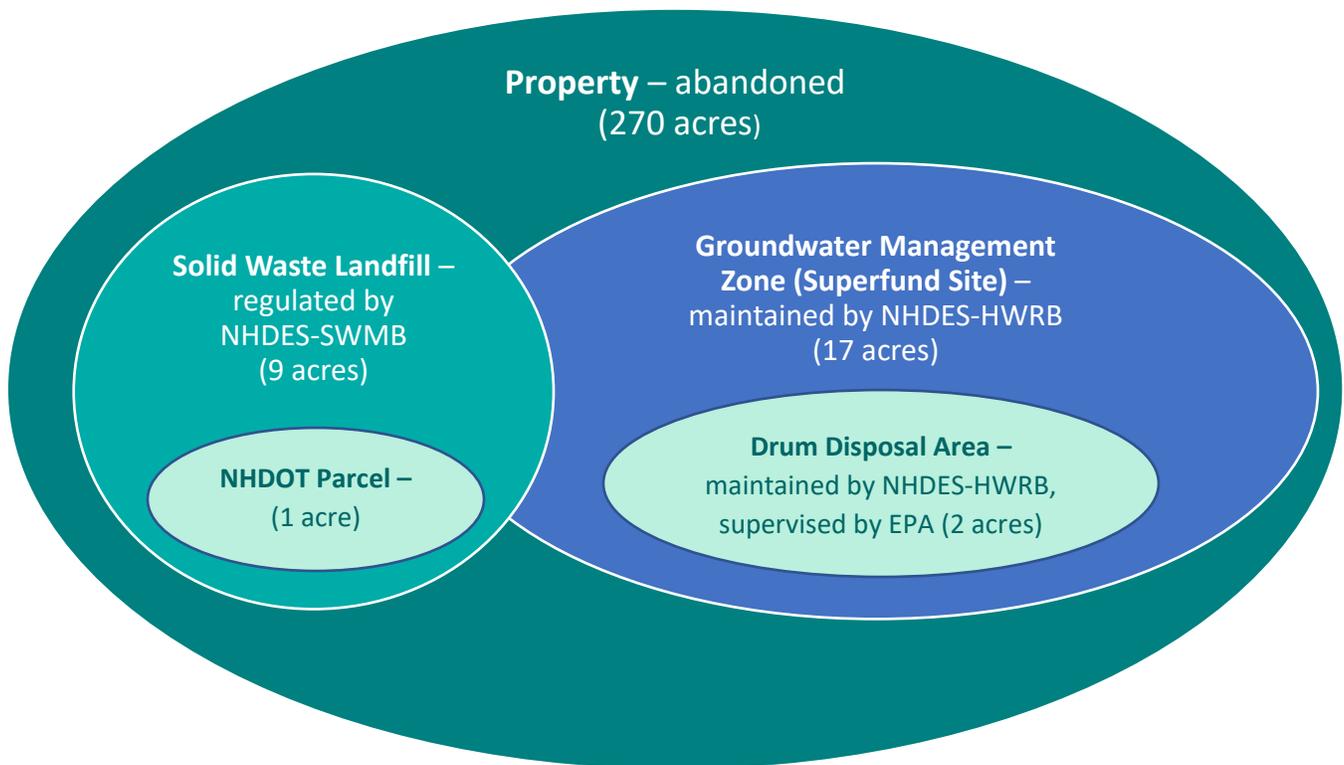
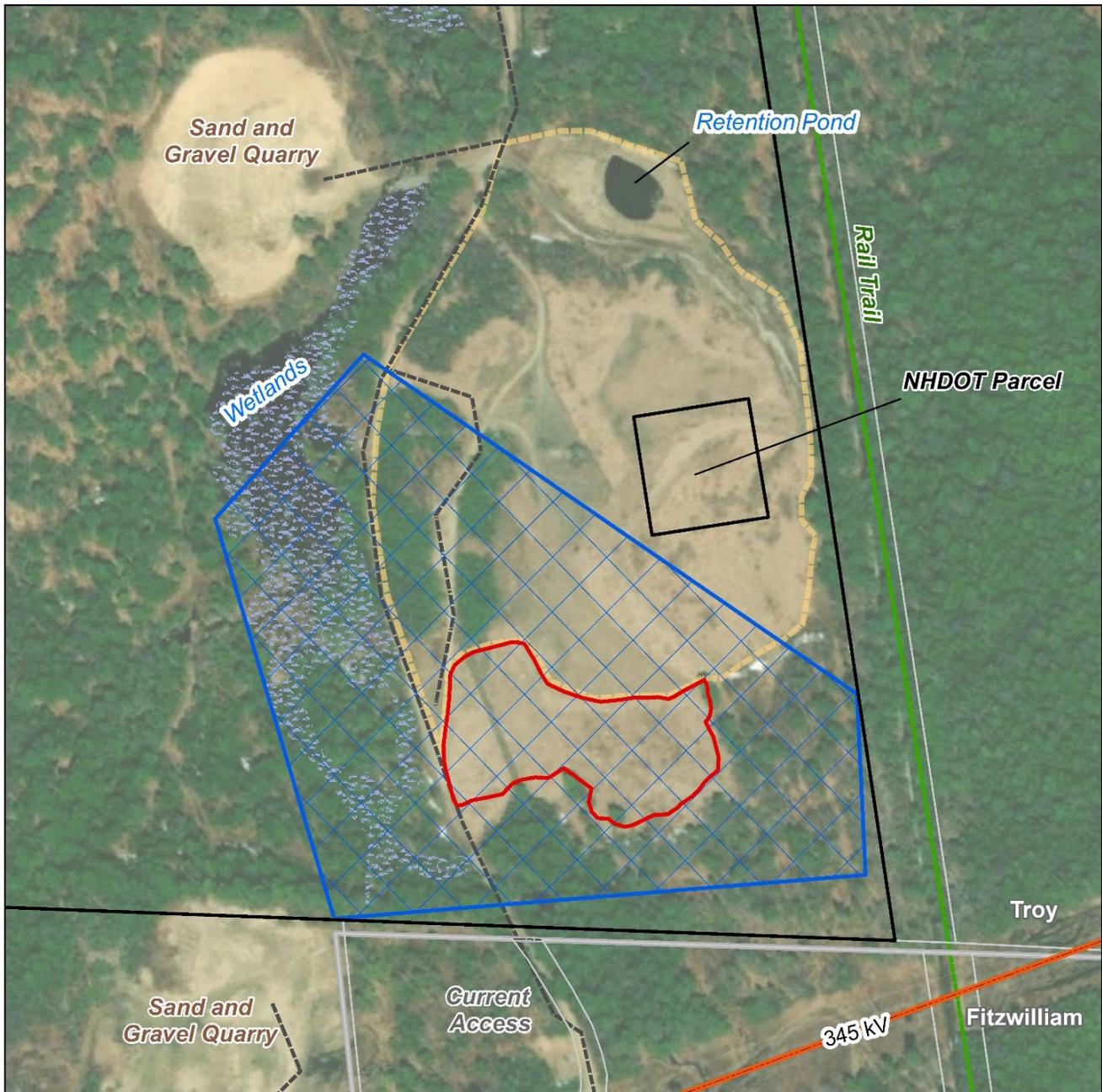


Figure 2. The graphic highlights major areas of the property and the parties responsible for their stewardship. Relative area sizes are not to scale.



0 0.1 0.2 Miles

*The Solid Waste Landfill area is approximate.

- | | | | |
|------------------------|---|----------------------------|-----------------------|
| County Parcel Boundary | Former Drum Disposal Area | Unimproved Roads | Pond |
| Property Parcel | Groundwater Management Zone and Superfund Site Boundary | Cheshire Branch Rail Trail | Wetland |
| Transmission Line | | | Solid Waste Landfill* |
| Municipal Boundary | | | |

Figure 3. A map of the remediated Site and Solid Waste Landfill.

What are potential redevelopment opportunities of the Site and the Property?

Looking forward, the Property could support a range of open space and recreation uses, as well as solar renewable energy generation, in the future.

- Recreation uses could include a trail network for walking, mountain biking, hiking and horseback riding. This trail network could be located on the Property's undeveloped areas (see Figure 1). The Appalachian Mountain Club has expressed interest in extending a trail connection across the Property to link the Metacomet-Monadnock Trail with the Cheshire Branch Rail Trail.
- The Property could also support solar renewable energy generation. About 60 acres of the Property is flat enough to support a solar facility (see Figure 1). A solar energy facility could enable energy cost savings through a power purchase agreement and/or net metering for the parcel owner and decrease reliance on non-renewable energy sources for the town and residents. Additionally, if a solar power company leased part of the parcel for a solar energy facility, the lease would generate income. A solar facility would also help deter trespassing on the Site and the solid waste landfill area, with the installation of additional security fencing.

Are there examples of reuse at other Superfund sites in New Hampshire and nearby states?

Former landfills and waste disposal sites, cleaned up by EPA under the Superfund program, offer opportunities for community amenities, recreation, and renewable energy reuses. Descriptions of these types of uses at former landfills in New Hampshire (Londonderry and Somersworth), as well as waste disposal sites in other States within New England, are below. These examples specifically highlight the success of reuse in tandem with continued EPA supervision and maintenance of the site remedy.

- **Auburn Road Landfill (Londonderry, New Hampshire):** Much like the Property, this 200-acre area had contaminated soil, groundwater and surface water associated with landfilling activities. Cleanup operations included capping and fencing of three contaminated landfill areas as well as extension of the public water supply to nearby residences. Site reuse was the result of a collaboration between EPA and the New Hampshire Flying Tigers Academy of Model Aeronautics Club. A model airplane flying field opened on the site in 2008.
- **Somersworth Sanitary Landfill (Somersworth, New Hampshire):** A disposal area operated on site from the mid-1930s to 1981. Improper disposal practices contaminated soil, sediment and groundwater. Cleanup included groundwater containment and treatment, a landfill cover, gas venting, and land and groundwater use restrictions. The newer area has not been developed but the city is reviewing proposals for a solar energy facility.
- **Iron Horse Park (Billerica, Massachusetts):** This industrial complex covers 553 acres. Industrial activities on site began in 1913. They included manufacturing, rail yard maintenance, waste storage and landfilling. Their operations resulted in soil, groundwater, and surface water contamination. Cleanup is ongoing. Activities include removing contaminated soil, backfilling areas with clean soil, capping contaminated soil areas, and closing and capping landfills. These activities enabled the continued operation of industrial businesses on site. They also restored marshes and created new wetlands habitat. In 2012, site stakeholders began a project to place solar panels on the Shaffer Landfill. After coordinating with EPA and the state, the town of Billerica signed a payment in lieu of taxes (PILOT) agreement in August 2013. It guarantees project revenue for the town over 25 years. Construction of the 25-acre solar array began in early 2014. Urban Green Technologies (UGT), the solar developer, placed 20,000 solar panels on the landfill. EPA worked with UGT to make sure panel installation did not impact the site's capped area. The 6-megawatt facility has reduced the town's reliance on fossil fuels and provided the locality with significant long-term energy cost savings. An additional 4-megawatt solar array was later built on site in 2016, followed by another 6-megawatt array in 2017.

- Sullivan’s Ledge (New Bedford, Massachusetts):** A 12-acre quarry operated at this site until 1921. In 1935, the city of New Bedford took over the site and turned it into a dump for hazardous materials. Waste disposal activities took place from the 1940s to the 1970s. The city then closed the dump and backfilled the disposal areas. Starting in 1984, cleanup activities included removing contaminated soil and sediment and capping the site. Restoration work finished in 2002. Today, site wetlands provide habitat for many wildlife species, including the great blue heron, the great egret, the red-tailed hawk, and the spotted turtle. In 2010, EPA’s Superfund Redevelopment Program and EPA Region 1 assessed the site’s capacity to support solar energy facilities. In 2013, EPA approved a 1.75-megawatt solar project on the capped part of the site. Project partners *SunEdison*, *Beaumont Solar*, *Pro-Tech Energy Solutions* and *BlueWave Capital* completed it in 2014. The 10-acre system includes more than 5,000 solar panels. The city of New Bedford buys energy generated from the solar arrays. This enables the city to increase its use of renewable energy sources and save 30% on municipal electricity bills. Over 20 years, the city will realize about \$2.7 million in energy cost savings through the purchase of solar net metering credits. In 2014, EPA Region 1 recognized the project team, including the city of New Bedford, *BlueWave Capital* and *SunEdison*, with its first Excellence in Site Reuse Award.
- Charles George Reclamation Trust Landfill (Tyngsborough, Massachusetts):** This 70-acre area started out as a small municipal dump. The landfill expanded to accept household and industrial wastes, chemicals containing volatile organic compounds and metal sludge. The Commonwealth of Massachusetts ordered the landfill’s closure in 1983. Site operations contaminated groundwater. Starting in 1983, cleanup activities included providing a permanent water supply to residents affected by contaminated groundwater, capping the landfill and collecting contaminated liquid (leachate) draining from the landfill, groundwater and landfill gas. The Massachusetts Department of Environmental Protection operates the landfill gas collection/destruction system and the groundwater/leachate collection system and maintains the cap. In 2016, Citizens Energy Corporation finished construction of a 3.56-megawatt solar facility on the landfill.

How does Superfund site reuse benefit communities?

Across the country, Superfund sites in reuse support community health and wellbeing. Recreation amenities such as athletic fields, walking trails, parks, playgrounds, and open space promote healthy lifestyles. Commercial and industrial reuses at the Site could support jobs and boost the local economy. If a solar facility is built on Site, a Site owner could benefit from renewable energy reuse by generating revenue from lease of the land to a solar developer, use power generated on site to offset energy costs and/or offer community members an option to access renewable energy to power their homes. People or entities interested in acquiring the Property can explore liability protections under the federal Superfund law. EPA’s [Top 10 Questions to Ask When Buying a Superfund Site](#) website provides more information.

Are local, regional or federal incentives for redevelopment available?

The economic incentives below apply to potential solar development, except for the State of New Hampshire Economic Revitalization Zone, which is based on the creation of jobs.

Federal Incentives	
Program	Benefits
Investment Tax Credit (ITC)	Available to any renewable energy development. The ITC reduces the tax liability of the installation cost by deducting a percentage of investment costs from the income taxes of the person or company claiming the deduction. Tiered percentages by the year when construction starts. <ul style="list-style-type: none"> In 2022: 26%. In 2023: 22%. In 2024 and future years: 10%.

Example: If a solar installation costs \$1 million and construction started in 2023, the income tax liability deduction would be 22% of the installation costs, or \$220,000.

Learn more at crsreports.congress.gov/product/pdf/IF/IF10479

U.S. Department of Agriculture (USDA) Rural Energy for America Program Energy Audit & Renewable Energy Development Assistance Grants (REDA)

Available to state and local governments, rural electric cooperatives and public power entities. Up to \$100,000 per project for conducting energy audits, providing technical assistance or conducting renewable energy site assessments.

Learn more at www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-energy-audit-renewable-energy-development-assistance-grants.

USDA Rural Energy for America Program (REAP)

Available to small businesses and agricultural producers. REAP provides guaranteed loan financing and grant funding for renewable energy systems and energy-efficiency improvements. Funding will cover up to 25% of project costs, capped at \$500,000 per project.

Learn more at www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans.

State/Regional Incentives

Program

Benefits

New Hampshire Public Utilities Commission Commercial & Industrial (C&I) Solar Incentive Program

Available to non-residential structures with a commercial electric meter in New Hampshire. Program provides \$0.20/watt for new solar facilities, up to 25% of the total project cost or \$10,000.

Learn more at www.puc.nh.gov/sustainable%20energy/renewableenergyrebates-ci.html.

State of New Hampshire Economic Revitalization Zone Tax Credit

Areas eligible to be designated as economic revitalization zones are defined as “vacant land or structures previously used for industrial, commercial, or retail purposes but currently not so used due to demolition, age, obsolescence, deterioration, brownfields, relocation of the former occupant's operations or cessation of operation resulting from unfavorable economic conditions either generally or in a specific economic sector...” by state law. The tax benefit is 4% to 6% of each new full-time job salary created in the calendar year. The zone requirement is reevaluated every five years.

Learn more at www.nheconomy.com/move/incentives-and-tax-credits/revitalization-zone.

EPA Region 1 Contact Information

For more information regarding the Site, please contact the Remedial Project Manager or Community Involvement Coordinator. For more information about reuse at Superfund sites in Region 1, please contact the Superfund Redevelopment Coordinator.

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