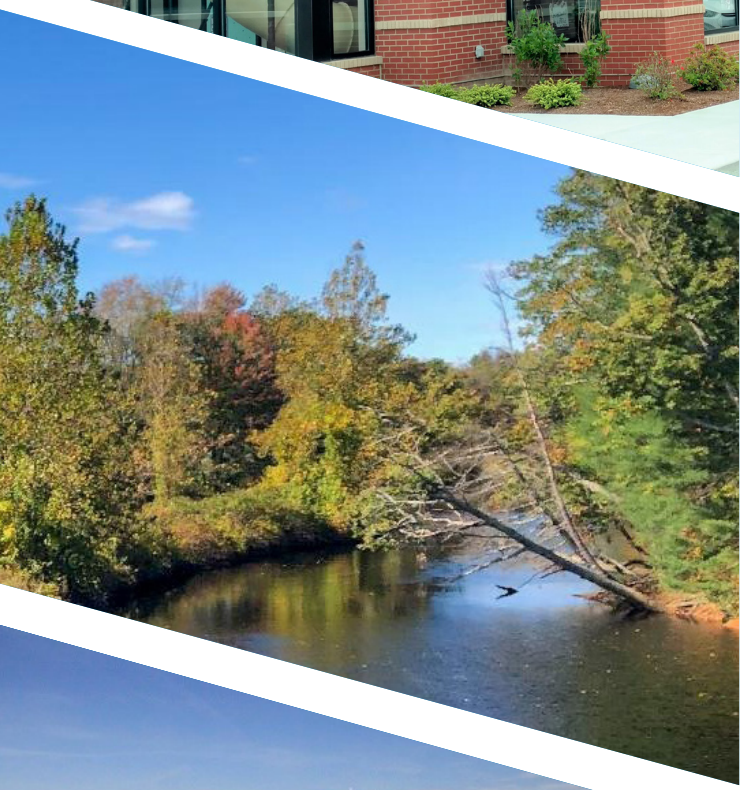
EPA

REGION 1
ECONOMIC
PROFILE



PUTTING SITES TO WORK

How Superfund Redevelopment in Region 1 Is Making a Difference in Communities

2023 DATA

Cover page photos:
Wells G&H (Massachusetts), Fletcher's Paint Works & Storage (New Hampshire), Iron Horse Park (Massachusetts).

Figure 1. Walking trail at the Blackburn & Union Privileges site (Massachusetts).

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PREFACE

The EPA's Superfund Program is a cornerstone of the work that the Agency performs for citizens and communities across the country. The revitalization of places affected by contaminated lands is a key part of Superfund's mission, meeting community needs for thriving economies and improved environmental and public health outcomes. Through the EPA's Superfund Redevelopment Program, the Agency contributes to these communities' economic vitality by supporting the return of sites to productive use.

The EPA is focused on accelerating work and progress at all Superfund sites across the country, and supporting redevelopment and community revitalization. Using resources from the 2021 Bipartisan Infrastructure Law, the EPA is providing necessary funding to enable delayed cleanup efforts at over 100 Superfund sites to move forward. As of early 2024, nearly 80% of the funding from the Bipartisan Infrastructure Law has gone to sites in communities with potential environmental justice concerns. The EPA is leading the way to support the return of these and other once-contaminated sites to productive use.

These regional profiles highlight community-led efforts as the EPA expedites cleanup and remediation and engages with partners and stakeholders to support redevelopment and community revitalization.

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INTRODUCTION

The EPA's Region 1 office serves Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. Since the 1950s, the states in EPA Region 1 have faced major changes in the manufacturing sector. Spurred by globalization, advances in technology and a transition to a service-based economy, these changes have contributed to significant job losses and substantial neighborhood and downtown declines in communities across the region. While continuing to emphasize manufacturing as an economic cornerstone and a source of jobs, state and local leaders are helping communities adjust to these large-scale economic changes. Much of this work centers on investing in workforce development, retaining existing businesses, encouraging new business development and repurposing old industrial land, including Superfund sites. The Superfund program in EPA Region 1 is proud to play a role in these efforts.

The cleanup and reuse of Superfund sites often restores value to site properties and amenities to surrounding communities that have been negatively affected by contamination. Site redevelopment can revitalize a local economy with jobs, new businesses, tax revenues and local spending.

Region 1 Sites in Reuse and Continued Use: Business and Job Highlights

In 2023...

614

businesses operating

$2.7B

annual sales

10,741

people employed

$930M

annual employee income

Figure 2. A new hotel at the W.R. Grace property at the Wells G&H site (Massachusetts).

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 1. There are 54 Superfund sites in reuse or continued use in Region 1 for which the EPA does not have business data, including 15 federal facilities on the Superfund National Priorities List (NPL). Not all sites in reuse involve an on-site business or other land use that would employ people. Several sites without businesses have beneficial effects that are not easily quantified, such as properties providing ecological or recreational benefits (e.g., parks, wetlands, ecological habitat and open space). In addition, there are 55 sites in reuse or continued use in Region 1 for which the EPA does not have property value or tax data, including 13 NPL federal facilities.

Through efforts such as the Superfund Redevelopment Program, EPA Region 1 helps communities reclaim cleaned-up Superfund sites. Factoring the reasonably anticipated future use of Superfund sites into the cleanup process promotes their safe redevelopment. In addition, EPA Region 1 works closely with state and local officials to remove barriers that have kept many Superfund sites vacant or underused. EPA Region 1 works to ensure that businesses on properties being cleaned up under Superfund can continue operating in a way that protects human health and the environment during site investigations and cleanup work. This continuity enables these businesses to remain open and serve as a source of jobs and income for local communities.

Superfund sites across Region 1 are home to commercial and industrial parks, retail centers, condominiums and single family homes. Many sites continue to host industrial operations, including large-scale manufacturing facilities. Some sites now support alternative energy projects. Others have been transformed into ecological preserves, parks and recreation complexes. On-site businesses and organizations at current and former Region 1 Superfund sites provide an estimated 10,741 jobs and contribute an estimated $930 million in annual employment income. Sites in reuse and continued use in Region 1 generate $23 million in annual property tax revenues for local governments.[1]

This profile looks at how redevelopment activities at Superfund sites make a difference in communities across Region 1. In particular, it describes some of the beneficial effects of redevelopment and continued use of current and former Superfund sites. The profile also describes the land values and property taxes associated with Superfund sites returned to use and sites that have remained in use throughout the cleanup process. The EPA updates these profiles periodically. The beneficial effects may increase or decrease over time due to changes in:

- The number of sites in reuse or continued use.
- The number of on-site businesses.
- Data availability.
- Changes in business and property value data.

Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 1.

Figure 3. Sign for The Nevins, an adult living community at the Tinkham Garage site (New Hampshire).

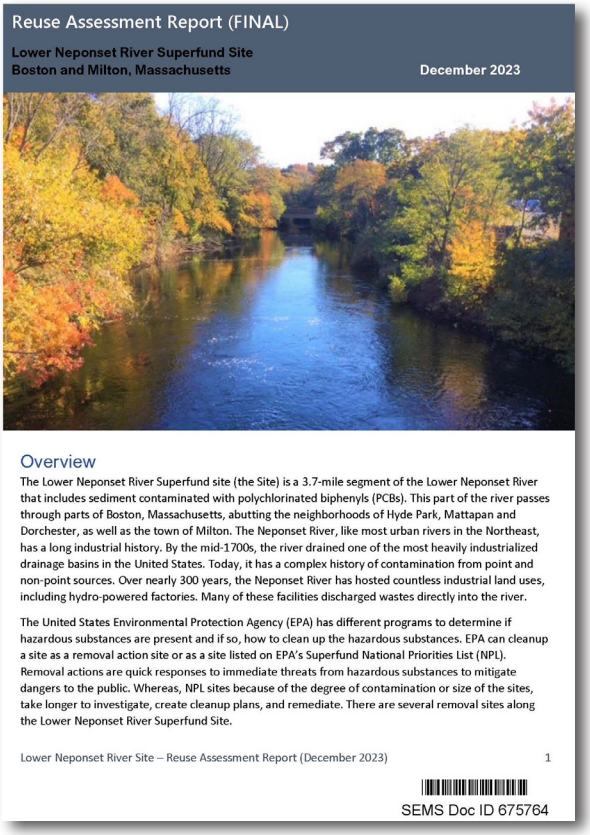
Figure 4. The River Lofts at Ashton Mill and the Blackstone River at the Peterson/Puritan, Inc. site (Rhode Island).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 1 is committed to improving the health and livelihood of Americans by cleaning up and returning land to productive use. In addition to protecting human health and the environment through the Superfund program, Region 1 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 1 helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment. In addition, the EPA participates in partnerships with communities and encourages opportunities to support Superfund redevelopment projects that emphasize environmental and economic sustainability.

Specific redevelopment support efforts in EPA Region 1 include:

- Identifying and evaluating local land use priorities to align with site cleanup plans through the redevelopment planning process.
- Facilitating cleanup and redevelopment discussions to help resolve key issues between parties interested in site redevelopment.
- Supporting targeted projects intended to help Region 1 communities and the EPA find the right tools to move site redevelopment forward.
- Making efforts to help address communities' and developers' liability, safety and reuse concerns through development of educational materials, comfort letters, developer agreements and environmental status reports – known as Ready for Reuse Determinations – that provide information about the appropriate use of sites.
- Supporting partnerships with groups committed to returning Superfund sites to productive use.
- Developing the *Process for Risk Evaluation, Property Analysis and Reuse Decisions Workbook* for local governments considering the reuse of contaminated properties.
- Developing reuse fact sheets, websites, webinars and reuse case studies to share opportunities and lessons associated with Superfund Redevelopment.


Reuse Assessment Report (FINAL)

Lower Neponset River Superfund Site
Boston and Milton, Massachusetts

December 2023

Overview

The Lower Neponset River Superfund site (the Site) is a 3.7-mile segment of the Lower Neponset River that includes sediment contaminated with polychlorinated biphenyls (PCBs). This part of the river passes through parts of Boston, Massachusetts, abutting the neighborhoods of Hyde Park, Mattapan and Dorchester, as well as the town of Milton. The Neponset River, like most urban rivers in the Northeast, has a long industrial history. By the mid-1700s, the river drained one of the most heavily industrialized drainage basins in the United States. Today, it has a complex history of contamination from point and non-point sources. Over nearly 300 years, the Neponset River has hosted countless industrial land uses, including hydro-powered factories. Many of these facilities discharged wastes directly into the river.

The United States Environmental Protection Agency (EPA) has different programs to determine if hazardous substances are present and if so, how to clean up the hazardous substances. EPA can cleanup a site as a removal action site or as a site listed on EPA's Superfund National Priorities List (NPL). Removal actions are quick responses to immediate threats from hazardous substances to mitigate dangers to the public. Whereas, NPL sites because of the degree of contamination or size of the sites, take longer to investigate, create cleanup plans, and remediate. There are several removal sites along the Lower Neponset River Superfund Site.

Lower Neponset River Site – Reuse Assessment Report (December 2023) 1

SEMS Doc ID 675764

Figure 5. Reuse Assessment for the Lower Neponset River site (Massachusetts).

These efforts have helped build expertise across Region 1, making it easier to both consider future use of Superfund sites prior to cleanup and to identify opportunities for removing reuse barriers. These efforts also help Tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and other partners and stakeholders to better understand potential future uses for Superfund sites. This helps stakeholders engage early in the cleanup process, ensuring that Superfund sites are restored as productive assets for communities. Most importantly, these efforts lead to significant returns for communities, including jobs, annual income and tax revenues.

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

The EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.[2] The EPA refers sites warranting long-term cleanup to its remedial program or to state programs. The EPA's National Priorities List (NPL) is a list of sites the Agency is targeting for further investigation and possible remediation through the Superfund program. Once the EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. The EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. The EPA has placed 123 sites in Region 1 on the NPL.

Whenever possible, the EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 1, 83 NPL sites and 14 non-NPL Superfund sites are in use. These sites have either new uses in place or uses that remain in place from before cleanup. Many of these sites have been redeveloped for commercial, industrial and residential purposes. Others have been redeveloped for recreational, ecological and agricultural uses. Businesses and other organizations also use some site areas for memorials and parking areas. Many redeveloped sites support multiple uses and have the capacity to support additional uses and further redevelopment. The following sections take a closer look at the beneficial effects of businesses operating on current and former Superfund sites in Region 1.

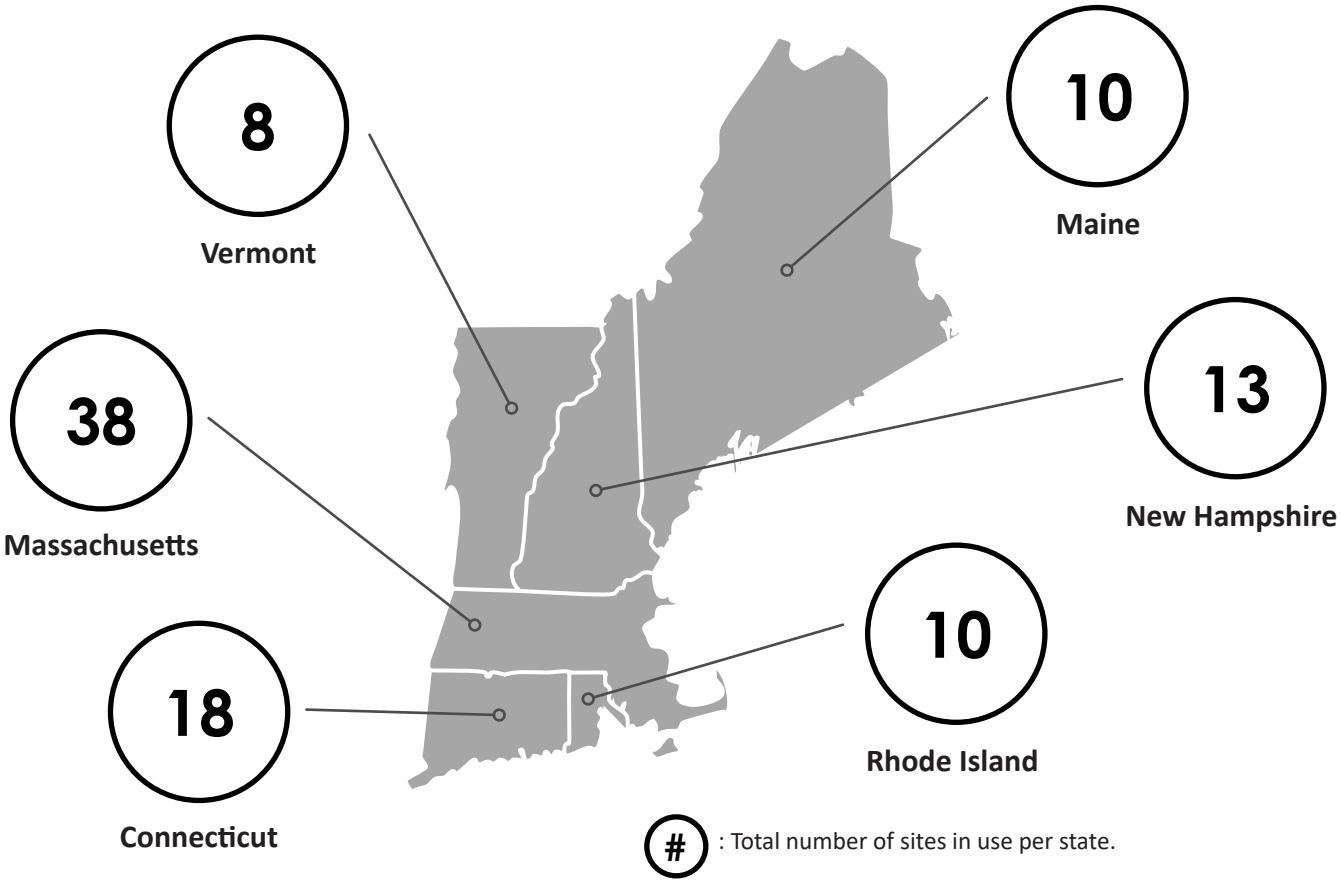


Figure 6. 97 sites in reuse, continued reuse, and reuse and continued reuse in Region 1.

2 Removal actions may be taken at sites on the NPL and sites not on the NPL.

Figure 7. A distribution warehouse at the Peterson/Puritan, Inc. site (Rhode Island).

Figure 8. The police station at the Blackburn & Union Privileges site (Massachusetts).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 1 Example
In Reuse	*Part or all of a site is being used in a new, different manner than before Superfund involvement. Or, the property was vacant and cleanup was designed to support a new, specific land use.*	*Blackburn & Union Privileges (Massachusetts) – Following cleanup, the town took over site parcels for unpaid taxes and developed a new police station and senior center on-site. In May 2018, town officials, police and community members gathered to attend a ribbon-cutting ceremony to open a new police station. In December 2018, another ribbon-cutting ceremony marked the completion of a new senior center – the Walpole Co-operative Bank South Street Center.*
In Continued Use	*Historical uses at a site remain active, and/or the site is still used in the same general manner as when the Superfund process started at the site.*	*Central Landfill (Rhode Island) - Cleanup at this site enabled the continued operation of the Central Landfill. It receives over 90% of Rhode Island's municipal solid waste. The landfill owner leads tours of the landfill and recycling center for community groups and local schools.*
In Reuse and Continued Use	*Part of a site is in continued use and part of the site is in reuse.*	*Peterson/Puritan, Inc. (Rhode Island): Cooperation among the EPA, the Rhode Island Department of Environmental Management and the community enabled on-site businesses to remain open during cleanup. The Blackstone River remains an important natural, recreational and cultural resource for the region. New site uses include several commercial businesses and solar installations.*

Enabling Reuse at Removal Action Sites

The EPA is committed to incorporating reuse plans into removal action cleanups. In EPA Region 1, removal action sites are now parks, a tree farm, a supermarket, a museum, a hotel and a manufacturing operation. Developers and other parties are evaluating reuse options at other sites where the EPA has recently completed removal actions. To learn more, see the profiles of removal action sites in reuse in the Reuse Summary Profiles section.

Figure 9. Homewood Suites hotel at the Lawrence Metals (Former) site (Massachusetts).

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 1

Businesses and Jobs

The EPA has collected economic data for 614 businesses, government agencies and civic organizations operating on 38 NPL sites and five non-NPL sites in reuse and continued use in Region 1. (See the State Redevelopment Profiles for each state's reuse details.) Businesses and organizations at these sites are part of several different sectors, including lodging, professional trade, industrial trade and health care services.

Businesses and organizations at Region 1 Superfund sites include hotels, schools, grocery stores, restaurants, civic and social organizations, freight transportation facilities, health care centers and manufacturing facilities.

Figure 10. MonkeySports sporting goods store at the Norwood PCBs site (Massachusetts).

The businesses and organizations at these sites generate about $2.7 billion in estimated annual sales and employ about 10,741 people, earning an estimated $930 million in annual employment income. This income injects money into local economies and generates revenue through personal state income taxes. These businesses also help local economies through direct purchases of local supplies and services. On-site businesses that produce retail sales and services also generate tax revenues through the collection of sales taxes, which support state and local governments. Table 1 provides more detailed information.

Table 1. Site and Business Information for Region 1 Sites in Reuse and Continued Use (2023)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*32*	*13*	*15*	*$79 million*	*111*	*$8 million*
In Continued Use	*6*	*1*	*1*	*$620,000*	*6*	*$398,736*
In Reuse and in Continued Use	*59*	*29*	*598*	*$2.6 billion*	*10,624*	*$922 million*
Totals	***97***	***43***	***614***	***$2.7 billion***	***10,741***	***$930 million***

[a] 15 sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

[b] Also includes other organizations such as government agencies, nonprofit organizations and civic institutions. Business information is not available for all businesses on all Superfund sites in reuse or continued use. Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use have the potential to increase in value significantly. This increased value can boost property tax revenues, which help pay for local government operations, schools, transit systems and other public services. Site properties at the Industri-Plex site in Massachusetts are now valued at $253.5 million.

Identifying increases in property values and property taxes following cleanup and reuse is challenging. This is due to several factors, including limited data on past property values and the frequency and timing of local property value assessments. Likewise, many factors affect property values, including external economic and neighborhood factors not related to a site's contamination or Superfund status. It is also difficult to isolate the effects of Superfund cleanup and redevelopment using current property values. However, these values do provide insight into the current value of Superfund properties and the potential loss in economic value if the properties were not cleaned up and made available for reuse or continued use.

The EPA has collected property value and tax data for 42 Superfund sites in reuse and continued use in Region 1.[4] These sites span 1,111 property parcels and 7,375 acres. They have a total property value of $1.4 billion. The average total property value per acre is $185,123.

Region 1 Sites in Reuse and Continued Use: Property Value and Tax Highlights

$1.4B

total property value

$23M

total annual property taxes

Figure 11. Emery Flats Apartments at the Industri-Plex site (Massachusetts).

Land and improvement property value information is available for 42 sites. These properties have a total land value of $524 million and a total improvement value of $841 million.[5]

Property tax information is available for 38 sites. The properties generate a combined $23 million in local property taxes annually.

Table 2. Property Value and Tax Information for Sites in Reuse and Continued Use in Region 1[a]

Total Land Value (42 sites)	Total Improvement Value (42 sites)	Total Property Value (42 sites)	Total Property Value per Acre (42 sites)[b]	Total Annual Property Taxes (38 sites)
$524 million	$841 million	$1.4 billion	$185,123	$23 million

[a] Results are based on an EPA Superfund Redevelopment Program effort to collect on-site property values and property taxes for a subset of Superfund sites. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2019 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

[b] Based on total property value amount of $1,365,359,740 (rounded value is $1.4 billion) divided by total acreage of 7,375.41 (rounded to 7,375 acres).

4 There are 55 additional sites in reuse or continued use in Region 1 for which the EPA does not have property value or tax data, including 13 NPL federal facilities.

5 Property values consist of land value and the value of any improvements (buildings and infrastructure) placed on a property. When sites are redeveloped, some or all of these improvements may be new or already in place. In some cases, the breakdown showing the land value and improvement value is not always available; only the total property value may be available.

BENEFICIAL EFFECTS FROM ENHANCED RECREATIONAL AND ECOLOGICAL AMENITIES

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 1 sites in reuse and continued use provide recreational and ecological benefits. Green space and habitat reuses help attract visitors and residents and indirectly contribute to local economies.

Figure 12. An informational kiosk and recreational trail at the Solvents Recovery Service of New England site (Connecticut).

Careful planning can enable the integration of green spaces and habitat into site cleanup plans, resulting in the transformation of contaminated properties into valuable community and wildlife assets. Green spaces are integral components of sustainable communities – they help protect the environment and human health while providing other social and economic benefits. Parks, community gardens and other public green spaces create opportunities for people to gather, exercise and connect with nature. The creation of green spaces and habitat at once-contaminated properties serves to re-introduce ecosystems and biodiversity into urban and suburban landscapes by providing corridors for migrating species and preserving habitat. They can also mitigate stormwater runoff problems by slowly absorbing and naturally filtering stormwater, resulting in improved water quality due to decreased runoff and erosion.

Parks, natural areas and scenic landscapes also have great economic value – supporting regional economies through tourism, agriculture and other activities. Economic impacts of recreation activities can include outdoor recreation spending and reduced public costs related to healthcare and infrastructure. In 2021, outdoor recreation contributed $862 billion to the U.S. economy, supporting 4.5 million jobs and 1.9% of the total gross domestic product (GDP). Outdoor recreation's contribution to the GDP grew 18.9% compared to the overall economy that grew 5.9% in 2021.[5] Protected green space can also increase the property values of nearby homes by providing amenities that draw people to live and work in the community. Many sites in Region 1 provide recreational and ecological benefits.

3 State of the Outdoor Market, Fall 2022. Outdoor Industry Association. Available at www.outdoorindustry.org/wp-content/uploads/2022/12/OIA-State-of-the-Outdoor-Market-Report-Fall-2022.pdf.

ELIZABETH MINE
Award-Winning Wetland Restoration at Former Copper Mine

The Elizabeth Mine Superfund site is in Strafford and Thetford, Vermont. A copper mine was on-site from the early 1800s until 1958. The area consists of two mine tailings piles, one area of waste rock and heap leach piles, two open-cut mines, several horizontal mine entrances, underground shafts and tunnels, ventilation shafts and several former ore processing buildings, among other on-site structures. During early mining operations, several copper smelters were built on the site. Throughout the years of operation, over 3.25 million tons of ore were mined, producing over 100.5 million pounds of copper.

Figure 13. An aerial view of the Elizabeth Mine Superfund site (Vermont).

Mining wastes contaminated groundwater, soil and sediment with heavy metals and acid-rock drainage. The adjacent West Branch of the Ompompanoosuc River, Lord Brook and two tributaries were also contaminated. The EPA added the site to the National Priorities List (NPL) in 2001. Cleanup actions taken by the EPA included stabilization of the tailing pile with soil, repair of the tailing dam, construction of surface water diversion channels, water treatment systems and a passive leachate treatment system, excavation, consolidation and covering of mining waste and contaminated soil, and institutional controls. The EPA also restored 15 acres of wetlands for ecological reuse. Remedy construction of all remedial actions finished in 2021.

Figure 14. Historical signage at the Elizabeth Mine Superfund site placed by the Vermont Division for Historic Preservation (Vermont).

As a result of the cleanup and the recovery of benthic and fish communities, the state of Vermont delisted the four miles of impaired West Branch of the Ompompanoosuc River and parts of Lord Brook from the Clean Water Act's impaired waters list. The U.S. Army Corps of Engineers Sustainability Award Program presented the Green Dream Team Award to the Elizabeth Mine Superfund Site Project Delivery Team in 2014 for wetland restorations at the site. Construction of a 7-megawatt solar farm finished in 2017. The solar installation uses ballasted foundations so that it sits on top of a capped waste area without impacting the integrity of the cap. Today, the project includes nearly 20,000 solar modules. It supplies electricity to the Green Mountain Power grid, producing enough energy to power about 1,200 homes. In collaboration with the Elizabeth Mine Historic Preservation Trust, the Stafford Historical Society, the Vermont Department of Environmental Conservation and the Vermont Division for Historic Preservation, the EPA also placed interpretive panels on-site to help people learn about the area's history and cleanup.

FLETCHER'S PAINT WORKS & STORAGE
Memorial Park at Former Paint Facility Supports Recreational and Ecological Use

Fletcher's Paint Works and Storage Facility Superfund Site is in a dense residential, commercial and industrial area in the town of Milford, New Hampshire. The site is less than a quarter mile from downtown Milford, with part of the Site bordered by the Souhegan River and adjacent to Keyes Memorial Park, a town recreation area. From 1949 to 1991, Fletcher's Paint Works made and sold paints and stains on-site. During operations, hundreds of drums of hazardous substances were stored outdoors at both the paint manufacturing plant and retail outlet (Elm Street Area) and in a nearby storage shed (Mill Street Area). In 1984, volatile organic compounds (VOCs) were detected in a drinking water supply well in Keyes Field, located just west of the Elm Street Area. The Keyes Municipal Water Supply Well was

subsequently removed from service, triggering an investigation that resulted in the site's listing to the National Priorities List (NPL) in 1989. The investigation uncovered contamination in the soil at the Elm Street and Mill Street areas, in the groundwater underlying and connecting both areas, and in the sediments of the Souhegan River. The primary contaminants at the site are polychlorinated biphenyls (PCBs) from scrap pyranol, and VOCs, such as benzene, 1,2 dichloroethane (DCA) and trichloroethylene (TCE), that were released from spills, leaks, manufacturing operations and dust suppression at the site.

Site cleanup included both removal and remedial actions. The site's primary potentially responsible party (PRP) led cleanup activities. The PRP removed drums containing hazardous wastes and underground storage tanks were removed. PCB-contaminated soil in both the Elm Street and Mill Street areas was excavated, treated and disposed of off-site, and replaced with clean fill. The Elm Street area was capped with an engineered soil and vegetative cover. Contaminated sediments in the Souhegan River were excavated and the riverbanks and river bottom were restored.

In the Elm Street Area, redevelopment includes a public park containing a Korean War Memorial built in 1996, a public open-air performance stage constructed from local repurposed stone in 2019, and additional parking for the pre-existing Keyes Memorial Park. The Mill Street area provides open green space, and the restored Souhegan River is in continued ecological use.

Figure 15. The Souhegan River and a public performance space at the Fletcher's Paint Works & Storage Superfund site (New Hampshire).

Figure 16. The parking lot at the Fletcher's Paint Works & Storage Superfund site, built to improve public access to Keyes Memorial Park (New Hampshire).

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 1. At the Atlas Tack Corp. Superfund site in Fairhaven, Massachusetts, restored wetlands and a saltwater marsh now provide habitat for plants, fish and wildlife. Birders frequent the area for bird-watching activities. Restored wetlands at the Pine Street Canal site in Burlington, Vermont now support a wide range of mammals, birds, reptiles, amphibians and fish. At the Kearsarge Metallurgical Corp. site in Conway, New Hampshire, forested wetlands provide habitat along the northern bank of Pequawket Pond. Restored wetlands at the Shpack Landfill Superfund site in Attleboro and Norton, Massachusetts, help treat stormwater and alleviate flooding along a roadway next to the site.

Figure 17. Restored wetlands and saltwater marsh at the Atlas Tack Corp. site (Massachusetts).

Wetlands provide a variety of benefits. The combination of shallow water, high levels of nutrients and primary productivity is ideal for organisms that form the base of the food web and feed many species of fish, amphibians, shellfish and insects. Wetlands are extremely effective in removing pollutants from water and acting as filters for future drinking water. Wetlands play a role in reducing the frequency and intensity of floods. They can store large amounts of carbon. They also provide recreational amenities.

These benefits also have economic value. Replacing wetlands' water treatment services with manmade facilities, for example, would be expensive. Worldwide, wetlands provide an estimated $47.2 trillion in ecosystem services. To learn more, see:

- EPA's *Economic Benefits of Wetlands*: www.epa.gov/sites/default/files/2021-01/documents/economic_benefits_of_wetlands.pdf
- EPA's *Ecosystem Services at Superfund Sites: Reuse and the Benefit to Community:* https://semspub.epa.gov/src/document/HQ/100003500
- EPA's *Why Are Wetlands Important?*: www.epa.gov/wetlands/why-are-wetlands-important
- EPA's *Functions and Values of Wetlands*: www.epa.gov/sites/default/files/2021-01/documents/functions_values_of_wetlands.pdf

Redevelopment of Federal Facility Sites

EPA Region 1 provides cleanup oversight and support at many federal facilities across New England. The EPA works with the U.S. Department of Defense to:

- Ensure appropriate plans are in place for site cleanup and long-term monitoring.
- Provide cleanup oversight.
- Assist with cleanup actions when appropriate.

Cleanups of federal facilities are often complex, involving many parties to address contamination across large areas. At active federal facilities, the EPA works with all appropriate parties to minimize the impact of cleanup activities on military operations.

At federal facilities identified for closure or new missions, where appropriate, the EPA works with federal, state and local parties to make sure cleanup efforts align with redevelopment plans. Former federal facility sites are now in use for a wide range of purposes, from business parks and industrial complexes to cultural centers and parks. These uses provide benefits for communities affected by facility closures. Here are a few examples:

- The EPA placed Pease Air Force Base in New Hampshire on the NPL in 1990. The U.S. Air Force continues to investigate site conditions and is putting systems in place to treat contaminated groundwater. The site is now home to an airport, the Great Bay National Wildlife Refuge and the Pease International Tradeport. The thriving Tradeport business park is home to over 200 businesses. The site also supports Portsmouth International Airport, the New Hampshire Air National Guard and a golf course. Site businesses employ about 6,600 people, providing estimated annual employment income of $739 million and generating nearly $2.2 billion in estimated annual sales revenue.
- The EPA placed the Loring Air Force Base in Maine on the NPL in 1990. During investigations and cleanup, the Loring Development Authority has worked with the U.S. Air Force, Maine DEP and the EPA to establish the Loring Commerce Centre, an industrial complex, aviation centre and business park. Businesses and federal agencies in the centre provide jobs and income for the surrounding community. Together, these agencies, businesses and other organizations employ about 800 people and generate an estimated $7 million in annual sales revenue.
- The EPA placed 9,000-acre Fort Devens in Massachusetts on the NPL in 1989. While cleanup and investigations continue, a successful partnership between the EPA, the U.S. Department of Defense, the U.S. Army, the commonwealth of Massachusetts and MassDevelopment has contributed to increased employment opportunities as well as increased revenue for the community. About 130 establishments are active on-site, including warehouses and distribution centers, manufacturing and industrial spaces, and research and development facilities. These businesses employ about 4,500 people and generate about $1.8 billion in estimated annual sales. Redevelopment also includes a Native American cultural center and residential

Figure 18. Pease International Tradeport sign at the Pease Air Force Base site (New Hampshire).

Figure 19. The United Native American Cultural Center at the Fort Devens site (Massachusetts).

properties, as well as the Shirley Meadows affordable apartments for seniors with supportive services for aging, which opened in 2020, and an expansion of the Oxbow National Wildlife Refuge. In 2021, two major developments began construction, including a $500 million, 89-acre bio-manufacturing campus and a $300 million, 47-acre fusion energy research and manufacturing campus. Both campuses are now open and expanding with new projects.

- The EPA placed the Materials Technology Laboratory (USARMY) site in Massachusetts on the NPL in 1994. Cleanup removed contamination and demolished an on-site nuclear reactor. The site is now home to stores, restaurants, a childcare facility, a fitness center, corporate offices and other businesses, as well as the Arsenal Center for the Arts. Site businesses employ about 900 people and generate about $190 million in estimated annual sales revenue.

- The EPA placed the Davisville Naval Construction Battalion Center in Rhode Island on the NPL in 1989. Today, about 80 companies are on-site, employing over 1,000 people and generating over $300 million in estimated annual sales revenue. Park and recreation areas for the community have also been created. The site is also the cornerstone of the larger Quonset Business Park, which is home to 200 companies that employ over 14,000 people.

More summary profiles of federal facilities in reuse and continued use are available in the Reuse Summary Profiles section.

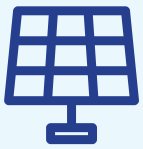
Figure 20. AthenaHealth office at the Materials Technology Laboratory site (Massachusetts).

Figure 21. Mill Creek Marine on Allen Harbor at the Davisville Naval Construction Battalion Center site (Rhode Island).

BENEFICIAL EFFECTS FROM ALTERNATIVE ENERGY PROJECTS

Alternative energy projects provide a range of beneficial effects. They support construction and operations jobs, spur local investment for manufacturing and materials, create benefits for landowners in the form of land lease and right-of-way payments, lower energy costs, and reduce greenhouse gas emissions. They also help hedge against energy price and supply volatility, support local business competitiveness and technology supply chain development, provide outreach and public relations opportunities for site owners and communities, and contribute to broader economic development planning. Alternative energy projects at Superfund sites and other contaminated lands help support White House priorities to strengthen resilience to climate change and increase access to clean energy sources. These projects also can help communities reclaim and return contaminated lands to productive uses, while supporting the EPA's mission to protect human health and the environment.

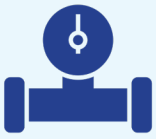
As of September 2023, the EPA is tracking 28 alternative energy projects at 27 Superfund sites in Region 1. These projects have an installed capacity of about 165 megawatts. Four of these projects offset on-site energy demands of cleanup efforts or directly power site-related cleanup activities.



22
Solar Projects

2
Biomass Projects

1
Hydroelectric Project



1
Landfill Gas Facility

2
Wind Projects

Alternative energy projects tracked in **Region 1** generate an estimated **539,010 megawatt hours** each year.[6] This is equivalent to the following emission reductions...

376,547 metric tons of carbon dioxide

The carbon dioxide emissions from **49,105** homes' energy use for one year

The greenhouse gas emissions from **89,619** gasoline-powered passenger vehicles driven for one year

6 Equivalencies were calculated using power production. Production values were not available for one project in Region 1. Estimated power production for solar projects was calculated using facility capacity (megawatts) with the National Renewable Energy Laboratory's PVWatts Calculator pvwatts.nrel.gov. To learn more about equivalencies, visit www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

ENVIRONMENTAL JUSTICE AND ECONOMIC REVITALIZATION

Communities with environmental justice concerns are disproportionately affected by environmental pollution and hazards and typically include marginalized, underserved, low-income groups and people of color, including Tribal and indigenous people. Superfund cleanups and redevelopment are opportunities to evaluate how to reduce impacts on these communities and, through meaningful community involvement efforts, engage communities in productive dialogue to increase local benefits through reuse opportunities that meet community needs.

In 2021, President Biden issued two executive orders – Executive Order 13985 (Advancing Racial Equity and Support for Underserved Communities Through the Federal Government) and Executive Order 14008 (Tackling the Climate Crisis at Home and Abroad). The executive orders directed federal agencies to develop and implement policies and strategies that strengthen compliance and enforcement, incorporate environmental justice considerations in their work, increase community engagement, and ensure that at least 40% of the benefits from federal investments in climate and clean energy flow to underserved communities.

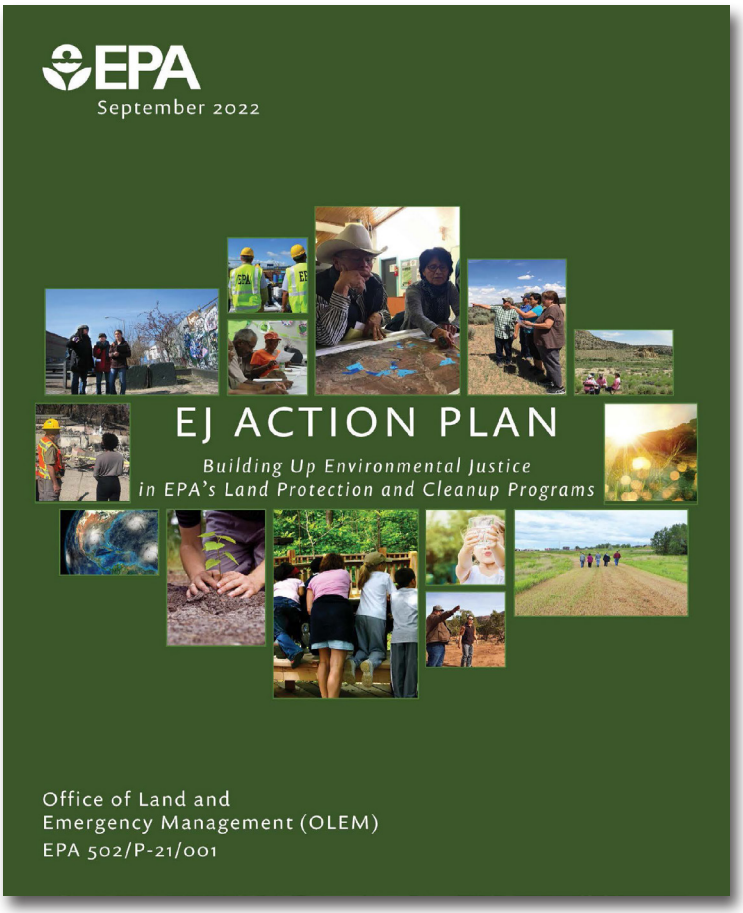


Figure 22. The EPA's EJ Action Plan aims to address cleanup issues in overburdened communities across the country.

The EPA has taken this charge to heart and, in September 2022, issued the *EJ Action Plan: Building Up Environmental Justice in EPA's Land Protection and Cleanup Programs (EJ Action Plan)*, intended to address land cleanup issues in overburdened communities across the country. The plan includes strategies to enhance nearly two dozen projects while addressing the need for stronger compliance, increased environmental justice considerations in EPA regulations, and improved community engagement. The plan also complements the recommendations for integrating environmental justice into the cleanup and redevelopment of Superfund and other contaminated sites highlighted in the May 2021 National Environmental Justice Advisory Council (NEJAC) report, *Superfund Remediation and Redevelopment for Environmental Justice Communities*.

In addition, the EPA is using investment from the Bipartisan Infrastructure Law to fund new cleanup projects and expedite ongoing cleanup at over 100 Superfund sites across the country. As of early 2024, nearly 80% of the funding from the Bipartisan Infrastructure Law has gone to sites in communities with potential environmental justice concerns. This historic investment will finance cleanup at 11 sites in Region 1.

CLIMATE ADAPTATION AT SUPERFUND SITES

Remedies at contaminated sites may be vulnerable to the impacts of climate change and extreme weather events. The EPA's Superfund program has developed an approach that raises awareness of these vulnerabilities and applies climate change and weather science as a standard operating practice in cleanup projects. The approach involves periodic screening of Superfund remedy vulnerabilities, prioritizing the Superfund program's steps to adapt to a changing climate, and identifying measures to assure the climate resilience of Superfund sites. The EPA is working to ensure that its programs, policies, rulemaking processes, enforcement and compliance assurance activities, and operations consider the current and future impacts of climate change and how those impacts may disproportionately affect overburdened and underserved communities.

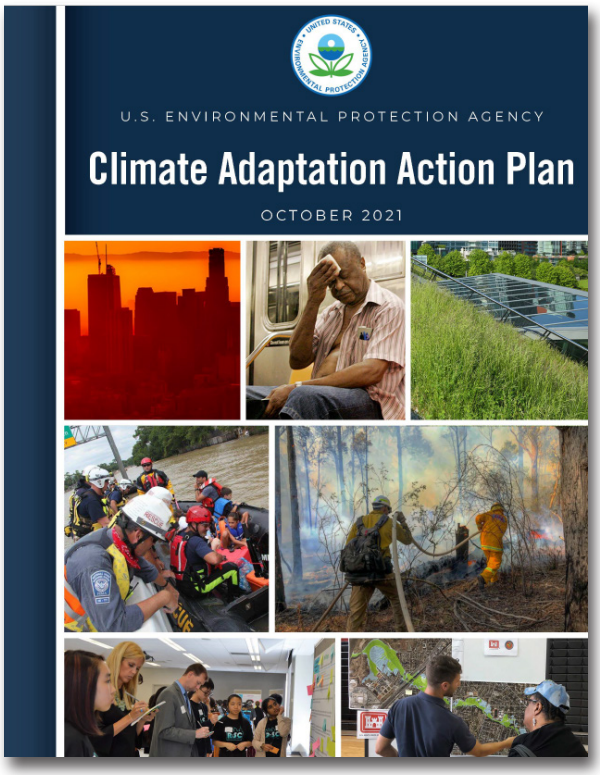


Figure 23. In January 2021, President Biden signed Executive Order 14008, requiring federal agencies to develop climate action plans that describe their climate vulnerabilities and steps to increase resilience to the impacts of climate change. In October 2021, the EPA released its updated Climate Adaptation Action Plan, which includes five climate adaptation priority actions that the Agency is taking to increase human and ecosystem resilience as disruptive impacts associated with climate change increase.

The EPA's Superfund program has done studies to identify potential vulnerabilities of cleanup actions and evaluate strategies to mitigate these vulnerabilities. In 2012, the EPA did a preliminary vulnerability assessment of all NPL sites. The EPA found that a significant number of the sites were susceptible to flooding associated with sea-level risk or floodplain proximity. A 2018 EPA study assessed the status of remedies in place at 251 Superfund sites in EPA Regions 2, 4 and 6 that were exposed to tropical-force winds or flooding associated with three major hurricane events the previous year. It found that climate resiliencies built into the remedies implemented at these sites were critical to successfully maintaining long-term protectiveness. These studies have helped inform climate adaptation planning for the Superfund program.

Strategies for mitigating vulnerabilities and increasing remedy resilience in light of climate change may apply to existing or planned remediation systems. The strategies also may be applied to cleanups conducted under other regulatory programs or through voluntary efforts to increase remedy resilience to the potential effects of climate change.

Examples of climate adaptation measures that increase resiliency include:

- Vegetating landfill cap covers with native plants provides a ground cover that is tolerant of local seasonal temperature and precipitation extremes and mniimizes the need for maintenance, such as mowing and watering.
- Designing and constructing capping systems to withstand significant storm and flood events.
- Raising the elevation of critical electrical instrumentation for remedial components and using water-tight materials to construct and protect remedial components.
- Restoring wetlands to reduce wave action in floodplain and intertidal zones to minimize erosion from storm events.
- Integrating specifications regarding tolerance of extreme weather and other natural hazards into building and remedial infrastructure designs.
- Routinely reassessing site vulnerability to wildfires and implementing resilience measures as recommended by firefighting agencies.

GREEN INFRASTRUCTURE AND SUSTAINABLE LANDSCAPE AND BUILDING PRACTICES AT SUPERFUND SITES

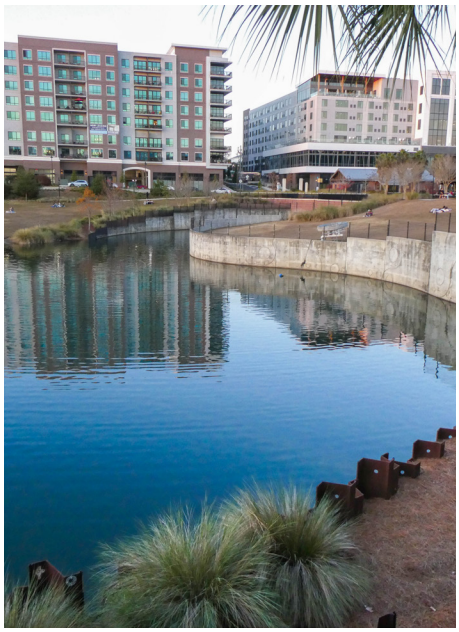
Cleaning up Superfund sites and planning for their future use offers communities opportunities to explore exciting and innovative ways to approach infrastructure, landscape and building design. Collaboration among the EPA and communities has led to award-winning examples of green infrastructure and sustainable landscape and building projects at Superfund sites across the country.

Examples of green infrastructure include ponds, stream corridors, rain gardens, green roofs and porous pavement. Green infrastructure helps manage stormwater naturally, reduces flood risk, improves air and water quality, and addresses climate change. It provides many of the same functions as traditional "grey" infrastructure, often at a fraction of the cost. It uses plants, soil, landscape design and engineered techniques to retain, absorb, filter and reduce polluted stormwater runoff. These features cut down on the need to send stormwater into overburdened, aging sewer systems, while enhancing water quality and conservation, flood-risk mitigation, habitat diversity and access to green space. Green infrastructure also enhances local quality of life for communities with Superfund sites, providing attractive green spaces, public parks and trails, and natural habitats in once-contaminated areas. Recent projects also show how reusing Superfund sites to link regional natural resources together and create interconnected landscapes provides a unique sense of place that attracts people, jobs and investment.

Sustainable landscapes, much like green infrastructure, restore and recreate natural processes, enabling water conservation, water filtration and irrigation. Sustainable building practices result in facilities that minimize energy and water use and rely on environmentally friendly materials. Projects using these approaches follow a variety of methods to improve air, soil and water quality, while also addressing urban heat island effects. By providing new habitats and reducing the use of materials that affect native plant and animal populations, sustainable buildings and landscapes support biological diversity and site stewardship. Greening once-contaminated areas also supports economic revitalization through new jobs, amenities and services, recreational assets and housing.

Key Considerations

- Green infrastructure projects rely on a detailed assessment of the area's natural resources, including waterways, forests, agricultural areas and habitat, and the services they provide.
- Early consideration of community priorities and existing initiatives is an important part of green infrastructure planning. Working with diverse stakeholders locally and regionally makes sure projects identify all linkage opportunities and any potential issues.
- Superfund reuse projects can incorporate sustainable landscape and building best practices at different scales. Some features require skilled labor and significant investment. Other efforts, such as putting in rain gardens, natural lighting and energy-efficient appliances, are simple to implement and offer significant returns.
- Reducing impervious areas – conventional pavement and roofs – is a key part of innovative projects. Using porous materials such as permeable pavers allows rain to soak into the soil, preventing sewer overflows, flooding and stream erosion.



Green infrastructure and sustainable landscape and building projects include features such as rain gardens, green roofs and permeable pavers to reduce the amount of stormwater entering sewers; "floodable" parks to provide drainage areas during major storm events; green space, parks and trails to support walkable communities; buildings using high-efficiency and environmentally friendly materials; and LEED-certified facilities.

REDEVLOPMENT IN ACTION

GE-PITTSFIELD/HOUSATONIC RIVER
Cleanup Supports Community Priorities and Spurs Economic Growth

The GE-Pittsfield/Housatonic River Superfund site is in Pittsfield, Massachusetts. It encompasses over 5,800 acres and includes the Housatonic River, floodplains, filled river oxbows, Silver Lake, the Allendale School, neighboring commercial properties and areas, and a 254-acre former manufacturing facility operated by General Electric (GE). GE made and serviced power transformers and defense and aerospace (ordnance) plastics on-site. From 1932 to 1977, the electrical transformers made and serviced at the facility contained polychlorinated biphenyls (PCBs), which are highly carcinogenic chemicals. Improper disposal of wastes containing PCBs and other harmful chemicals led to extensive contamination in the city of Pittsfield and down the length of the 150-mile-long Housatonic River.

Today, the cleanup of two miles of the Housatonic River and 20 areas outside of the river, all within the city of Pittsfield, is complete. Cleanup included the removal of contaminated soil and sediment from the 20 cleanup areas, removal of contaminated material from river sediment and bank soil, engineered barriers to contain remaining contamination, and containment, collection and off-site disposal of non-aqueous phase liquid (NAPL). Long-term monitoring and maintenance activities are ongoing, while site improvements, including those with the goal of potential future redevelopment, are ongoing in the former GE plant area. Design efforts to clean up the "Rest of River," which stretches nearly 125 miles downstream from Pittsfield, are underway.

Under an agreement between GE and the city of Pittsfield, sections of the site transferred to the Pittsfield Economic Development Authority (PEDA) for redevelopment after each phase of cleanup. In 2000, the EPA's Superfund Redevelopment Program gave PEDA a grant to develop a reuse plan for the site. It outlined opportunities for community recreation and business development. In 2004, GE built a 3-acre recreation facility on-site for the community. It includes a baseball diamond, a soccer field, a jogging track, equipment storage, fencing and lighting. The Western Massachusetts Electric Company installed an 8-acre solar facility in 2010, using 2 acres of the site and 6 acres of an adjacent property. It generates 1.8 megawatts of electricity. PEDA also developed the William Stanley Business Park on-site. Its first tenant, a financial services company, built a 170,000-square-foot building that opened in 2012.

In 2014, PEDA received a $9 million state grant for the Berkshire Innovation Center (BIC). The BIC opened in 2020. The facility supports shared research, early-stage production and commercialization, and workforce training for life science companies and related businesses. The BIC received an additional $1 million from the American Rescue Plan Act to help set up a manufacturing academy to spur economic growth and job growth. Other current site uses include a school, a city park and residential and commercial areas. A tech firm headquartered at the BIC plans to build a new production facility on-site.

Figures 24 & 25. View of the Housatonic River from Lyman Street after cleanup of part of the GE-Pittsfield/Housatonic River Superfund site (Massachusetts) (left). The Berkshire Innovation Center opened in 2020 at the GE-Pittsfield/ Housatonic River Superfund site (Massachusetts) (right).

INDUSTRI-PLEX
Cleanup Supports New Solar Energy Projects and Economic Growth

The Industri-Plex Superfund site is in Woburn, Massachusetts. From 1853 to 1969, several manufacturers produced chemicals, insecticides, munitions and glue products at the site. Improper storage and disposal of byproducts and wastes from these industries contaminated groundwater, surface water, soil and sediment. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup included placement of protective covers over parts of the site, gas collection and thermal treatment of gases, contaminated groundwater treatment in the Halls Brook Holding Area Pond, dredging and off-site disposal of contaminated sediments, construction of wetlands and a fish ladder, and institutional controls. The covers were compatible with productive reuse of the areas. Final remedy construction took place from 2015 to 2017.

During and after initial cleanup activities, public- and private-sector improvements took place. They included construction of public roads, an interstate highway exchange, a shopping center, an office park and a hotel complex. These redevelopment activities were recognized with the prestigious Phoenix Award in 2000. In 2001, the 34-acre, $10 million James Anderson Regional Transportation Center opened on-site. The center relieves congestion on highways leading into Boston and eases commutes for many area residents. In 2008 and 2009, additional redevelopment on-site included a restaurant, a pet supply store and a furniture store.

Cleanup also set the stage for several new alternative energy projects. In 2021, two solar rooftop projects started running. They generate 1.7 and 0.8 megawatts of energy, respectively. In 2022, the EPA approved a reuse work plan for another solar facility at the site. In 2023, Standard Solar and ECA Solar partnered to install a 4-megawatt solar array on the eastern part of the site. Local, state and federal officials gathered for a ribbon-cutting ceremony in October 2023 to celebrate its completion. The facility will generate about 5,200 megawatt-hours of energy annually.

Today, the site hosts commercial, industrial, residential, ecological, recreational, public service and alternative energy uses. In 2023, 43 on-site businesses generated over $309 million in sales and supported nearly 1,200 jobs. With the EPA continuing to provide support for the safe redevelopment of the site, more projects are on the horizon. They include a residential-retail reuse project, several more solar rooftop projects, and a proposed life-science laboratory and office complex. In addition, construction of the New Boston Street Railroad Bridge began on-site in 2022. It is scheduled for completion in 2025.

Figures 26 & 27. New solar arrays at the Industri- Plex Superfund site (Massachusetts).

Cleanup of Former Industrial Areas in Massachusetts Showcases EPA Commitment to River Cleanups and Reuse Planning

The Lower Neponset River Superfund site is located in Boston and Milton, Massachusetts, encompassing a 3.7-mile section of the river with sediment contaminated with PCBs and other hazardous substances from past industrial operations in the area. The Lewis Chemical removal site and the Riverside Square PCB removal site abut the Lower Neponset River site along the northern bank of the river in the Hyde Park neighborhood of Boston. While the Lower Neponset Superfund site is listed on the National Priorities List (NPL), neither the Lewis Chemical removal site nor the Riverside Square PCB removal site are listed on the NPL.

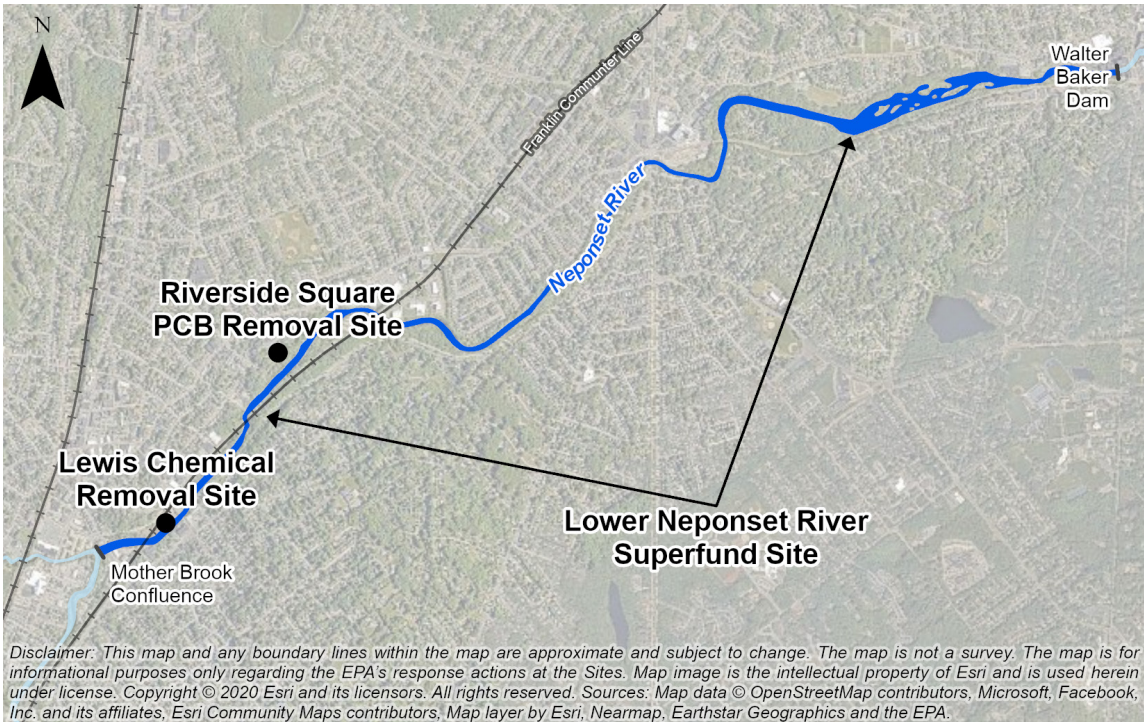
The Lewis Chemical site covers 0.9 acres across three properties. Several businesses operated on the former Lewis Chemical Corporation property starting in the late 1800s. Lewis Chemical Corporation operated from approximately 1963 until 1983 when the facility exploded. While it was operating, the Lewis Chemical Corporation collected, transported, stored and processed hazardous wastes. The Riverside Square PCB site is in the Riverside Square area of Hyde Park. From the 1930s through the 1970s, several industries using polychlorinated biphenyls (PCBs) were active in the Neponset River Basin. In 1962 and 1964, the Metropolitan District Commission, now a part of the Massachusetts Department of Conservation and Recreation, dredged the river to deepen the channel to help manage flooding. Dredged materials were placed in several locations along the banks of the river – the Riverside Square PCB site is one of those areas.

As the current owner of the former Lewis Chemical Corporation property, the city of Boston demolished the industrial facility in 2013. In 2022, the city and the Massachusetts Department of Environmental Protection (MassDEP) requested EPA's assistance to address contamination at the site. In 2023, the EPA began environmental investigations at the Riverside Square PCB site to better understand the PCB contamination in the soil. In 2023, the EPA initiated a removal action to remove over 5,700 tons of contaminated soil from the Lewis Chemical site. On October 4, 2024, EPA Region 1 staff, U.S. Senator Edward J. Markey, Boston Mayor Michelle Wu, MassDEP Commissioner Bonnie Heiple and members of community organizations gathered at Hyde Park along the Neponset River to celebrate the completion of the cleanup at the Lewis Chemical site and the start of cleanup at the Riverside Square PCB site.

The EPA added the Lower Neponset River site to the NPL in 2022. A Metropolitan Boston Transit Authority and Amtrak railroad commuter line crosses the site, and several recreational amenities surround the site. The Lower Neponset River site is one of many across the country to receive funding from the Bipartisan Infrastructure Law, which has invested $3.5 billion in environmental remediation at Superfund sites across the country. The funding is being used at the site to start the remedial investigation process.

With the remedial investigation of the Lower Neponset River site underway, the EPA is engaging with the community. The EPA's community involvement efforts include hosting public meetings to share information and answer questions about the site investigation and cleanup process, supporting a Community Advisory Group to facilitate communication between the EPA and the community, and providing Superfund Redevelopment Program (SRP) technical support for a reuse assessment. The site's 2023 Reuse Assessment Report identified reasonably anticipated future land uses to guide the EPA's cleanup decision-making process and inform land use planning activities. The reuse assessment process included interviews and other information sharing opportunities for community members and stakeholders to share their perspectives and visions for the future of the site. The process identified strong community interest in the future use of the site as a recreational space. Currently, many public recreational land uses, including trails, parks, playgrounds and community gardens, are near the site. However, some neighborhoods with environmental justice concerns are more isolated from the river and lack access to it and nearby parks. Several local efforts are improving access in these areas.

The EPA's activities at the Lewis Chemical, Riverside Square PCB and Lower Neponset River sites show its commitment to cleaning up contaminated rivers and communities, including communities with environmental justice concerns. The EPA's efforts also help support local equitable and inclusive decision-making and planning processes. Together, these cleanups will help remove environmental barriers and may help facilitate future reuse that could be beneficial for the community. The EPA will continue to coordinate with area stakeholders as well as state agencies and regional partners regarding cleanup plans for all three sites.



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Sites. Map image is the intellectual property of Esri and is used herein under license. Copyright © 2020 Esri and its licensors. All rights reserved. Sources: Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, Nearmap, Earthstar Geographics and the EPA.

Figure 28. Locations of the Lower Neponset River Superfund site and Lewis Chemical and Riverside Square PCB removal sites (Massachusetts).

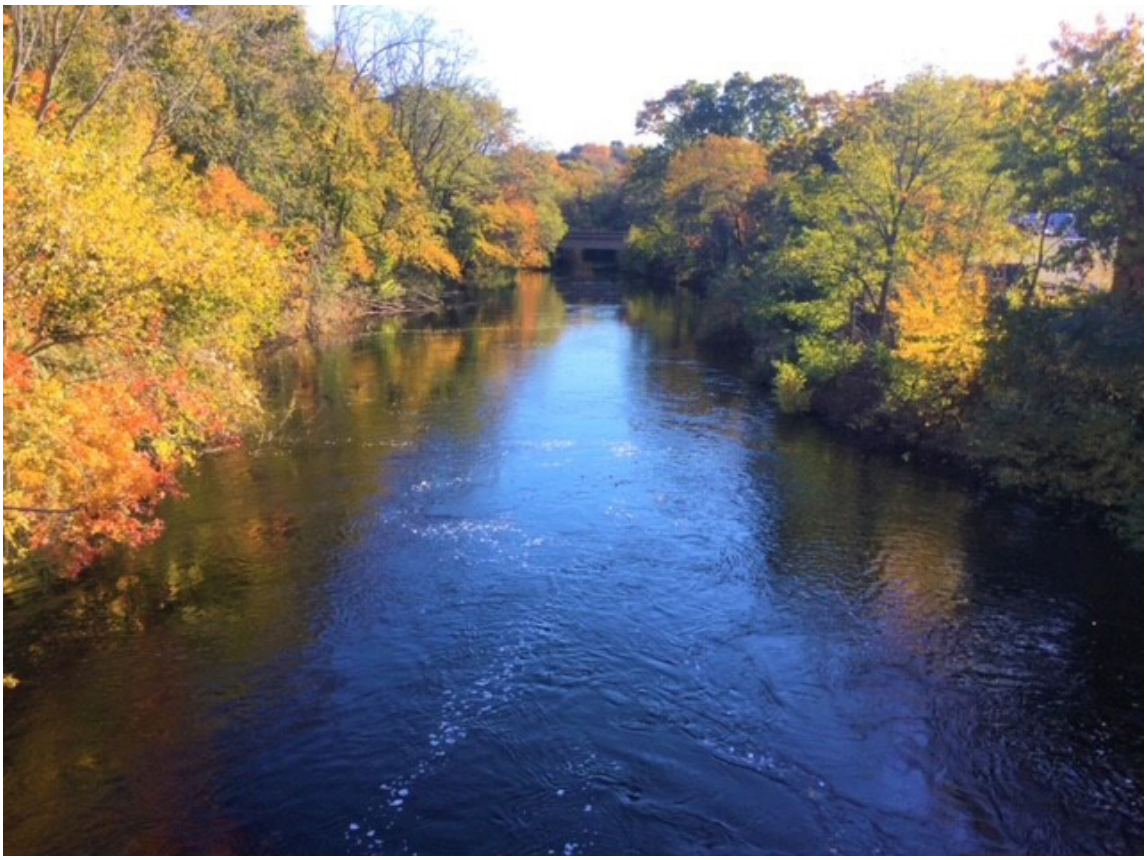


Figure 29. View of the Lower Neponset River in Boston, Massachusetts.

LINEMASTER SWITCH CORP.
Cleanup Enables Continued Manufacturing and Supports Reuse of Historic Landmark

The Linemaster Switch Corp. Superfund site is in Woodstock, Connecticut. Linemaster Switch Corporation's facility at this 92-acre area has made electrical and pneumatic foot switches and wiring harnesses since 1952. Its manufacturing process requires paint thinner, trichloroethylene (TCE) and other volatile organic compounds. Improper waste disposal practices from 1969 to 1979 resulted in contamination of groundwater, sediment, surface water and soil. Given the possibility of groundwater use for drinking water, the EPA found that the contamination posed an unacceptable risk to human health and the environment. The EPA added the site to the National Priorities List (NPL) in 1990.

To address immediate threats to human health, the EPA provided bottled water to residents with contaminated wells and placed filtration devices on the wells. Cleanup includes treatment of contaminated soil and groundwater as well as land and groundwater use restrictions. After the soil treatment system operated unsuccessfully, the EPA found that it could be turned off with minimal impact on the groundwater treatment system. Treatment of contaminated groundwater and monitoring of groundwater and surface water are ongoing.

Linemaster Switch Corporation continues to make electrical power switches, air valves, electrical cord sets and metal nameplates at the site. The Mansion at Bald Hill, a historic landmark that is now a bed and breakfast, is also on-site. It includes a restaurant, a wedding venue and a banquet facility. The 7,500-square-foot banquet center can accommodate 275 guests. It includes a ballroom, a dance floor, indoor and outdoor fireplaces, and water features. Four homes, a tennis court and a pond are also on-site.

Figure 30. Linemaster Switch Corporation's facility at the Linemaster Switch Corp. Superfund site (Connecticut).

Figure 31. The Mansion at Bald Hill at the Linemaster Switch Corp. Superfund site (Connecticut) is now a bed and breakfast.

RAYMARK INDUSTRIES, INC.
Cleanup Supports New Commercial and Recreational Amenities, with More Uses on the Horizon

The Raymark Industries, Inc. (Raymark) Superfund site consists of over 500 acres near the Housatonic River in Stratford, Connecticut. From 1919 to 1989, Raymark and its predecessors made various automotive parts on a 34-acre area at the site. Liquid manufacturing wastes were disposed of in a series of unlined lagoons. Solid wastes were buried at the former manufacturing site, on dozens of residential, commercial and municipal properties across town, and in the wetlands next to the Housatonic River. These practices contaminated groundwater and soil. Contaminated groundwater beneath the former facility impacted nearby commercial and residential areas due to the intrusion of vapors into overlying homes and buildings. The EPA added the site to the National Priorities List (NPL) in 1995. Cleanup activities included removing contaminated soil and waste from 47 residential properties, capping the former manufacturing property, placing vapor mitigation systems in more than 100 homes, and temporarily covering and restricting access to other properties.
The EPA took reuse considerations into account as part of capping the former manufacturing property. The area was centrally located with nearby access to Interstate 95, attracting developers interested in commercial redevelopment opportunities.

During the cleanup, a group of companies acquired the property at a bankruptcy auction in 2000. In 2002, these companies began work on the Stratford Crossing Shopping Center. The EPA integrated the shopping center elements into the final design and construction of the cap. The shopping center was finished in 2005. Today, the shopping center is a bustling commercial area that includes a Walmart, Home Depot, ShopRite, Subway and Webster Bank. On-site businesses employ over 1,000 people, contribute nearly $62 million in estimated annual employee income and generate about $269 million in annual sales. The total value of site properties exceeds $86 million, resulting in the generation of about $2 million in local property taxes anually. In 2022 and 2023, the EPA committed $113 million under the federal Bipartisan Infrastructure Law to support ongoing cleanup activities at nearly 30 additional properties and Ferry Creek. Many of these properties were active businesses. Other properties were recreational and open space.

From November 2021 to January 2022, the EPA removed about 5,000 cubic yards of waste from public property on Quail Street. The previously overgrown public space is near one of the town's elementary schools and a playground. After cleanup, and consistent with the town's preference, the EPA restored the Quail Street property as a natural space, planting grass and about two dozen small trees. Today, the area provides a place for residents to enjoy nature and walk their dogs. From November 2022 to June 2023, the EPA removed about 12,000 cubic yards of waste from a marina and wetlands at Beacon Point. Restoration of Beacon Point included replacing and raising a dock and associated parking lot by 1 foot to provide resiliency against sea-level rise. Current uses in the area include a boat launch, picnic tables and a public fishing pier. Prior to the cleanup, this dock and parking area were often submerged at high tide. From January 2022 to December 2023, the EPA removed about 10,000 cubic yards of waste from a once-overgrown, vacant, 3-acre lot behind a restaurant on Ferry Boulevard. Consistent with the property owner's preference, the EPA left the area as open space with a buffer of trees along an adjacent neighborhood. The property is now for sale; several developers are interested in the lot for commercial or residential use. From January to May 2024, the EPA removed over 15,000 cubic yards of waste from a 4-acre property along Lockwood Avenue. The cleanup included excavation and restoration of a 2.5-acre tidal wetland, and excavation of a 1.5-acre overgrown commercial property. The tidal wetland was stabilized with coir matts and replanted with 45,000 live plants improving the functional quality. A half-acre inland wetland had to be excavated from the commercial property. The EPA is undertaking a mitigation project in lieu of replacing the inland wetland. The commercial property was raised in elevation by about 1 foot to improve coastal resiliency. A proposal to develop the commercial property is anticipated.

Looking ahead, cleanup of a 6-acre town-owned property known as Morgan Francis will include consolidation and capping of about 50,000 cubic yards of waste. The cap is being designed to be compatible with a recreation complex centered around an artificial turf soccer field. Capping of the property is expected to begin in 2025. Another overgrown town-owned property was referred to as the Raybestos Memorial Ballfield. Before the discovery of contamination in the late 1980s, this 11-acre property was home to the world-champion Brakettes women's softball team. The EPA estimates that at least 150,000 cubic yards of waste are buried on the property. Over the past 4 years, the EPA has consolidated an additional 100,000 cubic yards of waste from the commercial and other properties and is building a cap which will be completed in 2025. A 4-acre portion of the cap will be able to support a building and a parking pad. The town owns the property and is marketing it for commercial use. In addition, planning is underway to extend a new connector road through the property. This road will improve local access and help foster reuse interest.

Figure 32. Lockwood Avenue Wetland after cleanup and restoration (Connecticut).

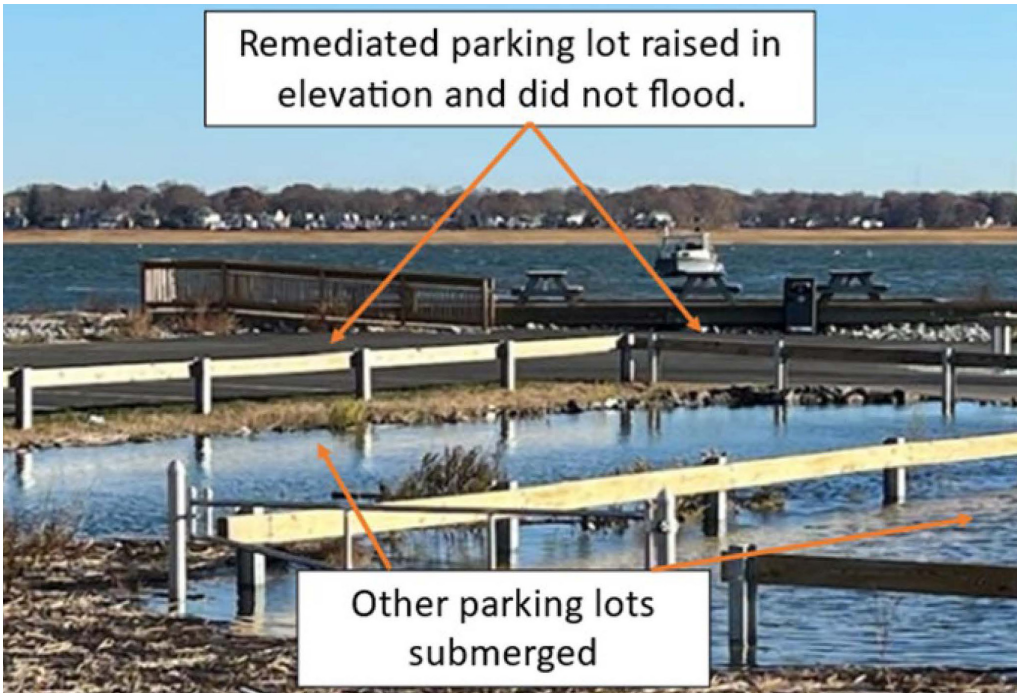


Figure 33. EPA cleanup raised a portion of docks and parking lots and improved climate resiliency at the restored Beacon Point (Connecticut).

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REDEVELOPMENT ON THE HORIZON IN REGION 1

MANSELL FIELD
EPA and Locality Partner on Park Cleanup and Restoration

The Mansell Field site includes about 1.5 acres of Gallows Hill Park in a neighborhood in Salem, Massachusetts. From the late 1800s to the early 1900s, an industrial facility, likely a tannery, was active on the eastern part of the site. Its operations used hazardous chemicals, including arsenic, chromium sulfate, aluminum sulfate and glutaraldehyde. The facility was gone by the 1930s. Tanneries operated nearby through the 1960s. The city of Salem took ownership of the site property for use as a basketball court and soccer field, known as Mansell Field. In 2018, in preparation for an improvement project at Gallows Hill Park, a contractor for the city of Salem found high levels of arsenic, lead and chromium in soils at the site and nearby properties. The contaminants likely came from tannery operations. Mansell Field has been closed to the public since 2018.

In 2019, the city contacted the EPA to help remove contaminated soil from the site. The EPA negotiated a workshare agreement with the city. Each party is responsible for some of the cleanup work. In 2019 and 2020, the EPA monitored air and removed contaminated soil from three off-site residential properties. From May 2023 to January 2024, the EPA dug up about 2,600 tons of soil from Mansell Field. The EPA took it off-site for disposal.

Following the EPA's cleanup, the city will now address the remaining soil and restore Mansell Field as a public park. This work will include a topographical survey to guide cleanup planning, soil remediation and restoration activities. Park restoration plans include a new basketball court and trees and a bioretention basin to manage stormwater.

Figure 34. View of Mansell Field, facing west (Massachusetts). Image used with permission of Tighe & Bond.

Figure 35. Conceptual restoration plan for the Mansell Field site (Massachusetts). Image used with permission of Tighe & Bond.

MOHAWK TANNERY
Former Tannery to Support Community Housing Needs

The Mohawk Tannery site is in Nashua, Hillsborough County, New Hampshire. It includes two contiguous 15-acre land parcels. From 1924 to 1984, the Mohawk Tannery facility made tanned hides for leather and disposed of process wastes on the northern part of the site. Waste disposal practices included discharge of wastewater containing hazardous substances such as chromium, zinc and phenol into the Nashua River and disposal of sludge containing similar hazardous substances in unlined disposal areas on-site, two of which were next to the Nashua River and one of which was in the 100-year floodplain.

The EPA proposed adding the site to the National Priorities List (NPL) in 2000. At the request of the city of Nashua, the final NPL listing was put on hold. Early cleanup actions by the EPA finished in 2001. They included removal and disposal of asbestos-containing material from the old tannery building and off-site disposal of contaminated drums and tanks. In 2002, the EPA proposed a non-time-critical removal action for the site's sludge disposal areas. The city of Nashua indicated that a developer could move the cleanup forward. The EPA then coordinated with interested developers about ways to advance the cleanup and prepare the site for reuse. However, the developer's plan at that time did not pan out so the site remained idle.

In 2020, the EPA reached an agreement with local development company Blaylock Holdings, LLC ("Blaylock") that will ensure a successful cleanup and enable reuse to move forward. In 2020, the EPA also revised the removal action to include the adjacent Fimbel Door Landfill and City Right of Way as part of the overall cleanup plan. Blaylock will perform selected cleanup actions and share cleanup costs with the EPA. Once the remedy is in place and approved by the EPA, Blaylock plans to develop housing on-site. The project will feature 546 apartments and condominiums, green space, and a recreation area with a canoe and kayak launch on the Nashua River. It may also include a pedestrian bridge across the Nashua River to Mine Falls Park. To meet Nashua affordable housing requirements, Blaylock will contribute to the Nashua Affordable Housing Trust Fund for the condominium development. Twenty percent of the apartments will be affordable housing.

Figure 36. The Mohawk Tannery site will soon host a vibrant mixed-use development (New Hampshire).

NEW BEDFORD HARBOR
EPA Supports Job Training for Community Near Contaminated Harbor

The 18,000-acre New Bedford Harbor Superfund site is in New Bedford, Fairhaven, Acushnet and Dartmouth, Massachusetts. From 1940 to the late 1970s, at least two companies made capacitors containing polychlorinated biphenyls (PCBs) on-site. Operations discharged industrial waste into the harbor and contaminated a large portion of the estuary from the upper Acushnet River into Buzzards Bay.

The EPA added the site to the National Priorities List (NPL) in 1983. Pilot dredging and disposal studies began in the late 1980s, and "hot spot" dredging in operable unit 2 (OU-2) occurred in 1994 and 1995. In 2001, dredging began, and additional early action cleanups were conducted. The EPA built a shoreline sediment dewatering facility in 2004 to aid the dredging process. Subtidal dredging in OU-1 was completed in 2020, and remaining intertidal cleanups and restoration are planned to be completed in 2024 (only a small amount of restoration planting remains). Sitewide long-term monitoring (LTM) activities have occurred since 1993 to assist in the evaluation of the remedies over time. In total, the EPA dredged over 1 million cubic yards of PCB-contaminated material from the harbor. Other cleanup actions included removal and disposal of contaminated intertidal areas, including mudflats, and the replanting of impacted salt marshes with thousands of native grasses, shrubs and trees. The EPA recently announced that the long-term work to remediate the site is on track for completion by December 2025, thanks to a $72.7 million allocation from the Bipartisan Infrastructure Law.

In 2020, after extensive cleanup, the EPA transferred the dewatering facility to the city of New Bedford. The city plans to use the dewatering facility as a heavy-duty, multi-purpose port facility, potentially including offshore wind energy projects. In 2023, the EPA began offering free job training to people in New Bedford and the surrounding area through its Superfund Job Training Initiative (SuperJTI). This job readiness program provides training and employment opportunities for people living in communities affected by Superfund sites, many of which are underserved and overburdened communities with environmental justice concerns. At the New Bedford job training program, the first SuperJTI program offered by the EPA in New England, participants learned technical skills and gained health and construction safety knowledge that allowed them to fill available jobs with environmental contractors. Through SuperJTI, the EPA hopes to help communities such as New Bedford develop job opportunities that remain long after the completion of Superfund cleanups.

Figure 37. Additional state and city dredging around the New Bedford Harbor site is enhancing the selected remedy and facilitating more commercial port development (Massachusetts).

SOMERSWORTH SANITARY LANDFILL
Solar Installation Planned for Former Landfill

The 26-acre Somersworth Sanitary Landfill Superfund Site is in Somersworth, New Hampshire. The City of Somersworth operated a waste disposal area at the Site from the mid-1930s until 1981. The City burned residential, commercial and industrial wastes at the Site. In 1958, the City stopped burning waste and converted the area into a landfill. Improper disposal practices contaminated the soil, sediment and groundwater at the Site. The EPA added the Site to the National Priorities List (NPL) in 1983. Cleanup included groundwater containment and treatment, a landfill cover and gas venting, as well as land and groundwater use restrictions. Prior to the Site's listing on the NPL, the City covered a 10-acre portion of the Site with clean fill for use as a recreation area. This area was available for passive recreation, such as walking, until the City closed it in 2011. The rest of the Site is undeveloped as it contains the former landfill and wetlands downgradient from it. In 2013, the EPA presented the City with an initial assessment of renewable energy opportunities for the Site. On August 20, 2021, land use restrictions were recorded on the property that allowed for solar development.

In early 2022, Ameresco, Inc. contacted the EPA regarding the compatibility of a solar co-generation facility within the Site. After several discussions, they requested the EPA provide them with a CERCLA comfort letter. In August 2022, the EPA issued a comfort letter that described the Site cleanup and use restrictions. In early 2023, the City contracted Ameresco to re-develop the 10-acre former recreation area of the site into a solar array facility that will be leased from the City. Ameresco visited the Site and held preliminary discussions with the EPA and the New Hampshire Department of Environmental Services (NHDES), which culminated in the submittal of a Reuse Report to both agencies and the submittal of an application for an Alteration of Terrain (AOT) permit to NHDES in September 2023. The plan includes the use of concrete-ballasted foundations designed to maintain the integrity of the landfill cover.

The EPA and NHDES reviewed and discussed the submittals with Ameresco, the City and the City's consultant (Geosyntec Inc.). These discussions resulted in a revised version of both documents, which were submitted in March 2024. The EPA and NHDES reviewed and discussed the revised version of the Reuse Report and approved it on April 1, 2024. NHDES, after consultation with the EPA, approved the AOT permit on April 24, 2024.

On August 12, 2024, the EPA and stakeholders held a groundbreaking ceremony for the solar farm, which will be New Hampshire's first solar project to be placed on a Superfund site. The installation is expected to generate over 67 million kilowatt-hours of energy over 20 years, offsetting 2,461 metric tons of carbon dioxide per year, or the equivalent to the annual electricity use of 486 homes. The energy produced will be sold to the City under the State's group net metering program, with the City receiving a lease payment and a payment in lieu of taxes. Construction and maintenance of the project will use local labor and trade workers. Ameresco expects to begin work on the project in September 2024 and finish it by the end of the same year. Local officials see this initiative as an important step toward advancing the City's sustainability efforts to align with similar efforts in the region and State.

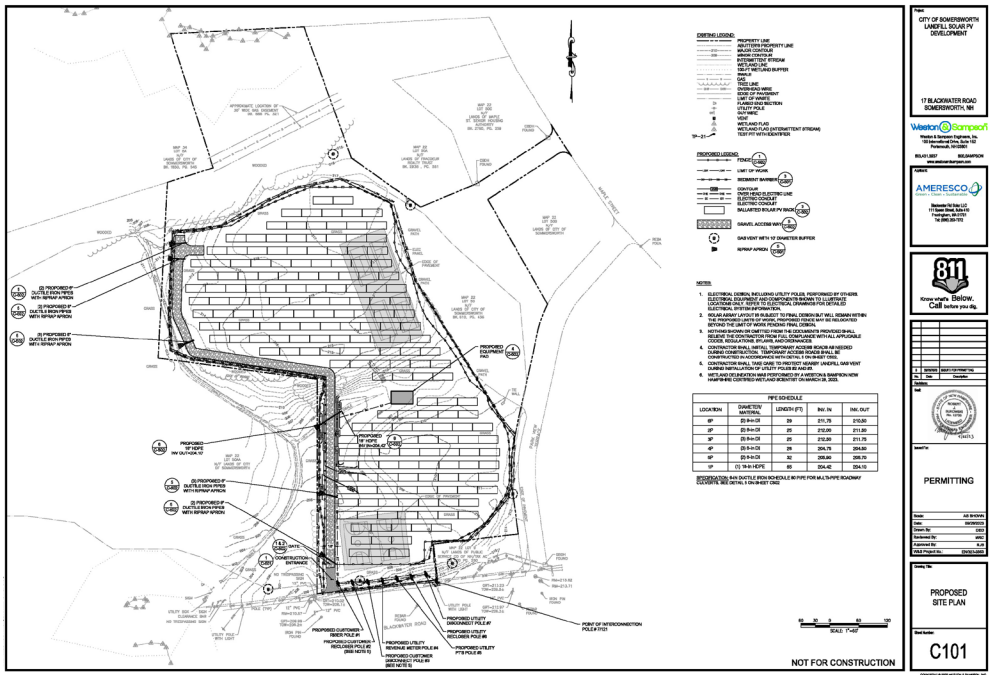


Figure 38. The proposed site plan for the solar development at the Somersworth Sanitary Landfill Superfund site (New Hampshire).

Figure 39. Stakeholders gathering for the groundbreaking of the solar development at the Somersworth Sanitary Landfill Superfund site (New Hampshire). Event participants from left to right: Don Austin (Somersworth City Councilor), Richard Michaud (Somersworth City Councilor), Paul Grace (Ameresco Solar Development Engineer), Paul Raducha (Ameresco Senior Director of Solar and Battery Development), David Peterson (EPA ORC), Matt Gerding (Mayor of Somersworth), Chris Pappas (Congressional House Representative for New Hampshire 1st), Sanjay Seth (EPA Region 1 Chief of Staff), Ryan Fahey (Ameresco Senior Project Development Manager), Robert Belmore (Somersworth City Manager), (back row) Brian Thornton (NHDES Project Manager), Gerardo Millán-Ramos (current EPA EJ Section Chief and former site RPM) and Jeffrey Dewey (current EPA site RPM).

W.R. GRACE & CO., INC. (ACTON PLANT)
Additional Solar Capacity Planned for Former Chemical Manufacturing Facility

The 260-acre W.R. Grace & Co., Inc. (Acton Plant) Superfund site is in the towns of Acton and Concord, Massachusetts. For over 100 years, different companies ran a chemical manufacturing facility on-site. W.R. Grace, the last site owner, ceased all operations in 1991. Operations at the facility produced wastewater and solid industrial wastes that were disposed of in several unlined lagoons and an on-site landfill. These practices contaminated soil, groundwater, surface water and sediment. In 1978, investigations found contamination in two municipal wells in Acton. The EPA added the site to the National Priorities List (NPL) in September 1983.

The EPA directed W.R. Grace to begin interim cleanup actions. They included groundwater extraction and treatment and removal of hazardous storage tanks. Final cleanup actions included landfill and lagoon closure, excavation of soil and sludge, sediment dredging and removal, more groundwater extraction and treatment, and restoration of wetlands. Ongoing activities include maintenance of the area and groundwater monitoring.

The EPA's Superfund Redevelopment Program (SRP) and Region 1 assessed the site in 2010 as part of an effort to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. After construction of the site's remedy, the town of Concord took ownership of a 70-acre parcel in 2016. The first phase of the town's three-phase reuse plan involved the construction of a 5.6-megawatt (MW) solar array that finished in early 2017. It supplies up to 4.5% of the town's power supply needs, enough to power 625 homes. The solar array reduces greenhouse gas emissions and offsets the town's peak demand for electricity by up to 10%. The second phase of the town's reuse plan, the construction of a school bus depot, finished in August 2017.

Plans are underway for a new 5-MW solar field covering 40 acres between the landfill and the railroad tracks that run through the center of the site. The installation will include 30 acres of panels and 10 acres of maintenance area. Construction is anticipated in 2024. This project will add more green, competitively priced energy to the town's power supply portfolio.

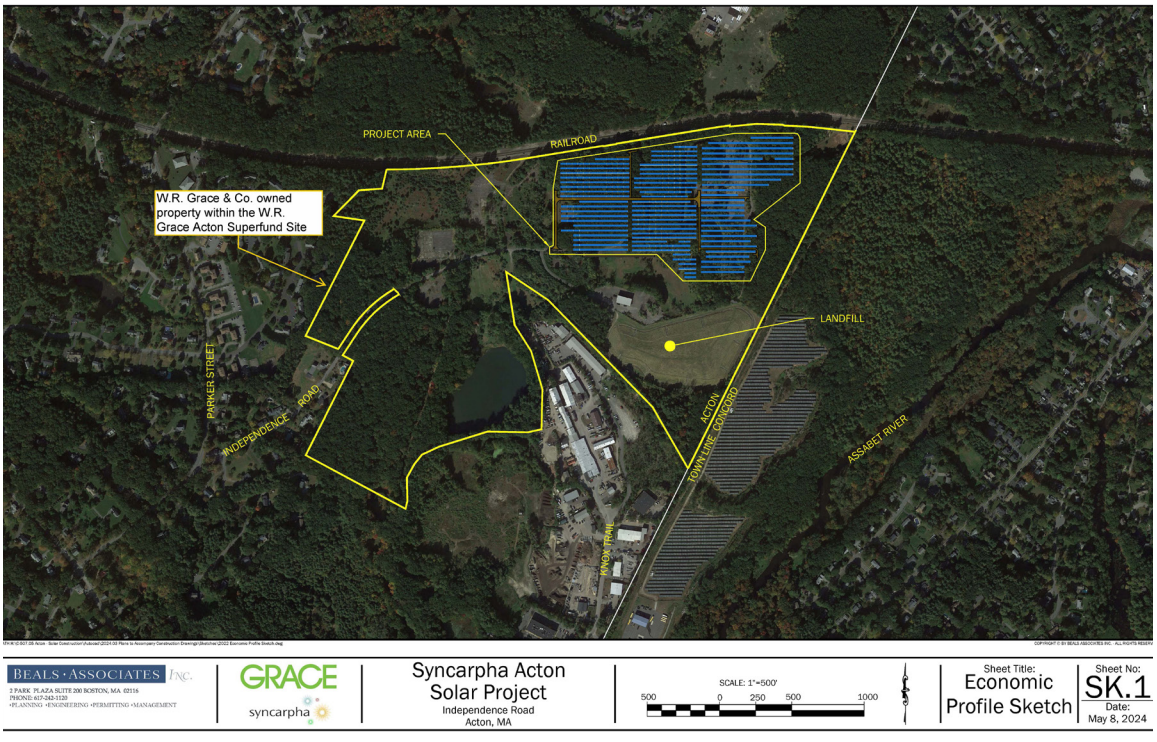


Figure 40. Illustration of the future solar installation location at the W.R. Grace & Co., Inc. (Acton Plant) Superfund site (Massachusetts).

CONCLUSION

The EPA works closely with its partners at Superfund sites across Region 1 to make sure sites can safely be reused or remain in continued use during and following cleanup. The EPA also works with businesses and organizations at Superfund sites throughout the cleanup process to make sure they can remain open.

The businesses and organizations at these sites provide jobs and income for communities and generate local and state taxes. Cleanup and redevelopment also helps stabilize and boost property values. There are 83 NPL sites and 14 non-NPL Superfund sites in Region 1 that have either new uses in place or uses that have remained in place since before cleanup. Future uses are planned for many more Superfund sites in Region 1. The EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 1.

Figure 41. Plaza and fountain at Heritage Park on the 31 Water Street site (Massachusetts).

The redevelopment of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among the EPA, Tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and nearby residents and business owners is essential. EPA tools, including reuse assessments and plans, comfort letters and partial deletions of sites from the NPL, often serve as the foundation for moving forward. At some sites, parties may need to take additional actions to ensure reuses are compatible with site remedies.

Across Region 1, Superfund sites are now home to major commercial and industrial facilities, mid-size developments and small businesses providing services to surrounding communities. The EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Redevelopment Resources

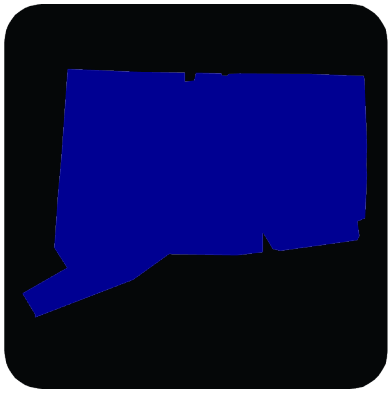
EPA Region 1 Superfund Redevelopment Coordinator
Joe LeMay | (617) 918-1323 | lemay.joe@epa.gov

Superfund Sites in Reuse: find more information about Superfund sites in reuse
www.epa.gov/superfund-redevelopment/find-sites-reuse

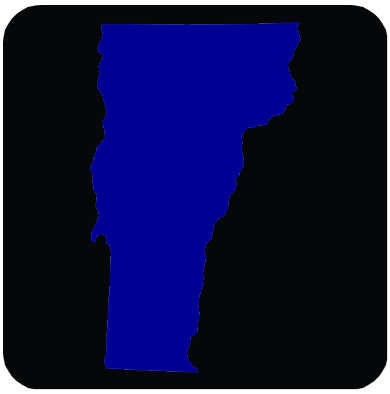
EPA Superfund Redevelopment Program Website: tools, resources and more information about Superfund site reuse
www.epa.gov/superfund-redevelopment

EPA Office of Site Remediation Enforcement Website: tools that address landowner liability concerns
www.epa.gov/enforcement/landowner-liability-protections

STATE REDEVELOPMENT PROFILES





CONNECTICUT REDEVELOPMENT PROFILE

The EPA partners with Connecticut Department of Energy & Environmental Protection to oversee the investigation and cleanup of Superfund sites in Connecticut. Connecticut has 18 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Connecticut.

Businesses and Jobs

The EPA has collected economic data for 64 businesses and organizations operating on 10 sites in reuse or continued use in Connecticut.

Table 3. Detailed Site and Business Information for Sites in Reuse and Continued Use in Connecticut (2023)

	Sites[a]	Sites with Businesses	Businesses	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*5*	*1*	*1*	*$9 million*	*36*	*$3 million*
In Continued Use	*1*	*1*	*1*	*$620,000*	*6*	*$398,736*
In Reuse and in Continued Use	*12*	*8*	*62*	*$381 million*	*1,462*	*$88 million*
Totals	***18***	***10***	***64***	***$391 million***	***1,504***	***$91 million***

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for eight Superfund sites in reuse or continued use in Connecticut. These sites span 126 property parcels and 932 acres.

Table 4. Property Value and Tax Information for Sites in Reuse and Continued Use in Connecticut[a]

Total Land Value (8 sites)	Total Improvement Value (8 sites)	Total Property Value (8 sites)	Total Annual Property Taxes (8 sites)
$57 million	*$146 million*	*$203 million*	*$5 million*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2022 to 2023.

Figure 42. Cheshire Ground Water Contamination Superfund site (Connecticut).

Did You Know?

The 15-acre Cheshire Ground Water Contamination Superfund site is in Cheshire, Connecticut. From 1966 to 1980, two companies made plastic molding on-site. Operations contaminated soil and groundwater with chemicals and solvents. Cheshire Associates cleaned up the site by removing some contaminated soil. The EPA extended the public water supply to residents with drinking water wells affected by the contamination. Carten Controls relocated to the site in 1996. After cleanup, the EPA took the site off the NPL in 1997. Carten Controls continues to run its semiconductor parts manufacturing facility on-site.

MAINE REDEVELOPMENT PROFILE

The EPA partners with Maine Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in Maine. Maine has 10 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Maine.

Businesses and Jobs

The EPA has collected economic data for five businesses and organizations operating on three sites in reuse or continued use in Maine.

Table 5. Detailed Site and Business Information for Sites in Reuse and Continued Use in Maine (2023)

	Sites[a]	Sites with Businesses	Businesses	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*2*	*2*	*2*	*$75,130*	*6*	*$223,392*
In Continued Use	*1*	*0*	*-*	*-*	*-*	*-*
In Reuse and in Continued Use	*7*	*1*	*3*	*$31 million*	*153*	*$5 million*
Totals	***10***	***3***	***5***	***$31 million***	***159***	***$5 million***

[a] Three sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This could be attributed to a number of business conditions and/or data reporting. In addition, annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for four Superfund sites in reuse or continued use in Maine. These sites span 26 property parcels and 363 acres.

Table 6. Property Value and Tax Information for Sites in Reuse and Continued Use in Maine[a]

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (4 sites)	Total Annual Property Taxes (4 sites)
$573,200	*$2.6 million*	*$3.2 million*	*$50,292*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2019 to 2023.

Figure 43. Brunswick Naval Air Station Superfund site (Maine).

Did You Know?

The 3,100-acre Brunswick Naval Air Station Superfund site is in Brunswick, Maine. The site was initially a civilian airport. The U.S. Navy established Brunswick Naval Air Station on-site during World War II. Wastes generated by the U.S. Navy as part of installation activities contaminated soil and groundwater. Naval air station operations continued until May 2011, when the air station was officially decommissioned. The U.S. Navy continues to conduct investigations and cleanup activities. Today, the site supports commercial, industrial, recreational, educational, ecological, military, public service, agricultural and residential uses as well as renewable energy projects. Brunswick Landing, a commercial and industrial development, the Kate Furbish Preserve and Mere Creek Golf Club are on-site.

MASSACHUSETTS REDEVELOPMENT PROFILE

The EPA partners with the Massachusetts Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in Massachusetts. Massachusetts has 38 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Massachusetts.

Businesses and Jobs

The EPA has collected economic data for 480 businesses and organizations operating on 14 sites in reuse or continued use in Massachusetts.

Table 7. Detailed Site and Business Information for Sites in Reuse and Continued Use in Massachusetts (2023)

	Sites[a]	Sites with Businesses	Businesses	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*14*	*4*	*4*	*$64 million*	*34*	*$2 million*
In Continued Use	*3*	*0*	*-*	*-*	*-*	*-*
In Reuse and in Continued Use	*21*	*10*	*476*	*$1.9 billion*	*7,248*	*$737 million*
Totals	***38***	***14***	***480***	***$2 billion***	***7,282***	***$739 million***

[a] Eight sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for 16 Superfund sites in reuse or continued use in Massachusetts. These sites span 506 property parcels and 4,328 acres.

Table 8. Property Value and Tax Information for Sites in Reuse and Continued Use in Massachusetts[a]

Total Land Value (16 sites)	Total Improvement Value (16 sites)	Total Property Value (16 sites)	Total Annual Property Taxes (15 sites)
$295 million	*$546 million*	*$841 million*	*$16 million*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2021 to 2024.

Figure 44. Lawrence Metals site (Massachusetts).

Did You Know?

The Lawrence Metals site is in Chelsea, Massachusetts. In 1986, the Lawrence Metals Forming Company built an industrial facility on-site. Its operations resulted in the contamination of soil and site materials. In 1999, the city of Chelsea acquired the site property under an Urban Renewal Plan. The EPA, the city and state agencies coordinated cleanup, including the excavation of contaminated soil. Today, an extended-stay hotel is on-site.

NEW HAMPSHIRE REDEVELOPMENT PROFILE

The EPA partners with New Hampshire Department of Environmental Services to oversee the investigation and cleanup of Superfund sites in New Hampshire. New Hampshire has 13 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in New Hampshire.

Businesses and Jobs

The EPA has collected economic data for 15 businesses and organizations operating on four sites in reuse or continued use in New Hampshire.

Table 9. Detailed Site and Business Information for Sites in Reuse and Continued Use in New Hampshire (2023)

	Sites[a]	Sites with Businesses	Businesses	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*5*	*1*	*1*	*-*	*-*	*-*
In Continued Use	*0*	*-*	*-*	*-*	*-*	*-*
In Reuse and in Continued Use	*8*	*3*	*14*	*$133 million*	*718*	*$35 million*
Total	***13***	***4***	***15***	***$133 million***	***718***	***$35 million***

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for seven Superfund sites in reuse or continued use in New Hampshire. These sites span 368 property parcels and 729 acres.

Table 10. Property Value and Tax Information for Sites in Reuse and Continued Use in New Hampshire[a]

Total Land Value (7 sites)	Total Improvement Value (7 sites)	Total Property Value (7 sites)	Total Annual Property Taxes (5 sites)
$11 million	*$98 million*	*$109 million*	*$2 million*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2020 to 2024.

Figure 45. Kearsarge Metallurgical Corp. Superfund site (New Hampshire).

Did You Know?

The 9-acre Kearsarge Metallurgical Corp. Superfund site is in Conway, New Hampshire. From the mid-1960s through the early 1980s, KMC made stainless steel castings on-site. The manufacturing process created waste casting sands, wax and solvents. KMC dumped these wastes in a wooded wetland east of the facility. Cleanup began in 1992. It included the removal of 13,620 tons of contaminated soil and groundwater treatment. Today, after cleanup, a towing company, a heating business, and a farm equipment and diesel truck repair facility are on-site.

RHODE ISLAND REDEVELOPMENT PROFILE

The EPA partners with Rhode Island Department of Environmental Management to oversee the investigation and cleanup of Superfund sites in Rhode Island. Rhode Island has 10 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Rhode Island.

Businesses and Jobs

The EPA has collected economic data for 44 businesses and organizations operating on seven sites in reuse or continued use in Rhode Island.

Table 11. Detailed Site and Business Information for Sites in Reuse and Continued Use in Rhode Island (2023)

	Sites[a]	Sites with Businesses	Businesses	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*4*	*3*	*5*	*$5 million*	*33*	*$2 million*
In Continued Use	*0*	*-*	*-*	*-*	*-*	*-*
In Reuse and in Continued Use	*6*	*4*	*39*	*$68 million*	*889*	*$39 million*
Total	***10***	***7***	***44***	***$73 million***	***922***	***$41 million***

[a] Two sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for four Superfund sites in reuse or continued use in Rhode Island. These sites span 70 property parcels and 916 acres.

Table 12. Property Value and Tax Information for Sites in Reuse and Continued Use in Rhode Island[a]

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (4 sites)	Total Annual Property Taxes (4 sites)
$156 million	*$31 million*	*$187 million*	*$420,569*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2022 to 2024.

Figure 46. West Kingston Town Dump/University of Rhode Island (URI) Disposal Area Superfund site (Rhode Island).

Did You Know?

Two former dumping areas in South Kingston, Rhode Island, make up the 18-acre West Kingston Town Dump/University of Rhode Island (URI) Disposal Area Superfund site. In the 1950s, nearby towns and URI disposed of unregulated waste on-site, contaminating soil and groundwater. The EPA and the potentially responsible parties finished cleanup in 2009. Two solar facilities started running on-site in 2018. They have a combined power production capacity of 4.6 megawatts.

VERMONT REDEVELOPMENT PROFILE

The EPA partners with Vermont Department of Environmental Conservation to oversee the investigation and cleanup of Superfund sites in Vermont. Vermont has eight Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Vermont.

Businesses and Jobs

The EPA has collected economic data for six businesses and organizations operating on five sites in reuse or continued use in Vermont.

Table 13. Detailed Site and Business Information for Sites in Reuse and Continued Use in Vermont (2023)

	Sites	Sites with Businesses	Businesses	Total Annual Sales[a]	Total Employees	Total Annual Employee Income
In Reuse	*2*	*2*	*2*	*$499,000*	*2*	*$126,568*
In Continued Use	*1*	*0*	*-*	*-*	*-*	*-*
In Reuse and in Continued Use	*5*	*3*	*4*	*$58 million*	*154*	*$17 million*
Total	***8***	***5***	***6***	***$58 million***	***156***	***$17 million***

[a] Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for three Superfund sites in reuse or continued use in Vermont. These sites span 15 property parcels and 107 acres.

Table 14. Property Value and Tax Information for Sites in Reuse and Continued Use in Vermont[a]

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (2 sites)
$4 million	*$18 million*	*$22 million*	*$419,756*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2022 to 2024.

Figure 47. Bennington Municipal Sanitary Landfill Superfund site (Vermont).

Did You Know?

The Bennington Municipal Sanitary Landfill Superfund site is in Bennington, Vermont. Several local industries put liquid wastes in an unlined lagoon at the landfill, contaminating groundwater with harmful chemicals. After cleanup, the EPA found that no further action was necessary. Monitoring and maintenance activities are ongoing. A special waste and recycling service station is now active on part of the site.

REUSE INFORMATION SOURCES

Write-ups of sites in reuse or continued use included in this profile are based on available EPA resources, including Superfund Redevelopment Program case studies as well as other resources. Links to the EPA's Superfund Redevelopment Program case studies and other resources are included below.

EPA Resources

Bennington Municipal Sanitary Landfill. EPA Site Profile. www.epa.gov/superfund/bennington

Brunswick Naval Air Station. EPA Site Profile. www.epa.gov/superfund/brunswick

Cheshire Ground Water Contamination. EPA Site Profile. www.epa.gov/superfund/cheshire

Elizabeth Mine. EPA Site Profile. www.epa.gov/superfund/elizmine

Fletcher's Paint Works & Storage. EPA Site Profile. www.epa.gov/superfund/fletcher

Fletcher's Paint Works & Storage. 2022. Region 1 Economic Profile. semspub.epa.gov/src/document/HQ/100003144

GE – Pittsfield/Housatonic River. EPA Site Profile. www.epa.gov/ge-housatonic

GE – Pittsfield/Housatonic River. 2022. Site Redevelopment Profile. semspub.epa.gov/src/document/HQ/100003112

Industri-Plex. EPA Site Profile. www.epa.gov/superfund/industriplex

Kearsarge Metallurgical Corp. EPA Site Profile. www.epa.gov/superfund/kearsarge

Lawerence Metals. EPA Site Profile. response.epa.gov/flm

Lewis Chemical. EPA Site Profile. response.epa.gov/LewisChemical

Linemaster Switch Corp. EPA Site Profile. www.epa.gov/superfund/linemaster

Linemaster Switch Corp. 2019. Fourth Five-Year Review Report. semspub.epa.gov/src/document/01/100012360

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BUSINESS, JOBS, SALES AND INCOME INFORMATION

Information on the number of employees and sales volume for on-site businesses comes from the Hoovers/Dun & Bradstreet (D&B) (https://www.dnb.com) database. The EPA also gathers information on businesses and corporations from D&B. D&B maintains a database of over 330 million businesses worldwide.

When Hoovers/D&B research was unable to identify employment and sales volume for on-site businesses, the EPA used the ReferenceSolutions database (https://thereferencegroup.com). In cases where ReferenceUSA did not include employment and sales volume for on-site businesses, the EPA used the Manta database (https://www.manta.com). The databases include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. In some instances, business and employment information came from local newspaper articles and discussions with local officials and business representatives. While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This can be attributed to a number of business conditions and/or data reporting.

The EPA obtained wage and income information from the U.S. Bureau of Labor Statistics (BLS). Part of the U.S. Department of Labor, the BLS is the principal federal agency responsible for measuring labor market activity, working conditions and price changes in the economy. All BLS data meet high standards of accuracy, statistical quality and impartiality.

The EPA used the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for site businesses. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses in site counties. If weekly wage data were not available at the county level, the EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, the EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To estimate the annual income earned from jobs at site businesses, the EPA multiplied the average weekly wage figure by the number of weeks in a year (52) and by the number of jobs (employees) for each business.

Business and employment data used for this profile were collected in 2023. Estimated annual employment income was calculated using 2023 jobs data and BLS average weekly wage data for those jobs from 2022 (the latest available wage data at the time of this profile). Federal facility sites are included in calculations of total sites in reuse or continued use only. Federal facility sites are excluded from all other calculations (i.e., number of sites with businesses, number of businesses, total jobs, total income and total annual sales). All sales and income figures presented have been rounded for the convenience of the reader. Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

PROPERTY VALUE AND TAX INFORMATION

The EPA collected on-site property values and property taxes included in this profile for a subset of Superfund sites by comparing available site boundary information with available parcel boundary information and gathering information for selected parcels from county assessor datasets. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which typically varied from 2019 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

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CONNECTICUT REUSE SUMMARY PROFILES

National Priorities List Sites

Barkhamsted-New Hartford Landfill

Figure 48. The Barkhamsted-New Hartford Landfill site (Connecticut).

The 97.8-acre Barkhamsted-New Hartford Landfill Superfund site is in the towns of Barkhamsted and New Harford, Connecticut. Between 1974 and 1993, the land was used for municipal solid waste, industrial waste and non-processable waste disposal via landfilling. Initial groundwater contamination was identified in 1981. Subsequent investigations further identified the nature and extent of the contamination. The EPA added the site to the National Priorities List (NPL) in 1989. Remedy construction began in 1999. It consisted of a landfill cap, a runoff and leachate collection and treatment system, a gas collection system, a fence around the cap and all of its appurtenances, long-term groundwater, surface water and sediment monitoring, institutional controls to prevent contact with contaminated groundwater and damage to the cap, and performance of five-year reviews. Of the site's 97.8 acres, about 13 acres consist of the capped landfill and appurtenances; a second part of the site is in use as a transfer station and recycling center for Regional Refuse Disposal District No. 1. A third part of the site is used as a solar farm that generates 1.5 megawatts of electricity and helps offset recycling transfer operating costs.

Cheshire Ground Water Contamination

The 15-acre Cheshire Ground Water Contamination Superfund site is in Cheshire, Connecticut. From 1966 to 1980, two companies made plastic molding on-site. Operations contaminated soil and groundwater with chemicals and solvents. In 1990, the EPA added the site to the National Priorities List (NPL). Cheshire Associates, under state and EPA orders, cleaned up the area by removing some contaminated soil. The EPA extended the public water supply to residents with drinking water wells affected by the contamination. Carten Controls relocated to the site in 1996. After cleanup, the EPA took the site off the NPL in 1997. Carten Controls continues to run its semiconductor parts manufacturing facility on-site.

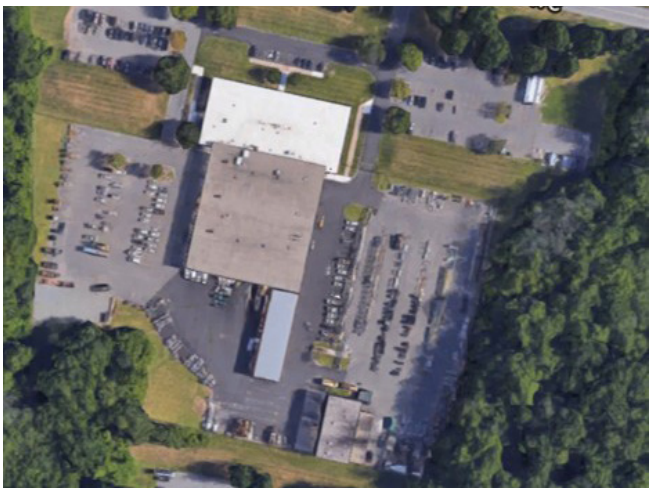

Figure 49. The Carten Controls facility at the Cheshire Ground Water Contamination site (Connecticut). Imagery ©2022 Google, Imagery ©2022 Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2022.

Durham Meadows

Figure 50. Signage at the Durham Meadows site (Connecticut).

The Durham Meadows Superfund site is in Durham, Connecticut. Merriam Manufacturing Company and Durham Manufacturing Company made metal cabinets, boxes and other items on-site from 1851 to 1998. Improper storage and disposal practices contaminated soil and groundwater. In 1982, the Connecticut Department of Energy & Environmental Protection (CT DEEP) found contamination in nearby private drinking water wells. Merriam Manufacturing Company and Durham Manufacturing Company installed filters on affected residential wells. The EPA added the site to the National Priorities List (NPL) in 1989. Cleanup activities include providing an alternate water supply for affected residents, removing soil, and monitoring and containing groundwater contamination. Cleanup also includes placing restrictions on land and groundwater use and investigating areas with possible indoor air risks. Cleanup of the Merriam Manufacturing Company area of the site is now complete. The town of Durham put an area-wide groundwater use restriction ordinance in place in 2015. Plans for the alternative water supply and cleanup of the Durham Manufacturing property are complete; construction began in 2019 and the new water system was brought into service in 2022. The EPA has been working to complete punch list items since 2022 and completion of the alternative water supply cleanup is expected in 2024. The EPA, working with the US Army Corps of Engineers, expects to award a contract to perform the cleanup at the Durham Manufacturing Facility starting in late 2024 or spring 2025. The EPA also issued an Explanation of Significant Differences in July 2024 to document changes to the Technical Impracticability Zone established in the 2005 Record of Decision. In 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites. CT DEEP and the EPA are working with the responsible parties and local officials to put final land and groundwater use controls in place. The Durham Manufacturing Company continues to make metal boxes on-site. Commercial and public service reuses are also on-site. The site is also home to a volunteer ambulance corps, the Durham District Board of Education, churches and many businesses.

Gallup's Quarry

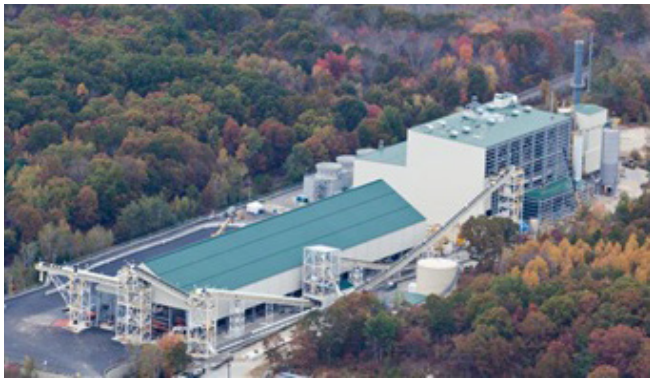

Figure 51. The Greenleaf biomass facility at the Gallup's Quarry site (Connecticut). Image used with permission of Greenleaf Power LLC.

The Gallup's Quarry Superfund site is a 29-acre abandoned gravel pit in Plainfield, Connecticut. During the 1970s, the site owner accepted chemical wastes without a permit. Disposal activities led to soil and groundwater contamination. After the Connecticut Department of Energy & Environmental Protection removed waste drums and contaminated soil, the EPA added the site to the National Priorities List (NPL) in 1989. The EPA's cleanup plan includes monitoring of natural processes to clean up groundwater and land use restrictions. Long-term soil, sediment and groundwater monitoring are ongoing. Today, the Plainfield Renewable Energy biomass facility is on-site. The facility became fully operational in 2014. The 37.5-megawatt power plant uses waste wood to generate enough electricity to power the equivalent of about 40,000 homes in Plainfield. Connecticut Light & Power purchases 80% of the generated energy under a 15-year agreement with the facility owner. The remaining energy contributes to the regional renewable energy certificate market. Greenleaf Power bought the plant in 2015 and is now in charge of plant operations. There are also several surface water bodies in or near the site, including Mill Brook, Fry Brook and Packers Pond.

Kellogg-Deering Well Field

The Kellogg-Deering Well Field Superfund site is in Norwalk, Connecticut. It consists of a 10-acre municipal well field and the adjacent upland area that contributed to well field contamination. The city of Norwalk has operated up to five municipal water supply wells on the well field portion of the site. During routine sampling in 1975, the city found high levels of trichloroethylene (TCE) at the well field. The city shut down wells with unacceptable levels of TCE. Inspections by the Connecticut Department of Energy & Environmental Protection from 1975 to 1980 found several hazardous chemicals in groundwater and soils. The EPA added the site to the National Priorities List (NPL) in September 1984. Cleanup included installation of a wellhead treatment facility to allow continued use of the well field, soil vapor treatment, groundwater extraction and treatment, and institutional controls. Routine maintenance and monitoring activities are ongoing. A supplemental investigation found the primary source of contamination, about a half-mile east of the well field along Main Avenue. Cleanup of source area soils and groundwater began in 1996. Soils met cleanup goals in 2006. Groundwater cleanup in the source area is ongoing. The First District Water Department operates the well field. It provides water to more than 40,000 residents in Norwalk and small areas of surrounding communities. Commercial and residential uses remain on-site. Commercial uses include office space, a shopping plaza, a car wash and car repair facilities. Development plans for the source area were recently approved by the City of Norwalk for the construction of first-floor retail and restaurant space with second floor residential units, associated parking, and an electric vehicle charging station.

Figure 52. The groundwater treatment building at the Kellogg-Deering Well Field site (Connecticut).

Linemaster Switch Corp.

The 92-acre Linemaster Switch Corp. Superfund site is in Woodstock, Connecticut. Electrical and pneumatic foot switch and wiring harness manufacturing has occurred on-site since 1952. These operations use chemicals, paint and thinners. Past practices resulted in groundwater, sediment, surface water and soil contamination. In 1990, the EPA added the site to the National Priorities List (NPL). Cleanup activities include soil and groundwater treatment. The groundwater treatment system remains active. Today, the Linemaster Switch Corporation continues to make electrical power switches, air valves, electrical cord sets and metal nameplates at the site. The Mansion at Bald Hill, a historic landmark that is now a bed and breakfast, is also on-site. It includes a restaurant, a wedding venue and a banquet facility. Four homes, a tennis court and a pond are also on-site.

Figure 53. The Mansion at Bald Hill at the Linemaster Switch Corp. site is now a bed and breakfast (Connecticut).

New London Submarine Base

The New London Submarine Base Superfund site covers 687 acres on the eastern bank of the Thames River in Groton and Ledyard, Connecticut. The base opened in 1868. It has been an operation and support facility for submarine activities in the Atlantic Ocean since 1916. The site includes many contaminated areas, including three landfills, chemical storage sites, tank farms, water courses and groundwater. The U.S. Navy is the lead agency for investigations and cleanup. The EPA and the Connecticut Department of Energy and Environmental Protection provide oversight. Cleanup

Figure 54. Athletic fields at the New London Submarine Base site (Connecticut).

activities included capping of all three landfills, eight removal actions, and removal of contaminated soil and sediment at the area known as the Over Bank Disposal Area. Wetland restoration in this area has also been completed. Long-term cleanup and monitoring activities are ongoing. Today, the New London Submarine Base continues to train and deploy professional submariners and combat-ready submarines. In addition to the Submarine School and other military facilities, the site supports recreational, commercial, ecological and public service uses on the base. Sailors have access to a gymnasium equipped with a free weight area, a track and field, a pool and picnic area, a golf course and a bowling center. In 2022, the U.S. Navy recently completed a waterfront modernization project to build an improved, climate-resilient submarine pier. Together with the Connecticut Department of Energy and Environmental Protection, the U.S. Navy is building an electrical microgrid to protect national security and improve resilience to sea level rise and weather events. The new grid will lower energy consumption and greenhouse gas emissions at the site.

Nutmeg Valley Road

The 28-acre Nutmeg Valley Road Superfund site is in Wolcott, Connecticut. Beginning in the 1940s, metalworking and finishing shops were on-site. Two of these shops disposed of chemicals in site soils. These improper disposal practices contaminated private drinking water wells near the site. In 1989, the EPA added the site to the National Priorities List (NPL). In 1992, an emergency cleanup action addressed surface soil contamination and a potential source of groundwater contamination. After the cleanup action, groundwater studies found contaminant levels were naturally decreasing. The studies also found no evidence of widespread groundwater contamination. The EPA took the site off the NPL in 2005. Industrial, commercial and some residential uses are ongoing at the site. To further revitalize the area, the town of Wolcott made infrastructure improvements to area roads and offered visual enhancement incentives such as debris pickup and free paint for property owners. Local officials point to site improvements and its removal from the NPL as factors that led to the construction of a $2 million state-of-the-art greenhouse nearby. The town of Wolcott expects these factors to encourage more commercial and industrial development at the site. A new commercial building for Ultimate Services Professional Grounds Management is on-site.

Figure 55. Ultimate Services Professional Grounds Management at the Nutmeg Valley Road site (Connecticut).

Old Southington Landfill

The 13-acre Old Southington Landfill Superfund site is in Southington, Connecticut. The municipal landfill was active from the early 1920s until 1967. Closure activities included compacting loose waste, covering the landfill with clean soil, and reseeding the area with grass. From 1973 to 1980, the town subdivided and sold the landfill property for residential and commercial development. Construction of several homes and commercial businesses took place at the site and nearby areas. In 1979, the Connecticut Department of Public Health found elevated levels of 1,1,1-trichloroethane (TCA) at Municipal Well #5, located 700 feet northwest of the landfill. This led to permanently closing the well and conducting further investigations that found groundwater, soil, sediment and surface water contamination at the landfill. The EPA added the site to the National Priorities List (NPL) in 1989. Cleanup activities included permanent relocation of on-site homes and businesses, landfill capping, passive soil gas collection system, disposal of semi-solid sludge materials in a lined cell beneath the cap, groundwater long-term monitoring, and land use restrictions. Land use restrictions in place at the landfill prevent damage to the cap and at two downgradient properties to keep vapors from landfill-contaminated groundwater from migrating through cracks into


Figure 56. The northern portion of the capped Old Southington Landfill site, used by the community for passive recreation (Connecticut).

the buildings. The northern part of the landfill is now a park where people walk their dogs, watch wildlife and canoe in the adjacent Black Pond. The southern part of the landfill is fenced with no public access. Cleanup has finished. The EPA took the site off the NPL in 2018. Long-term groundwater monitoring and five-year reviews continue to take place to make sure the remedy remains effective and protective of human health and the environment. As part of the cleanup settlement, the U.S. Fish and Wildlife Service restores ecological habitat, including waterways and natural resource areas affected by the site. Trail maintenance work along the Quinnipiac River will allow for more recreational use.

Raymark Industries, Inc.

The Raymark Industries, Inc. Superfund site includes over 500 acres near the Housatonic River in Stratford, Connecticut. From 1919 to 1989, Raymark Industries made various automotive parts on a 34-acre area at the site. Disposal of manufacturing wastes took place at the former manufacturing site, on dozens of residential, commercial and municipal properties across town, and in the wetlands next to the Housatonic River. Contaminated groundwater beneath the former facility impacted nearby commercial and residential areas due to the intrusion of vapors into overlying homes and buildings. The EPA added the site to the National Priorities List (NPL) in 1995. Cleanup activities included removing contaminated soil and waste from several residential properties, capping the former manufacturing property, placing vapor mitigation systems in more than 100 homes, and temporarily covering and restricting access to other properties. People near the site do not use groundwater for drinking purposes. The EPA took reuse considerations into account as part of capping the former manufacturing property. The cap allowed for redevelopment of the property while ensuring the remedy remained protective. The EPA awarded the site a Superfund Redevelopment Program pilot grant in 2001. The Stratford Crossing Shopping Center, completed in 2005, currently occupies the site. It provides a mixed green and commercial space. The community enjoys access to several popular businesses, including Walmart, Home Depot, ShopRite Supermarket and Webster Bank. Investigation and cleanup activities on the other contaminated properties around town are ongoing.

Figure 57. Wooster Park property after cleanup and restoration at the Raymark Industries, Inc. site (Connecticut).

In 2015, local and federal partners, including the EPA, completed a removal action at Sikorsky Memorial Airport. The cleanup realigned Main Street, facilitating the extension of an airport runway safety zone. In 2015, the EPA and the town jointly announced a reuse plan for a former ball field. Waste from several commercial and wetland properties is being consolidated with existing waste at the former ball field and capped. This plan was documented in a Record of Decision issued by the EPA in 2016. The EPA is designing the cap so that it is compatible with a commercial or municipal building, based on the town's needs. Cleanup of the additional contaminated properties began in 2020. Affected commercial properties include an office building, a dry cleaner, a karate studio, a liquor store, a boat yard and a pair of car dealerships. Open spaces, wetlands and public parks will be restored to their natural state. In 2021, the site was among those selected by the EPA to receive cleanup funding under the federal Bipartisan Infrastructure Law. With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at National Priorities List (NPL) sites. In 2022, the EPA committed $33 million under the law to ensure cleanup at the site. The resources will fund continued soil excavation and disposal and faster, more efficient capping of ball fields as well as stormwater management features. Reuses at excavated properties include a replanted area in Wooster Park (Quail Street) that provides a walking area for area residents with dogs and replacing and raising a fishing dock at Beacon Point to avoid flooding.

Planning is underway for several new developments at the site. After the cleanup of a once-overgrown, vacant 3-acre lot, the EPA left the area as open space with a buffer of trees along an adjacent neighborhood. The property is now for sale; several developers are interested in the lot for commercial use. Cleanup is underway at another 1-acre property along Lockwood Avenue. The cleanup includes wetland mitigation and raising the property's elevation by a foot to improve

coastal resiliency. Future plans for the property include commercial use. Cleanup of the 4-acre Morgan Francis property includes consolidation and capping of waste. The cap was designed to be compatible with a recreation complex centered around an artificial turf soccer field. Construction of the complex is expected to begin in 2025. Before the discovery of contamination in the late 1980s, an 8-acre property, referred to as the Consolidation Area, was home to the Brakettes women's softball team. About 150,000 cubic yards of waste were buried on the property. Cleanup is underway. The remedy includes consolidation and capping of the waste. Part of the cap will be able to support a building and a parking pad. The town owns the property and is marketing it for commercial use. In addition, planning is underway to extend a new connector road through the area. This road will improve local access and help foster reuse interest.

Revere Textile Prints Corp.

The 15-acre Revere Textile Prints Corp. Superfund site is in Sterling, Connecticut. Starting in 1972, a textile processing facility was on-site. Facility operations and storage practices contaminated soil and groundwater. In 1978, a fire destroyed the facility. Drums found in the ruins of the fire leaked heavy metals onto the ground. The EPA added the site to the National Priorities List (NPL) in July 1987. In 1983, the town of Sterling removed over 1,500 drums containing heavy metals and removed six more drums in 1990. Land restrictions were put in place. The EPA took the site off the NPL in September 1994. A memorial park was built on-site.

Figure 58. The Andrew Shippee Memorial Park at the Revere Textile Prints Corp. site (Connecticut).

Scovill Industrial Landfill

The 25-acre Scovill Industrial Landfill Superfund site is in Waterbury, Connecticut. From 1919 until the mid-1970s, the Scovill Manufacturing Company used the area as a landfill. By the mid-1990s, developers had built condominiums, apartment buildings, small commercial buildings and a shopping mall on the 18-acre southern part of the site. The northern part of the site is an undeveloped 6.8-acre parcel known as the Calabrese parcel. In 1988, residential development at the Calabrese parcel uncovered industrial wastes. The Connecticut Department of Energy & Environmental Protection (CT DEEP) issued a stop-work order and removed 2,300 tons of PCB-contaminated soil along with 18 capacitors from the Calabrese parcel. CT DEEP then placed a temporary soil cap over the area and fenced it. The EPA added the site to the National Priorities List (NPL) in 2000. Studies followed to determine the nature and extent of contamination at the site as well as potential risks to human health and the environment.

Figure 59. The undeveloped parcel at the Scovill Industrial Landfill site (Connecticut).

The EPA selected the site's long-term remedy in 2013 and updated it in 2016. It consists of excavation of contaminated soils and consolidation of contaminated soil under a 2-foot thick, 1.4-acre soil cap on the Calabrese property. Excavated soils exceeding state criteria will be excavated down to the water table and taken off-site for disposal at an approved licensed facility. Excavated areas will be backfilled with clean fill and restored to their original state (i.e., pavement or vegetation). An active vapor collection system installed under one of the commercial buildings by the property owner prevents potential future risk to those residents. Wetland areas affected by cap construction at the Calabrese property will be restored and replicated as appropriate. Institutional controls will also be implemented across the site to prevent contact with contaminated soils and damage to the cap. In 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites. The EPA selected the cleanup contractor in 2023 and mobilized to initiate implementation of the remedy in spring 2024, with a target completion date of 2025.

Solvents Recovery Service of New England

The Solvents Recovery Service of New England Superfund site is in Southington, Connecticut. It includes a 4-acre former operations area and a 42-acre groundwater contamination plume. From 1955 to 1991, a hazardous waste treatment and storage facility was active at the site. During operations, releases occurred on-site and operators stored process wastes in unlined lagoons. These practices resulted in soil and groundwater contamination. In 1979, the town of Southington found contamination in two public water supply wells downgradient of the site, resulting in the closure of these wells. The EPA added the site to the National Priorities List (NPL) in 1983. The EPA led short-term cleanup activities to remove 19 drums of contaminated materials. Cleanup activities also include treating groundwater, consolidating and capping contaminated soil, treating soil, and monitoring and restricting groundwater and land use. Cleanup finished in 2017 and long-term monitoring and maintenance activities are ongoing. The U.S. Fish and Wildlife Service used funds from potentially responsible parties to restore ecological habitat, including waterways and natural resources affected by past activities at the site. In September 2017, construction work finished for a new section of the nearly 80-mile-long Farmington Canal Heritage Trail that traverses the site, accompanied by a parking lot for trail users. A 50-kilowatt solar array was also built onsite to provide power for the long-term operation of the groundwater extraction system.

Figure 60. Trail and signage at the Solvents Recovery Service of New England site (Connecticut).

Other Cleanup Sites

Higganum Cove

The 13-acre Higganum Cove site is located off Nosal Road in Haddam, Connecticut. From the 1840s until 1983, various manufacturing operations took place on site. These included dyeing of fabrics and yarn and the production of bridge netting, marine paints and carbonless copy paper. Following reports of inappropriate handling of hazardous substances, the Connecticut Department of Energy & Environmental Protection (CT DEEP) performed site inspections from 1983 to 1989. The inspections found site soils and wetlands contaminated with industrial solvents, metals and polychlorinated biphenyls. In 2013, CT DEEP referred the site to the EPA for a removal evaluation. After the EPA identified the need for a removal action in 2014, the EPA began emergency cleanup actions at CT DEEP's request. These actions included excavation and disposal of contaminated soils and wetlands restoration. The EPA completed cleanup in late 2015. The cleanup actions facilitated reuse at the site. Through collaboration between the EPA, CT DEEP and local officials, the site is now home to a nature park. The park includes hiking trails, picnic tables, a kayak launch and restored wetlands for the public's enjoyment.

Figure 61. Park at the Higganum Cove site (Connecticut). Photo used with permission of CT DEEP.

Mitral Corporation

The 5-acre Mitral Corporation site is located in Harwinton, Connecticut. Between the mid-1960s and late-1980s, Mitral Corporation did metal stamping and tooling, tumbling, sanding, degreasing and other machining work on site. Waste materials included used solvents, sludge, waste oil and scrap metal. The Connecticut Department of Energy & Environmental Protection conducted inspections and subsequently referred the site to the EPA for removal evaluation. Beginning in 2007, the EPA conducted cleanup activities. The EPA removed asbestos-contaminated products, demolished an old factory building, removed sludge and storage tanks, removed and treated soil, and treated water. After the EPA completed its cleanup in 2009, the site was vacant for five years. In 2012, two residents living next to the site purchased the property. The new owners planted a few hundred evergreen trees and plan to plant additional evergreens to sell as Christmas trees. They are considering selling the trees to benefit the Fidelco Guide Dog Foundation.

Figure 62. Aerial view of the Mitral Corporation site (Connecticut). Sources: Imagery ©2022 Google, Imagery ©2022 Maxar Technologies, U.S. Geological Survey Map data ©2022.

Mukluk Preserve

The 17-acre Mukluk Preserve site is a former skeet shooting range located in Sprague, Connecticut; it is part of the larger 645-acre Sprague Land Preserve. Cleanup included excavation and disposal of almost 28,000 tons of soil contaminated with lead and polyaromatic hydrocarbons. The EPA coordinated closely with Connecticut Department of Energy & Environmental Protection and the town of Sprague to restore the site. The town provided all of the plantings/saplings used for restoration. The EPA completed restoration of the site and supported its return to use as a recreation area for hiking, fishing, hunting, horseback riding, cross-country skiing, canoeing and other activities.

Figure 63. Wetlands at the Mukluk Preserve site following cleanup (Connecticut).

MAINE REUSE SUMMARY PROFILES

National Priorities List Sites

Callahan Mine

The over 150-acre Callahan Mine Superfund site is in Brooksville, Maine. Metal mining operations began at the site in 1868 and ended in 1972. In 1975, the Maine Department of Marine Resources studied marine organisms in the adjacent Goose Pond and found elevated levels of metals. The Maine Department of Environmental Protection did more sampling in 1999. The studies found hazardous substances in site soils and nearby residential properties, site groundwater and on-site waste materials.

Figure 64. The Callahan Mine property and adjacent marsh (Maine).

The EPA added the site to the National Priorities List (NPL) in 2002. The EPA finalized the cleanup plan for part of the area in 2011. From 2010 to 2013, the EPA led soil cleanup of residential properties and removed contamination from the former Mine Operations Area. Institutional controls to restrict land use and prevent groundwater use are in place. Design work to stabilize the tailings dam and cover the tailings impoundment finished in 2015. Design work for the excavation of contaminated sediments, wetlands restoration, institutional controls and monitoring finished in 2019. In 2020, the EPA put in a stone buttress against the tailings dam and graded the tailings impoundment to allow installation of a geosynthetic cover system in 2021. In 2022, the EPA began the excavation and relocation of Waste Rock Pile #3 and completed that work in 2023. In 2023, the EPA completed the excavation of the contaminated areas in the salt marsh and began excavation of the contaminated sediments in Goose Pond. The contaminated sediments and Waste Rock Pile #3 material will be capped at the Stink Cove Repository in 2025 or 2026. In 2023, the EPA began dredging the contaminated sediments in Goose Pond. The sediment dredging should be complete in 2024. The EPA also began the excavation of contaminated hot spot areas and the placement of an in-situ soil cover in Dyer Cove. The work remaining after 2024 includes the dredging of Goose Cove. The site is one of over 100 Superfund sites receiving an infusion of resources from the 2021 Bipartisan Infrastructure Law to initiate and restart cleanups. The funding will expedite the cleanup and help protect the surrounding Brooksville community.

In 2009, the EPA did a reuse assessment for the former Callahan Mine property and Goose Pond. It was based on the goals of the site owner, local regulations, community input and reasonably anticipated future land uses. It recommended a habitat conservation area with potential recreation opportunities for the site. The Site is privately owned and is subject to limited recreational use in Goose Pond.

Eastern Surplus Company

The 5-acre Eastern Surplus Company Superfund site is located along Meddybemps Lake and the Dennys River in Meddybemps, Maine. The Eastern Surplus Company, an army surplus and salvage retailer, was on-site from 1946 until the early 1980s. Facility operations contaminated soil and groundwater with hazardous substances. A facility inspection in 1984 found evidence of a release and the Maine Department of Environmental Protection (MEDEP) started emergency cleanup in 1985. The EPA took responsibility

Figure 65. Commemorative patio area at the Eastern Surplus site (Maine).

for the cleanup in 1986. The EPA added the site to the National Priorities List (NPL) in 1996. To clean up the site, the EPA removed contaminated soil and materials and disposed of them off-site and began running a groundwater treatment system in 2000. The EPA later updated the remedy, suspending groundwater extraction and treatment and using enhanced in-place bioremediation instead, based on the success of a pilot study and post-treatment monitoring. The groundwater treatment system remains offline while the EPA and MEDEP evaluate the effects of the remedy improvements.

In the early 2000s, site investigations found Native American artifacts. The northern part of the site, named N'tolonapemk (Our Ancestor's Place) by the Passamaquoddy Tribe, is identified as a significant archaeological site. It is listed on the National Register of Historic Places. In 2012, the EPA constructed a commemorative plaza and pathway for the area. Downeast Salmon Federation coordinated with the tribe and state to restore a historic spawning run area for alewives on the Dennys River located on-site. In 2023, dam removal and construction of weirs were completed to assist the culturally significant tribal resource reach spawning habitat in Meddybemps Lake. Land uses near the site remain mostly residential and agricultural. The EPA anticipates continued recreational use on the northern part of the site as well as residential and agricultural use on the southern part of the site.

Eastland Woolen Mill

The 25-acre Eastland Woolen Mill Superfund site is located on Main Street in downtown Corinna, Maine. A textile mill was active on-site from 1909 to 1996. Disposal practices resulted in contamination of sediments in the East Branch of the Sebasticook River as well as soil and groundwater. The EPA added the site to the National Priorities List (NPL) in 1999. Cleanup activities included removal of hazardous materials, the mill and contaminated soils. Cleanup activities also included installation of a water line and treatment of contaminated soils and groundwater. The EPA's close coordination with the community helped ensure the beneficial reuse of the well-located property.

Figure 66. Eastland Woolen Mill site (Maine).

In 2001, the EPA's Superfund Redevelopment Program provided a grant to the town of Corinna for a community-based reuse assessment and reuse plan. Based on these plans, a 20-unit senior housing facility opened on part of the site in 2006. The EPA, the town of Corinna and the state of Maine also relocated the historic Odd Fellows Building from the site to a new location across Route 7. The site is also home to the town of Corinna War Memorial and a community bandstand. A community boardwalk runs through green space along the river. Ecological uses on-site include the river and wetlands. The remainder of the site includes commercial, residential and mixed-use areas. In 2012, the EPA took 80% of the site's land area off the NPL after determining that cleanup of the area was complete. This area includes several properties that are available for reuse. Site stakeholders hope the area's deletion from the NPL will further clarify the site's cleanup status and help support further reuse. In 2023, the town started construction of a new firehouse on parts of the deleted area.

Pinette's Salvage Yard

The 12-acre Pinette's Salvage Yard Superfund site is about a mile southwest of Washburn, Maine. In 1979, three electrical transformers broke at the site. Fluids containing hazardous chemicals spilled directly onto the ground. The fluids moved through the soil, contaminating groundwater and surface water. In 1982, the EPA added the site to the National Priorities List (NPL). In 1983, the EPA removed some contaminated soil and disposed of it off-site. The EPA's cleanup plan addressed contaminated groundwater and remaining contaminated soil. After cleanup, the EPA took the

Figure 67. The vehicle repair and salvage yard business at the Pinette's Salvage Yard site (Maine).

site off the NPL in 2002. The EPA's cleanup plan allowed a vehicle repair and salvage yard to continue operating on-site. Today, the vehicle repair and salvage yard business remains active. It stores and dismantles damaged vehicles and sells recovered auto parts. There is also residential use on-site.

Saco Municipal Landfill

The 90-acre Saco Municipal Landfill Superfund site is in Saco, Maine. The city of Saco owned and operated the landfill from 1963 to 1989. The site includes four disposal areas. Chemicals and wastes contaminated soil and groundwater at the site. In 1990, the EPA added the site to the National Priorities List (NPL). With the EPA and Maine Department of Environmental Protection oversight, the city of Saco cleaned up the site. Cleanup activities included removing waste and removing and placing contaminated sediment under a cap. Cleanup also includes monitoring of natural processes to clean up groundwater and restricting land use. In 1998, the city of Saco began planning for site reuse. The EPA approved a plan to improve wildlife habitat in the former gravel and sand pit in one of the site's disposal areas. In 2001, the city graded the area, established a vegetative cover, and installed a series of wetland areas next to one of the disposal areas. In 2003, the city completed plans for a community recreation area for hiking, biking, ice skating and soccer. The Saco Parks and Recreation Athletic Complex now includes five soccer fields and a soccer practice area. Sandy Brook runs across the site. Reuse planning is ongoing for unused parts of the site for more city facilities.

Figure 68. Platform overlooking soccer fields at the Saco Municipal Landfill site (Maine).

Saco Tannery Waste Pits

The 212-acre Saco Tannery Waste Pits Superfund site is in Saco, Maine. Saco Tannery Corporation was active on-site from 1959 until 1981. It used on-site waste pits for disposal of process wastes such as chromium sludges, acid wastes, methylene chloride and caustic substances. Disposal activities contaminated soil, groundwater and sediment. The EPA added the site to the National Priorities List (NPL) in 1983. The EPA led a removal action that removed liquid wastes, neutralized sludges, capped pits and installed a fence. Long-term cleanup added soil cover systems for the 53 waste pits, two lagoons, and two areas outside the waste pits, revegetated the site, created compensatory wetlands, and constructed permanent security fencing. After cleanup, the EPA took the site off the NPL in 1999. As part of the cleanup, the creation of compensatory wetlands was required for the wetlands permanently lost with the construction of the soil covers. Site investigations found not enough suitable acreage on-site to offset the acreage lost through the cleanup. In 1993, the Maine Department of Environmental Protection purchased 247 acres of nearby unique and threatened habitat. The property was placed under the management of The Nature Conservancy and is protected from future development. The purchase preserves over 160 acres of highly valued peatland, a unique habitat where northern and southern range species overlap.

Figure 69. Aerial view of the Saco Tannery Waste Pits site (Maine). Sources: Imagery ©2022 Google, Imagery ©2022 CNES/Airbus, Maine GeoLibrary, Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2022.

Federal Facility Sites

Brunswick Naval Air Station

The 3,100-acre Brunswick Naval Air Station Superfund site is located in Brunswick, Maine. The U.S. Navy established Brunswick Naval Air Station during World War II at a former civilian airport on-site. Wastes generated by the U.S. Navy as part of installation activities contaminated soil and groundwater. The EPA placed the Brunswick Naval Air Station on the Superfund program's National Priorities List (NPL) in 1987. Naval air station operations continued at the site until May 2011, when the air station was officially decommissioned. The U.S. Navy continues to conduct site investigations and cleanup activities. Today, the site supports a wide range of commercial, industrial, recreational, educational, ecological, military, public service, agricultural and residential uses as well as renewable energy projects. The site is home to Brunswick Landing, a mixed commercial and industrial development, as well as the Kate Furbish Preserve and Mere Creek Golf Club. Converted former naval air station housing, new housing units, colleges, schools and vocational training centers, and a general aviation airport are on-site. Housing has also expanded, with over 4,000 residents estimated to be living at the former base.

Figure 70. The Aroostook National Wildlife Refuge on the Brunswick Naval Ari Station site (Maine).

Loring Air Force Base

The Loring Air Force Base Superfund site is in Limestone, Maine. The roughly 9,000-acre Base was a major Strategic Air Command (SAC) base for the U.S. Air Force for over 40 years, before its closing in 1994. The Base housed a bomber wing and had SAC's largest capacity for weapons and fuel storage. Military operations contaminated soil, groundwater, surface water and sediment. The EPA added the site to the National Priorities List (NPL) in 1990. Cleanup included waste removal, excavations, landfill capping, institutional controls to prevent uncontrolled use and consumption of groundwater, provisional water supplies, long-term monitoring, and groundwater management zones. Some cleanup activities and investigations are ongoing.

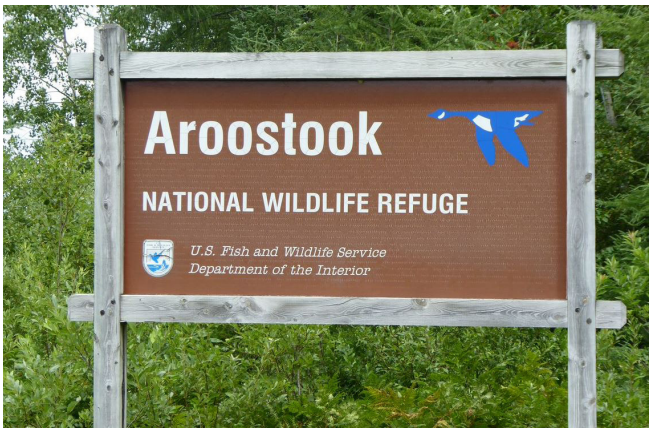

Figure 71. The Aroostook National Wildlife Refuge on the Loring Air Force Base site (Maine).

The U.S. Air Force transferred the site to the Loring Development Authority. They worked with the U.S. Air Force and the EPA to establish the Loring Commerce Centre, an industrial complex, aviation center and business park on-site. Businesses and federal agencies in the commerce center provide employment and income for the surrounding community. Tax credit and exemption programs, such as the Job and Investment Tax Credit and the Research Expense Credit, offer additional incentives to potential new tenants. Redevelopment at the site serves as a success story for other Base Realignment and Closure (BRAC) facilities. U.S. Fish and Wildlife Service maintains the Aroostook National Wildlife Refuge on-site, which provides space for recreation while protecting a diverse array of native wildlife habitats and species. The Loring Military Heritage Center is also on-site, preserving the history and legacy of Loring Air Force Base through education and museum exhibits.

Portsmouth Naval Shipyard (PNS)

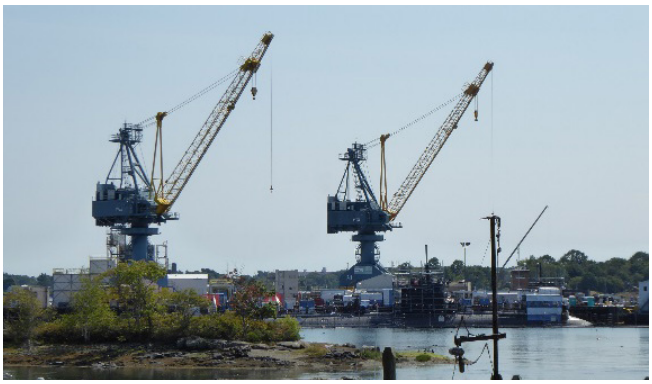

Figure 72. Naval facilities at the Portsmouth Naval Shipyard site (Maine).

The 278-acre Portsmouth Naval Shipyard (PNS) is a former Superfund site which achieved final deletion in February 2024 and is located in Kittery in York County, Maine. It consists of four islands connected by filled tidal flats. The U.S. Navy uses the Portsmouth Naval Shipyard for naval operations, including construction of ships and submarines. Industrial wastes, including used batteries, asbestos insulation, waste paint, chemical solvents and lead sludge, contaminated soils, groundwater and surface water at the site. This created a potential health risk for the 10,000 people living on and around the site. Contamination also threatened the unique wetlands and rivers nearby. In 1994, the EPA added the site to the National Priorities List (NPL). After the immediate removal of heavily contaminated storage tanks and containment of those areas with a soil cap, the EPA and the U.S. Navy removed localized areas of contaminated soil. They also put in stormwater controls along riverbanks and restored saltwater wetlands. Many decision documents were finalized from 2001 to 2022. A Final Close-Out Report was issued in July 2023. The site remains an active U.S. Navy shipyard with long-term and compliance monitoring and maintenance of land use controls.

Other Cleanup Sites

Bangor Gas Works

Figure 73. Entrance to the Shaw's Supermarket at the Bangor Gas Works site (Maine).

From 1852 to 1963, the 6-acre Bangor Gas Works site operated as a coal gasification plant in Bangor, Maine. The extracted gas provided the city of Bangor with electricity. Operations stored the remaining thick tar waste in large tanks on site. Tar deposits contaminated site soils and sediments of the nearby Penobscot River. After residents reported fumes from sewer lines and tar sheen on the river surface, the city of Bangor acquired the site in 1978. The city removed site structures and extracted and removed some contaminated materials from the site. The city also buried and capped some contaminated materials on site. Redevelopment activities paved over the capped area for a parking lot. Today, site uses include commercial space with a 60,000-square foot Shaw's Supermarket as well as recreational space that connects to the Second Street Community Park next to the site.

MASSACHUSETTS REUSE SUMMARY PROFILES

National Priorities List Sites

Atlas Tack Corp.

Figure 74. View of the Atlas Tack Corp. site (Massachusetts).

The Atlas Tack Corp. Superfund site is in Fairhaven, Massachusetts. It covers about 48 acres and includes upland areas, wetlands and saltwater marsh. From 1901 to 1985, the Atlas Tack facility made a variety of metal products, including tacks and steel nails, on-site. Operations released waste containing acids, metals, and solvents into drains and an unlined lagoon near a marsh area. Waste disposal practices resulted in contamination of soil, surface water, sediment and groundwater. In 1990, the EPA added the site to the National Priorities List (NPL). Cleanup activities included demolition of most remaining site structures, removal of contaminated soil, groundwater monitoring and site restoration. The EPA completed these activities in 2007; monitoring began in 2008. Restored wetlands and the saltwater marsh now provide habitat for plants, fish and wildlife. Birders frequent the area for bird-watching activities. These citizen scientists have recorded several species on-site, including the Pie-billed Grebe, the American Bittern and the Least Bittern, which are endangered in Massachusetts. The EPA's Superfund Redevelopment Program (SRP) began supporting a regional seed project in 2023 to assist with the preparation of interpretive signage graphics that could help tell the story of Superfund cleanup and natural resources restoration work at the site. Potential future development at the site could include commercial and industrial reuse of upland areas.

Blackburn & Union Privileges

Figure 75. The police station at the Blackburn & Union Privileges site (Massachusetts).

The Blackburn & Union Privileges Superfund site is in Walpole, Massachusetts. Industrial and commercial processes using chromium, arsenic and mercury in the area date back to the 1600s. Between 1891 and 1915, manufacturing of tires, rubber goods and insulating materials took place on-site. The crushing of raw asbestos in the manufacture of brake and clutch linings occurred at the site from 1915 to 1937. Cotton and fabric production took place at the site from 1937 to 1985, when the facility was abandoned. Industrial operations contaminated soil, sediment and groundwater. The EPA added the site to the NPL in 1994. In 1999, the EPA entered into a settlement with parties for the site's remedial investigation and feasibility study. In 2000, the EPA awarded the town of Walpole a Superfund Redevelopment Program pilot grant to develop reuse plans for the property. The EPA approved the site's cleanup plan in 2008. It divided the site into four management units requiring excavation and dredging with off-site disposal of contaminated soil and sediment, extraction and treatment of contaminated groundwater, and institutional controls and long-term monitoring. In 2010, the EPA entered into a settlement with the parties to design and perform the cleanup. Remedy construction began in 2015. The town took over site parcels for unpaid taxes and developed a new police station and senior center on-site. In May 2018, town officials, police and community members gathered to attend a ribbon-cutting ceremony to open a new police station. In December 2018, another ribbon-cutting ceremony marked the completion of a new senior center – the Walpole Co-operative Bank South Street Center. Continued site uses include a residential area and a community rail trail for recreation.

Cannon Engineering Corp. (CEC)

Figure 76. The propane distribution business at the Cannon Engineering Corp. site (Massachusetts).

The 7-acre Cannon Engineering Corp. (CEC) Superfund site is in Bridgewater, Massachusetts. Beginning in the 1970s, CEC transported, stored and burned hazardous wastes at the site. Mishandling of the waste and reporting violations led to the facility closing in 1980. In 1982, the Massachusetts Department of Environmental Protection (MassDEP) removed contaminated sludge and drums from the site. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup included installation of fencing, soil treatment of lesser-contaminated soils, excavation and off-site disposal of highly contaminated soils, groundwater monitoring, decontamination and removal of contaminated buildings and structures, restoration of wetlands, and institutional controls. In the mid-1990s, Osterman Propane Distribution (Osterman) relocated to the former CEC facility. It operates at the site through a Prospective Purchaser Agreement (PPA). A PPA encourages the reuse of Superfund site properties by addressing purchaser and lessee liability concerns. In 1998, Omnipoint Communications Enterprises began leasing property (on another parcel of land that is part of the site) and built a cellular communication tower. The responsible parties completed the cleanup in 2013. The EPA took the site off the NPL in September 2013. The EPA continues to monitor the site, conducting Five Year Reviews of the cleanup actions, every five years to make sure the remedies continue to remain protective of human health and the environment.

Charles George Reclamation Trust Landfill

Figure 77. Solar panels at the Charles George Reclamation Trust Landfill site (Massachusetts).

The 70-acre Charles George Reclamation Trust Landfill Superfund site is in Tyngsborough, Massachusetts. Initially a small municipal dump, the landfill expanded to accept household and industrial wastes, chemicals containing volatile organic compounds and metal sludge. The commonwealth ordered the landfill closed in 1983. Site operations contaminated groundwater. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup activities included providing a permanent water supply to residents affected by contaminated groundwater, capping the landfill, and collecting contaminated liquid draining from the landfill (leachate), 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. The EPA's Superfund Redevelopment Program and Region 1 did an assessment in 2010 to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. In 2016, Citizens Energy Corporation completed the construction of a 3.56-megawatt solar photovoltaic facility on the landfill.

Conway Park

Figure 78. Athletic field at the Conway Park site (Massachusetts).

The 2.8-acre Conway Park Superfund site is in Somerville, Massachusetts. From the early 1800s to the 1930s, a bleachery and dye-works factory were on-site. The city of Somerville acquired the property in 1937. A park has been on-site since the 1950s. In 2017, sampling found widespread polychlorinated biphenyl (PCB) contamination in soil, which led the city to restrict access to the site. In 2019, the Massachusetts Department of Environmental Protection (MassDEP) asked the EPA for help cleaning up site soils. In 2020, the EPA and the city of Somerville worked closely

together on a mixed-work approach to cleanup. Preparation for cleanup started in 2021. These activities included removing trees and installing fencing and erosion controls. From July to September 2021, the city and the EPA disposed of about 9,000 tons of contaminated soil. The cleanup also included air monitoring and dust control to make sure contamination did not spread off-site during cleanup activities. The cleanup presented an opportunity for renovations and updates to Conway Park, leading to a new athletic field for the recreation complex. The park's playground was also updated. Conway Park's grand reopening took place in May 2022.

Creese & Cook Tannery (Former)

Figure 79. The Crane River and wetlands at the Creese & Cook Tannery (Former) site (Massachusetts).

The Creese & Cook Tannery (Former) Superfund site is in Danvers, Massachusetts. Creese and Cook Tannery Company ran a tannery and finishing facility on-site from 1903 to 1981 on both sides of the Crane River. Hebb Leather also operated at the site until both companies filed for bankruptcy in 1982. Wastes from tanning operations went into two landfills at 55 Clinton Avenue and liquid waste was discharged to the Crane River and then sewers in the 1970s. Sludge waste was placed in a lagoon system on-site. Starting in the mid-1980s, the Massachusetts Department of Environmental Protection (MassDEP) oversaw investigations and response actions at some of the site properties. Its actions included fencing hazardous areas and building a waste disposal cell. MassDEP also requested that the EPA evaluate the site. The EPA then added the site to the National Priorities List (NPL) in 2013. Cleanup is ongoing. It will include removal and off-site disposal of contaminated soil, consolidation and capping, wetland and flood plain restoration, monitoring, Five Year Reviews and institutional controls. In December 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites. The EPA completed and approved the site's final 100% Remedial Design on 8/11/2023. Award of the remedial action contract (for cleanup) is expected to occur in June of 2024. Under the final plan, the EPA will utilize the BIL funding to excavate contaminated soil from properties located on the east and west sides of the Crane River, on properties historically occupied by the tannery's operation and adjacent properties. Impacted areas will be covered with clean soil and re-vegetated and wetlands and the flood plains will be restored. Most of the contaminated soil will be consolidated at the former Tannery property on the west side of the Crane River at 55 Clinton Avenue, and covered with a protective cap. Some contaminated soil may also be transported and disposed off-site at an appropriate disposal landfill. Current site uses include residential homes, recreational uses, two condominium complexes, a Revolutionary War memorial, a social club and two historical cemeteries, and vacant parcels. There are also Tribal and Massachusetts Historical Society interests at the site. The Crane River, which bisects the area, will be addressed by a separate cleanup action.

Groveland Wells

Figure 80. The solar facility at the Groveland Wells site (Massachusetts).

The 850-acre Groveland Wells Superfund site is located off of Washington Street in Groveland, Essex County, Massachusetts. The former Valley Manufacturing Products Company made metal screws and plastic parts on-site until 2001, when the company ceased operations. The site's Responsible Party (RP) released cutting oils and chlorinated hazardous solvents (TCE) at the site. Additional TCE product leaked from underground storage tanks and disposal systems at the facility. These releases contaminated the town of Groveland's public water supply.

The EPA added the site to the National Priorities List (NPL) in 1982. In late 1987 and early 1988, the RPs installed and used soil vapor extraction (SVE) to remove contaminants from site soils. The RPs also put in a small groundwater treatment

system in 1988. However, these systems were ineffective. The EPA then designed and installed a large groundwater treatment system in 2000. In 2006, the EPA removed abandoned underground storage tanks, and a former disposal system and contaminated soils from the site. In addition, from 2009 to 2011, the EPA designed, installed and operated an electrical resistive heating treatment system to replace the SVE system. All of these treatment activities were effective. They concluded in 2014 and MassDEP continues to conduct long term groundwater sampling.

The EPA's Superfund Redevelopment Program and Region 1 did an assessment in 2010 to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. In 2012, a 3.6-megawatt solar array was installed on another part of the site. It provides power for more than 500 homes. The site remains in continued residential, recreational, commercial, municipal and industrial use. Mill Pond and parts of Johnson Creek are also on-site. MassDEP properly decommissioned the site's large groundwater treatment facility. The Roman Catholic Archdiocese of Boston owns the property and plans to use the decommissioned treatment facility building. The EPA transferred ownership of the empty, clean building to the Archdiocese in 2022. The EPA and MassDEP continue to monitor conditions, conducting groundwater monitoring and conducting Five-Year Reviews every five years to make sure the remedies continue to remain protective of human health and the environment.

Hatheway & Patterson

Figure 81. The commuter parking lot at the Hatheway & Patterson site (Massachusetts).

The 38-acre Hatheway & Patterson Superfund site is in Mansfield and Foxborough, Massachusetts. Approximately 36 acres of the site are located in the town of Mansfield and the remaining 1.77 acres are located in the town of Foxborough. The site is bisected by the Rumford River, which runs north to south, and by a railroad right-of-way, which runs east to west. The Hatheway and Patterson Company operated a wood-preserving facility on-site from 1953 to 1993. Releases of chemicals used during these operations resulted in soil and groundwater contamination. It also resulted in contamination of sediment and surface water in the Rumford River's fisheries and surrounding wetlands. The EPA added the site to the National Priorities List (NPL) in 2002. Cleanup included removing contaminated soil, capping a 2-acre area, implementing institutional controls, and long-term monitoring of groundwater, surface water, fish tissue and sediment. The EPA completed the cleanup in 2011. Institutional controls in the form of Notice of Activity and Uses Limitations (NAULs) were recorded with the Registry of Deeds to prevent uncontrolled access to the remaining contamination. In 2018, the EPA deleted the site from the NPL because the EPA determined that the response actions for the site were complete and that all cleanup goals had been achieved. Today, a 119-space commuter parking lot is located on part of the site. It serves the nearby Mansfield commuter rail station. The town of Mansfield also uses part of the site for emergency vehicle storage and uses the remaining building for office space. The Mansfield portion of the site along County Street is not currently in use.

Haverhill Municipal Landfill

Figure 82. Soil grading and shaping of the landfill at the Haverhill Municipal Landfill site (Massachusetts).

The 71-acre Haverhill Municipal Landfill Superfund site is next to the Merrimack River in Haverhill, Massachusetts. Old Groveland Road runs along the southern border of the site. The landfill opened in the 1940s as an industrial landfill, began accepting municipal waste in the 1960s and continued to do so until its closure in 1981. From 1978 to 1996, sludge from the Haverhill wastewater treatment plant and byproducts from the paper manufacturing process at the Haverhill Paperboard Company were also disposed of at the landfill. The EPA added the site to the National Priorities List (NPL) in 1986. The site is also on the state's 21E site list due to the potential for environmental impacts resulting from the burial of industrial

and hazardous waste and is being closed (capped) under the MassDEP Solid Waste program, with EPA oversight. In 1996, the landfill was covered with a temporary soil cover. To address concerns about potential buried hazardous materials or "hot spots" at the landfill and subsurface investigations took place in December 2002. By May 2005, about 1,917 55-gallon drums of waste and 545 yards of contaminated soil were removed and taken off site for proper off-site disposal. In 2012, the southern part of the landfill was graded and capped. In 2021, Kearsarge Energy LP completed the renewable energy project on 12 acres of the southern part of the landfill under the Massachusetts SMART Program. The project combines photovoltaic energy production plus battery storage to feed 4.65 million kilowatt-hours into the utility grid annually. In partnership with Haverhill city government, energy savings, lease revenue and tax income are estimated at $3.9 million over 20 years. Planning for capping the site's northern mound is underway. Long-term cleanup and environmental monitoring are ongoing under MassDEPs' cleanup program.

Hocomonco Pond

Figure 83. Pond at the Hocomonco Pond site (Massachusetts).

The 23-acre Hocomonco Pond Superfund site is in Westborough, Massachusetts. Wood-treating operations occurred on-site from 1928 to 1946 and consisted of saturating wood products with creosote to preserve them. The wastes from this process went into a 1.7-acre unlined former lagoon and two other areas on-site. In 1976, the town of Westborough put in a storm drain. It crossed part of the former lagoon that contained creosote wastes, causing them to be discharged directly into Hocomonco Pond. Fish kills in 1979 and 1982 led to investigations that found the a source of the creosote contamination to enter the Pond. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup included source removal and control, landfill construction, capping of the former lagoon, relocation of the storm drain, and sediment removal and placement in the on-site landfill. Dense Non-aqueous Phase Liquids (DNAPL) in the deep bedrock below the groundwater table is manually removed and taken off-site for disposal every three months. Groundwater, sediment monitoring, DNAPL recovery, operation and maintenance activities and Five-Year Reviews continue. The Pond is adjacent to the Site. The Town of Westborough owns the property and is considering possible re-uses of the site.

Industri-Plex

Figure 84. The new solar array at the Industri-Plex site (Massachusetts).

The Industri-Plex Superfund site in Woburn, Massachusetts, is located 12 miles outside of Boston. From 1853 to 1969, several manufacturers produced chemicals, insecticides, munitions and glue products at the site. Large waste piles, heavy metals and hazardous chemicals collected on-site. This waste resulted in groundwater, surface water, soil and sediment contamination. In 1983, the EPA added the site to the Superfund program's National Priorities List (NPL). Cleanup included placement of protective covers over parts of the site, gas collection and thermal treatment, contaminated groundwater treatment in the Halls Brook Holding Area Pond, dredging and off-site disposal of contaminated sediments, construction of wetlands and a fish ladder, and institutional controls. The covers were compatible with productive reuse of the areas. The EPA has entered into five Prospective Purchaser Agreements (PPAs) at the site. A PPA encourages the reuse of Superfund site properties by addressing purchaser and lessee liability concerns.

During and after initial cleanup activities, several public- and private-sector improvements took place. They included a new interstate highway exchange, public roads, a 200,000-square-foot shopping center, an office park and a hotel

complex. Restored wetlands and grass-covered hills provide scenic open space at the site. The site's successful redevelopment was recognized by the prestigious Phoenix Award in 2000. In 2001, the 34-acre, $10 million James Anderson Regional Transportation Center opened at the site. The center relieves congestion on highways leading into Boston and eases commutes for many area residents. In 2008 and 2009, additional redevelopment included a restaurant, a pet supply store and a furniture store. The EPA, the state and the local government worked with the developer to record property use restrictions, prepare work plans, remove a building and support the property's transformation. Construction of the final cleanup phase began in 2015 and was completed in 2017.

Mitigation projects along the Aberjona River include constructed wetlands, floodplain enhancements and the Aberjona Nature Trail, as well as a fish ladder at the Center Falls Dam in nearby Winchester. The EPA continues to support the safe redevelopment of properties at the site, and prepared a 2018 Explanation of Significant Differences that enabled two mixed-use and residential projects to move forward. Construction of the first project, a 200-unit apartment community at 200 Presidential Way parcel, began in 2018 and finished in 2019. Construction of the second project, a 289-unit multi-family housing and over 9,000 square feet of commercial space development, began in 2019 and finished in 2022. In addition, the EPA took the 200 Presidential Way parcel off the NPL in 2020. In 2021, two solar rooftop projects were completed. They generate 1.7 and 0.8 megawatts of energy, respectively. In 2022, New Boston Street Rail Road Bridge construction began. It is scheduled for completion in 2025. The EPA provides oversight to ensure the remedy remains protective. In 2023, construction of a 4-megawatt Solar Electric Generating Facility finished. Other reuse projects on the horizon include a mixed-use area and a proposed life science laboratory and office complex.

Iron Horse Park

The Iron Horse Park Superfund site is a 553-acre industrial complex in Billerica, Massachusetts. Industrial activities, which began in 1913, included manufacturing, rail yard maintenance, waste storage and landfilling. These operations resulted in soil, groundwater and surface water contamination. The EPA added the site to the National Priorities List (NPL) in 1984. Remedy construction finished in 2022. It included removing contaminated soil, backfilling areas with clean soil, capping contaminated soil areas, and closing and capping landfills. These activities supported the continued operation of industrial businesses on-site, including lumber, manufacturing and rail yard maintenance facilities. Cleanup activities also restored natural marshes and created new wetland habitats. In 2012, site stakeholders began a project to place solar panels on the Shaffer Landfill, a former waste disposal area. After coordinating with the EPA and the state, the town of Billerica signed a payment in lieu of taxes (PILOT) agreement in August 2013. The agreement guarantees project revenue over 25 years.

Figure 85. The solar array on the Shaffer Landfill at the Iron Horse Park site (Massachusetts).

With the agreement in place, construction of the 25-acre solar array began in early 2014. Urban Green Technologies (UGT), the solar developer, placed 20,000 solar panels over the capped landfill. The EPA worked with UGT to address the challenge of installing solar panels on the sloped landfill while ensuring its cap remained intact. In August 2014, the EPA, Massachusetts Department of Environmental Protection, UGT and the town of Billerica held a ceremony marking the project's completion. The 6-megawatt facility allows the town to reduce its dependence on fossil fuels and benefit from significant long-term energy cost savings. Since then, a 4-megawatt solar array was constructed elsewhere on the site, followed by a 6-megawatt array in 2017. The solar facilities allow the town of Billerica to benefit from significant long-term energy cost savings.

Lower Neponset River

The Lower Neponset River Superfund site is a 3.7-mile section of the Neponset River between Hyde Park and Dorchester/Milton, Massachusetts. The site boundary begins at the confluence of the Neponset River and Mother Brook and extends to the Baker Dam. Based on preliminary studies, this portion of the river contains sediment contaminated with polychlorinated biphenyls (PCBs). In 2006 and 2007 the Massachusetts Department of Environmental Protection oversaw a large removal of contaminated sediments in Mother Brook, which feeds into the Neponset River. Further

sampling found PCB contamination in the Neponset River. The EPA added the site to the National Priorities List in 2022. The EPA finished phase I remedial investigations in 2023. Phase II investigations, an engineering evaluation and a cost analysis are planned for 2024.

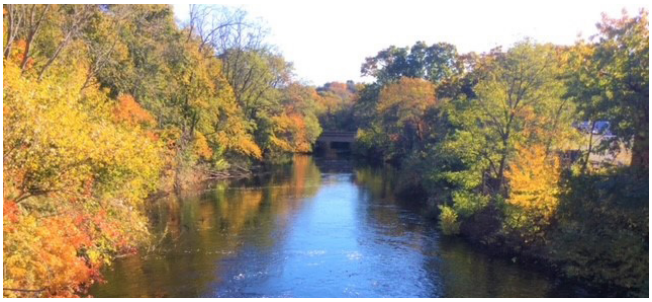

Figure 86. View of the Lower Neponset River at the Lower Neponset River site (Massachusetts).

The site's 2023 Reuse Assessment Report identified reasonably anticipated future land uses to guide the EPA's cleanup decision-making process and inform land use planning activities. The reuse assessment process included interviews and other information sharing opportunities for community members and stakeholders to share their perspectives and visions for the future of the site. The process identified strong community interest in the future use of the site as a recreational space. Currently, many public recreational land uses, including trails, parks, playgrounds and community gardens, are near the site. However, some neighborhoods with environmental justice concerns are more isolated from the river and lack access to it and nearby parks. Several local efforts are improving access in these areas.

New Bedford Harbor

The 18,000-acre New Bedford Harbor Superfund site is in New Bedford, Fairhaven, Acushnet and Dartmouth, Massachusetts. At least two companies produced capacitors containing polychlorinated biphenyls (PCBs) on-site from 1940 to the late 1970s. Operations discharged industrial waste into the harbor, which contaminated the estuary from the upper Acushnet River into Buzzards Bay. In 1983, the EPA added the site to the National Priorities List (NPL). Ongoing cleanup activities include the removal and disposal of contaminated shoreline soils, salt marshes and mudflats at approved off-site facilities, and replanting impacted salt-marsh areas with thousands of native grasses, shrubs and trees. Subtidal dredging (below the low tide line) finished in 2020. Cleanup is ongoing and is expected to be completed by December 2025.

Figure 87. Dredging of contaminated sediment has helped pave the way for commercial port development at the New Bedford Harbor site (Massachusetts).

In December 2020, after extensive decontamination, the EPA transferred its former 5-acre sediment dewatering facility to the city of New Bedford. To provide COVID-19 vaccinations for seafood industry workers and community members during the COVID-19 public health emergency, the city partnered with the Greater New Bedford Community Health Center in April 2021 to temporarily transform the facility into a COVID-19 vaccination site, capable of vaccinating up to 800 to 1,000 people daily. In 2022, the city used the facility to temporarily protect various Buttonwood Park Zoo waterfowl and endangered species from Highly Pathogenic Avian Influenza H5N1. The facility is now being used as a staging area for construction of the North Terminal. The city ultimately plans to use the former dewatering facility as a heavy-duty, multi-purpose port facility, potentially supporting offshore wind energy projects. The facility, located on the city's working waterfront, includes berthing space for freighters and commercial fishing vessels, a 55,000-square-foot warehouse, and a rail spur that connects to the city's rail yard.

As part of a separate Superfund removal action next to the harbor in 2011, the EPA completed demolition of the 11-acre Aerovox mill, located along the Acushnet River. The cleanup plan also allows for navigational dredging efforts by local and state stakeholders. Dredging of harbor channels, which enhances the remedy by removing sediment not addressed by the Superfund cleanup, has resulted in private investment in the commercial port. It paved the way for the recent construction of the New Bedford Marine Commerce Terminal (aka the South Terminal), a 28-acre marine terminal supporting the construction of offshore wind energy.

In December 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at National Priorities List (NPL) sites. BIL funds will enable the completion of all remaining remediation by December 2025. These activities will include the cleanup of four shoreline intertidal zones, off-site disposal of dredged material stored at the EPA's Sawyer Street facility, capping of the confined disposal facility at Sawyer Street, and full demobilization and return of the shoreline Sawyer Street facility to the city of New Bedford for redevelopment, including its planned upper harbor river walk. Redevelopment along the river is ongoing. Projects include the repurposing of many former mills for apartments and commercial space. Finally, plans include a river walk along the Upper Harbor and habitat restoration, which will draw residents back to the waterfront for recreation activities. The EPA's cleanup will address contamination along the shoreline. Once the ongoing state-led cleanup of the upland portion of the former Aerovox mill finishes, the property will provide the city with space for potential future shoreline redevelopment. Residents use the harbor for recreational activities such as rowing and boating.

Norwood PCBs

The 26-acre Norwood PCBs Superfund site is in Norwood, Massachusetts. From 1942 through the mid-1980s, several businesses made and maintained electrical components on-site. During investigations, the EPA found polychlorinated biphenyls (PCBs) in soil and groundwater on-site and in the sediment of a nearby brook. In 1986, the EPA added the site to the National Priorities List (NPL). Cleanup included removing contaminated soil and sediment and consolidating it beneath an asphalt cap. It also included demolition of site structures and long-term monitoring. A groundwater treatment facility operated on-site until 2001. In 2008, the site owner and developers completed a 56,000-square-foot commercial facility on-site. Developers also put new buildings next to the capped area. They increased the thickness of the asphalt cap remedy to allow for its use as a parking lot. An athletic goods retailer remains in the facility. The EPA took the site off the NPL in 2011. Various enterprises have operated in the commercial buildings on the property in accordance with institutional controls on the parcels that ensure the protectiveness of the remedy.

Figure 88. One of several commercial facilities at the Norwood PCBs site (Massachusetts).

Nuclear Metals, Inc.

The Nuclear Metals, Inc. Superfund site includes a 46-acre property in the western part of the town of Concord, Massachusetts. It also includes a contaminated groundwater plume that extends under nearby areas. Facility operations at the site took place from 1958 to 2011. Nuclear Metals, Inc. was originally a specialty metal research and development facility licensed to possess low-level radioactive substances. It later developed into a large-scale industrial facility that made depleted uranium products. From 1958 to 1985, the facility sent waste into an unlined holding basin. Historical activities at the site resulted in soil, sediment, and groundwater contamination. The EPA added the site to the National Priorities List (NPL) in 2001. Interim cleanup under the removal program included the removal of 8,000 cubic yards of soil from the holding basin, lining of the holding basin, and fencing and capping of the on-site landfill. It also included a time-critical action to remove hazardous and flammable material, demolition of on-site buildings, temporary capping of the former building area, and off-property groundwater extraction and treatment. Long-term cleanup is underway to provide permanent solutions for on-property groundwater, sitewide soils and sediment, and the Holding Basin area. The EPA's Superfund Redevelopment Program

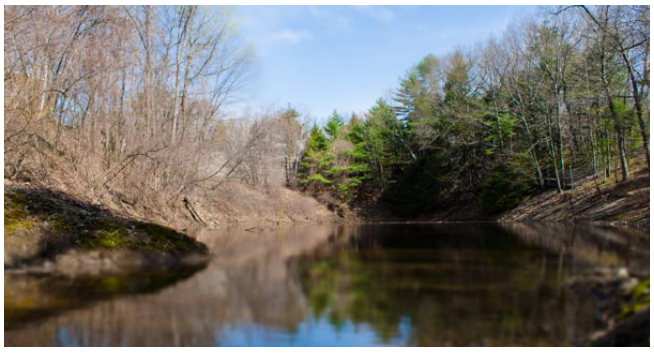
Figure 89. View of the Assabet River, which borders the northern edge of the Nuclear Metals, Inc. site (Massachusetts).

(SRP) supported a reuse assessment at the site from 2018 through 2020 to assist local stakeholders in planning for future land use, redevelopment, property ownership and long-term stewardship at the site. In 2023, SRP initiated phase two of reuse support to assist the town with understanding their property acquisition and liability protection options and a strategy for acquisition and potential disposition. In addition, the EPA will be working with local stakeholders to refine the remedial design and doing site reuse planning analyses to assist with remedial design and reuse planning integration. The site is vacant. Continued ecological uses on-site include wetlands and a pond.

Nyanza Chemical Waste Dump

Figure 90. Restored wetlands at the Nyanza Chemical Waste Dump site (Massachusetts).

The 35-acre Nyanza Chemical Waste Dump Superfund Site (the "Site") is in Ashland, Massachusetts, 25 miles west-southwest of Boston, Massachusetts. The Site consists of the former Nyanza, Inc. property and surrounding areas impacted by the contamination. A plume of groundwater contamination flows from the former Nyanza, Inc. property to the northeast below downtown Ashland, a densely populated area of mixed residential and commercial use, toward the Sudbury River. From 1917 to 1978, companies made textile dyes, dye intermediates and other products at the Site. Operators buried solid waste on Megunko Hill, and released manufacturing wastewater into a system of on-site lagoons and an underground concrete vault that were periodically discharged to a series of drainage ways and wetlands hydraulically connected to the Sudbury River. These improper waste-handling practices resulted in groundwater contamination and soil and sediment contamination, particularly mercury and volatile organic compounds (VOCs) such as trichloroethylene (TCE). The EPA added the Site to the National Priorities List (NPL) in 1982. In the mid-1990s, data from indoor air samples collected in buildings above a contaminated groundwater plume emanating from the Site indicated the potential for vapor intrusion of VOCs from soil below building foundations into indoor air. Cleanup activities between 1989 to 2001 have included excavating sludge and contaminated soils and sediments from the former Nyanza, Inc. manufacturing property and surrounding wetland areas, and capping the Megunko landfill. In 2007, the EPA installed sub-slab depressurization systems in buildings within a designated vapor mitigation area to mitigate the vapor intrusion risk from VOCs in the Site groundwater plume. EPA has initiated long-term groundwater monitoring events to further study the plume and expanded indoor air studies. In 2013, the EPA installed two extraction well systems in the source area to remove and recover dense non-aqueous phase liquid (DNAPL), which is contributing to ongoing groundwater contamination. The EPA has also conducted extensive mercury studies and sampling of sediment and fish tissue in the Sudbury River impacted by the Site discharges. Approximately 70 fish advisory signs have been posted at accessible locations along a 26-mile stretch of the Sudbury River in Ashland, Framingham, Sudbury, Wayland, Lincoln, and Concord to notify the public and discourage consumption of fish which may have elevated mercury levels.

The EPA's cleanup efforts have allowed for Site landowners to continue leasing land to several industrial and commercial businesses, including a chemical manufacturer. Several redevelopment projects next to the site have occurred in recent years, including a renovated MBTA commuter rail station and new parking lot, a large apartment complex with walkability to the MBTA station, the paved Trolley Brook recreation path, Mill Pond Park improvements including a new bridge and nature walkway over Mill Pond, which is part of the Sudbury River. Downtown Ashland has several new businesses, a Historical Society, an outdoor business and community gathering space, and recent improvements to sidewalks and crosswalks. A peaceful healing garden was also built near the Site to remember residents who were impacted by cancer. A new residential and commercial mixed-use development at a former mill property is also in the planning phase. Ecological uses on-Site include wetlands, Trolley Brook and the Sudbury River, which can be appreciated by the public from the new recreation path and nature walkway. In December 2019, a solar array was built and began operating on the Site's Megunko landfill cap. This array, together with a nearby off-site solar array, can generate up to 5.8 megawatts of electricity. In 2023, the Site wThe as added to those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites. The EPA is implementing more groundwater cleanup measures at the Site with some of these resources.

PSC Resources

Figure 91. Drainage along the capped area of the PSC Resources site (Massachusetts).

The 4-acre PSC Resources Superfund site is in Palmer, Massachusetts. From 1898 to 1974, various oil companies owned the property. From 1974 to 1978, PSC Resources Inc. Operated a waste oil and solvent recovery and disposal facility on site. The owner abandoned the facility in 1978, leaving millions of gallons of waste behind in tanks and lagoons. Site operations also contaminated surrounding soil, sediment and groundwater with organic contaminants and metals. The EPA added the site to the National Priorities List (NPL) in 1983. The Performing Settling Defendants led the remedial design and remedial action, which occurred in two phases. The first phase entailed the decontamination, demolition and off-site disposal of structures. The second phase entailed all other remedial activities, which included ex-situ treatment and stabilization of sediment and soil that was then placed under a low-permeability cap. The capped area is fenced to prevent access by the public. The restoration of wetlands, implementation of institutional controls on groundwater use and land development, and long-term monitoring of groundwater has occurred since completion of the remedy. Environmental monitoring in sediment and surface water were suspended after performance standards were achieved in the lagoon, wetland, and Quaboag River. The site includes forest and wetland areas that are used by local residents for recreation activities. A Mobil Oil Company pipeline right-of-way extends along the southwest boundary of the site.

Re-Solve, Inc.

Figure 92. Solar panels are used to power the groundwater treatment system at the Re-Solve, Inc. site (Massachusetts).

The 6-acre Re-Solve, Inc. Superfund site is a former waste chemical reclamation facility in North Dartmouth, Massachusetts. Between 1956 and 1980, site operators disposed of residues from operations, liquid sludge waste, impure solvents, and burned tires in on-site unlined lagoons. Site operators also spread oil waste over the site to control dust. The EPA placed the site on the National Priorities List (NPL) in 1983. A groundwater pump-and-treat system was constructed at the site to contain and remove contaminants in overburden groundwater, which has operated continuously since 1998. As part of the cleanup, one acre of wetlands was remediated and restored. The potentially responsible parties (PRPs) also worked closely with the EPA and the U.S. Fish and Wildlife Service to convert 4 acres of the site into a native meadow for ecological reuse. The PRPs placed bird boxes, brush piles, and sand piles for turtles to enhance the meadow habitat. Fishing derbies have been held at Cornell Pond to engage the community in fish monitoring activities. The EPA and the PRPs have also collaboratively evaluated sustainable treatment enhancements for the groundwater treatment system since 2004. In 2015, two anaerobic bio-reactor systems were constructed at the site. The systems are below-ground sand/peat beds in which naturally occurring microorganisms break down the contamination. This process significantly reduces the use of chemicals and the need for waste disposal. The groundwater treatment system is powered entirely by solar panels.

Rose Disposal Pit

The Rose Disposal Pit Superfund site is a 12.5-acre former waste disposal area in Lanesborough, Massachusetts. From 1951 to 1959, operators put waste oils and solvents from the nearby General Electric plant in an open trench at the site. In 1980, a state inspection found soil and groundwater contamination. Immediate actions protected human health and the environment. They included providing alternate water supplies to affected homes, removing and treating contaminated soil, covering the disposal area, and extracting and treating contaminated groundwater. The actions also treated sediments and surface water from a pond near the disposal area. The EPA added the site to the National

Priorities List (NPL) in 1984. Long-term cleanup included excavation and incineration of contaminated soil and sediment, placement of a clean soil cover, groundwater treatment, ecological restoration, and land and groundwater use controls. Construction of the groundwater extraction and treatment systems finished in 1993. Soil cleanup finished in 1994. GE demolished the Rose residence on-site in 2009. General Electric owns the site, which is vacant. The groundwater treatment facility continues to operate. A collection trench and several monitoring wells are on an adjacent Balance Rock State Park property. Ecological uses on-site include a pond.

Figure 93. The Rose Disposal Pit site (Massachusetts).

Salem Acres

The 235-acre Salem Acres Superfund site is in Salem, Massachusetts. From 1946 to 1969, part of the site received waste from the South Essex Sewerage District. The waste was placed in unlined pits. Other areas of the site were used for fly ash disposal and a landfill. The unlined pits, the fly ash pile and the landfill contained hazardous substances. The EPA added the site to the National Priorities List (NPL) in 1986. From 1995 to 1999, responsible parties removed and disposed of site contamination, with EPA oversight. The cleanup restored the area for unrestricted land use. The EPA took the site off the NPL in 2001. In 2019, a developer expanded a neighborhood of single-family homes onto part of the site.

Figure 94. Residential development at the Salem Acres site (Massachusetts).

Shpack Landfill

The 9.4-acre Shpack Landfill Superfund site is in Attleboro and Norton, Massachusetts. The landfill operated from 1946 until the 1970s. It received domestic and industrial wastes, including inorganic and organic chemicals, as well as radioactive waste ashes associated with nuclear fuel operations. Facility operations contaminated soil, sediment and groundwater with hazardous chemicals. The EPA added the site to the National Priorities List (NPL) in 1986. Cleanup included excavation and off-site disposal of contaminated soil, installation of a water supply line, stormwater drainage improvements, wetland creation and restoration, and institutional controls. The EPA took the site off the NPL in 2017. An electrical utility easement with overhead distribution and transmission lines crosses the site. Routine maintenance and monitoring activities are ongoing to ensure wetland system health.

Figure 95. Aerial view of the Shpack Landfill site (Massachusetts). Sources: Imagery ©2022 Google, Imagery ©2022 CNES/Airbus, MassGIS, Commonwealth of Massachusetts EOEA, Maxar Technologies, RIGIS, USDA/FPAC/GEO, Map data ©2022.

Sullivan's Ledge

The 12-acre Sullivan's Ledge Superfund site is in New Bedford, Massachusetts. A quarry operated on-site until about 1932. In 1935, the city of New Bedford took over the area and turned it into a dump for hazardous materials and other waste. Disposal activities took place on-site from the 1940s through the 1970s. The city then closed the dump and backfilled the disposal area following a fire in the 1970s. In 1982, during investigations associated with a proposed parking lot development, the Massachusetts Department of Public Works, now the Massachusetts Highway Department, found soil contamination at the site.

Figure 96. Aerial view of the solar array at the Sullivan's Ledge site (Massachusetts).

The EPA led studies in the area and added the site to the National Priorities List (NPL) in 1984. Cleanup activities included treating groundwater and removing contaminated soil and sediment and capping the site. Institutional controls are recorded with the Registry of Deeds to prevent uncontrolled access to the remaining contamination. Groundwater treatment is ongoing. Cleanup also included removing contamination from a neighboring golf course. The EPA's approach allowed for continued use of the golf course during cleanup. The EPA also restored 13 acres of affected wetlands. Restoration work finished in 2002. Today, the wetlands provide habitat for many wildlife species, including the great blue heron, great egret, red-tailed hawk and spotted turtle.

The EPA's Superfund Redevelopment Program and Region 1 did an assessment of the site in 2010 as part of an effort to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. In 2013, the EPA approved the installation of 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 construction in 2014. The 10-acre system includes more than 5,000 solar panels. A partnership between BlueWave Capital and the city of New Bedford supported further solar projects around New Bedford. 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 the course of 20 years, New Bedford will save about $2.7 million in energy costs through the purchase of solar net metering credits. In 2014, the EPA recognized the project team, including the city of New Bedford, BlueWave Capital and SunEdison, with EPA Region 1's first Excellence in Site Reuse award.

Sutton Brook Disposal Area

The 100-acre Sutton Brook Disposal Area Superfund site is in Tewksbury, Massachusetts. From 1957 until 1988, a landfill was active on-site. It accepted municipal, commercial, and industrial wastes. Waste disposal practices led to soil, sediment, surface water, and groundwater contamination at levels that pose unacceptable risks. The EPA added the site to the National Priorities List (NPL) in 2001, and led three short-term cleanups on and near the site - excavating and removing highly contaminated soils and drums. The long-term remedy included excavation of more soils and sediments, consolidation of this material in on-site landfills, landfill capping, and wetlands restoration. The remedy also included installation of an underground slurry wall to direct contaminated groundwater to an extraction well for removal and discharge to the local publicly owned treatment works (POTW), monitored natural attenuation for groundwater outside of the extraction system area, institutional controls, and long-term monitoring. Construction of the remedy was completed in July 2016 and monitoring of restored wetland areas is ongoing. In June 2020, MassDEP approved the own of Tewksbury's request to install ballast-mounted solar arrays at the site. In 2022, National Grid energized the 3.6-megawatt solar array project.

Figure 97. Solar panels at the Sutton Brook Disposal Area site (Massachusetts).

GE-Pittsfield/Housatonic River

Figure 98. The Berkshire Innovation Center at the GE-Pittsfield/ Housatonic River site (Massachusetts).

The GE-Pittsfield/Housatonic River site includes a 254-acre former manufacturing facility, filled river oxbows, neighboring commercial properties, the Allendale School, Silver Lake, the Housatonic River, floodplains and other areas. The site contains contamination released from the General Electric Company (GE) facility in Pittsfield, Massachusetts. A revised cleanup decision in the form of a Revised Corrective Action Permit for portions of the Housatonic River was issued in December 2020. A Consent Decree entered in federal court in 2000 outlined the cleanup of all other areas of the site. All 20 cleanup actions outside the river, all within the city of Pittsfield, are now complete. Cleanup of 2 miles of the Housatonic River is also already complete. As part of ongoing cleanup activities, the community prioritized the reuse of the former GE facility, located in the heart of downtown Pittsfield. Funded by a Superfund Redevelopment pilot grant from EPA, the Pittsfield Economic Development Authority (PEDA) developed a reuse plan. The plan outlined opportunities for sports fields and an office park. In 2004, GE built a 3-acre recreational facility on-site for the community. The facility includes a baseball diamond, soccer field, jogging track, equipment storage, fencing and lighting. Between 2005 and 2012, PEDA received ownership of 50 acres at the site for the development of the William Stanley Business Park. The facility provides commercial and industrial space for area businesses. The park's first tenant, a financial services company, built a 170,000-square-foot building that opened in 2012. Western Massachusetts Electric Company installed an 8-acre solar power facility in 2010, using 2 acres of the site and 6 acres of an adjacent property, which generates 1.8 megawatts of electricity.

In 2012 and 2013, a 26-acre lake and associated banks and floodplain were remediated. The bank/floodplain remediation included construction of a walking path, benches and the extensive planting of native trees and shrubs. In 2014, PEDA received a $9 million state grant to design and build the Berkshire Innovation Center (BIC). The BIC facility opened for business in February 2020. The facility supports shared research, early-stage production and commercialization, and workforce training for life science companies and related businesses. In 2022, the BIC received an additional $1 million from the American Rescue Plan Act for establishing a manufacturing academy to spur economic growth and jobs. A tech firm with city and state funding headquartered at the BIC is developing a solar masonry unit capable of generating energy from reflected light on the sides of buildings. The firm plans to have its production facility based at the BIC. Two large employers continue to operate on the GE-owned part of the 254-acre facility. Continued uses on the non-GE owned part of the site (excluding the Rest of River) include an elementary school, about 86 residential properties, about 35 commercial properties and a city park.

W.R. Grace & Co., Inc. (Acton Plant)

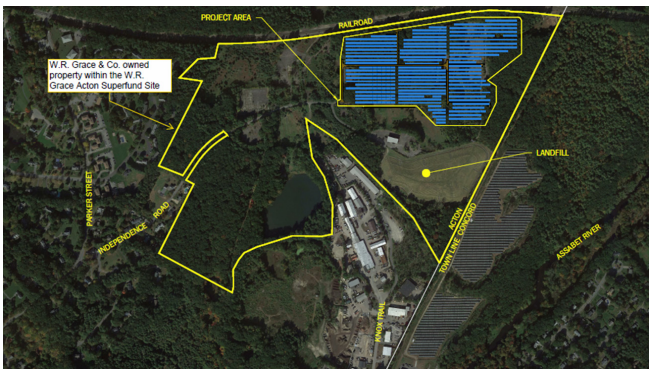

Figure 99. Aerial view of the solar array at the W.R. Grace & Co., Inc. (Acton Plant) site (Massachusetts).

The 260-acre W.R. Grace & Co., Inc. (Acton Plant) Superfund site is in the towns of Acton and Concord in Massachusetts. For over 100 years, different companies ran a chemical manufacturing facility on-site. W.R. Grace, the last site owner, ceased all operations in 1991. Facility operators created wastewater and solid industrial wastes and disposed of them in several unlined lagoons and an on-site landfill. These practices contaminated soils, groundwater, surface water and sediments. In 1978, investigations found contamination in two municipal wells in Acton. The EPA directed W.R. Grace to begin interim cleanup actions at the site.

The EPA added the site to the National Priorities List (NPL) in September 1983. Interim cleanup actions included groundwater extraction and treatment and removal of hazardous storage tanks. Final cleanup actions included landfill

and lagoon closure, excavation of soils and sludges, sediment dredging and removal, capping of the on-site landfill, more groundwater extraction and treatment, and restoration of wetlands. The EPA's Superfund Redevelopment Program and Region 1 assessed the site in 2010 as part of an effort to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. After the remedy was in place, the town of Concord took ownership of a 70-acre parcel in 2016. The first phase of Concord's three-phase reuse plan involved the construction of a 5.6-megawatt solar array. Construction finished in early 2017. This project added more green, competitively priced energy to the town's power supply portfolio. It supplies up to 4.5% of the town's power supply needs, enough to power 625 homes. The solar array reduces greenhouse gas emissions and offsets the town's peak demand for electricity by up to 10%. The second phase of Concord's reuse plan, the construction of a school bus depot at the site, finished in August 2017. Additional solar capacity is being planned for the area between the industrial landfill and the rail tracks on the WR Grace property. Construction is anticipated in 2024.

Wells G&H

The Wells G&H Superfund site includes 330 acres of land and contaminated groundwater in Woburn, Massachusetts. It includes commercial, industrial and residential areas. Past operations at the site include dry cleaning, solvent storage, truck terminals, drum disposal, food wrap equipment manufacturing, and plastics manufacturing. In 1979, the Massachusetts Department of Environmental Protection (MassDEP) found significant levels of hazardous chemicals in two municipal supply wells, known as wells G and H. MassDEP closed the wells. The EPA added the site to the Superfund program's National Priorities List (NPL) in 1983. Cleanup included treatment of contaminated soils, excavation and disposal of debris and mixed contaminated soil, and extraction and treatment of source-area groundwater, as well as removal of contaminated sediment and restoration. Cleanup is ongoing.

Figure 100. New development at the Wells G&H site (Massachusetts).

In 2000, the EPA's Superfund Redevelopment Program awarded the Woburn city government a pilot grant to complete a comprehensive land use plan for the site. Three of the site's responsible parties contributed additional funding for the effort. The land use plan identified reuse scenarios for three priority site areas: the Aberjona Auto Parts property, the city of Woburn property and the W.R. Grace property. The reuse scenario for the Aberjona Auto Parts property focused on an ice arena for local hockey leagues. Construction of the Holland Arena finished in 2008. The property owner also leases parts of the property to small businesses. The reuse scenario for the city of Woburn property identified public open space and passive recreation. The Aberjona Nature Trail was constructed along the Aberjona River and opened to the public in 2017. The reuse scenario for the W.R. Grace property focused on commercial uses and a hotel. The first restaurant opened there in 2016. Three years later, two more restaurants, a 110 Grill and Chick-Fil-A, and two hotels, a Homewood Suites and Hampton Inn, opened. A rooftop solar array started operating at the UniFirst commercial property on-site in 2021. At full capacity, it generates 310 kilowatts of energy.

Federal Facility Sites

Fort Devens

The 9,000-acre Fort Devens Superfund site, once a military base with extensive contamination, is now part of a large-scale redevelopment effort in central Massachusetts. Soil and groundwater contamination resulted from military activities at the site that started in 1917. In 1989, the EPA added the site to the National Priorities List (NPL). Of the 324 sites initially identified by the U.S. Army, 54 required further investigation. Most of these areas require no further action or have cleanup plans in place. Some cleanup activities and investigations are ongoing.

In 1994, the towns of Ayer, Harvard, Lancaster and Shirley, together with redevelopment authority MassDevelopment, developed the "Devens Reuse Plan". The Plan devoted more than a third of Devens' land area to open spaces and recreational areas. MassDevelopment has brought warehouses and distribution centers, manufacturing and industrial

space, and research and development facilities to the site. Several federal agencies, including the U.S. Department of Justice, the U.S. Department of Labor and the U.S. Department of Defense, have put almost 600 acres of the site back into beneficial use. The U.S. Fish and Wildlife Service used another 836 acres of the site to expand the Oxbow National Wildlife Refuge. The site also includes a Native American cultural center and residential properties, as well as the Shirley Meadows affordable apartments for seniors with supportive service for aging, which opened in 2020. While cleanup and investigations are ongoing, the successful partnership between the EPA, the U.S. Department of Defense, the U.S. Army, the Commonwealth of Massachusetts and MassDevelopment has contributed to increased employment opportunities as well as increased revenue for the community. In 2021, two major developments began construction, including a $500 million, 89-acre bio-manufacturing campus and a $300 million, 47-acre fusion energy research and manufacturing campus. Both campuses are open and expanding with new projects.

Figure 101. The Bill Ashe Visitor Facility at the Fort Devens site (Massachusetts).

Fort Devens-Sudbury Training Annex

The 2,750-acre Fort Devens-Sudbury Training Annex Superfund site is a former U.S. Army military installation and was delisted in 2001. It covers about 4 square miles and includes parts of the towns of Maynard, Stow, Hudson and Sudbury, Massachusetts. Established in 1942, the installation served as an ammunition depot, ordnance test station, troop training and research area, and laboratory disposal area. The EPA identified contamination from use of pesticides and other chemicals on parts of the site.


Figure 102. The Assabet River National Wildlife Refuge at the Fort Devens Sudbury Training Annex site (Massachusetts).

The EPA added the site to the National Priorities List (NPL) in 1990. The U.S. Army worked with the EPA to remove contaminated soil, cover an on-site landfill with a cap, remove underground storage tanks and monitor groundwater. In 2017, the Army started a preliminary assessment for per- and polyfluoroalkyl substances (PFAS). Based on the findings, the Army submitted a remedial investigation work plan for Areas of Contamination (AOC) A9 and P13 in fall 2023. AOC A7, a capped landfill, remains in long-term operation and maintenance, and continued land use controls limit future site use and restrict site access. Several entities own parts of the site.

In 2000, the U.S. Army transferred 2,230 acres of the site to the U.S. Fish and Wildlife Service which established the Assabet River National Wildlife Refuge on the land. In 2005, the Service finished walking trails in the refuge. In 2008, it finished restoring Russell Bridge. In 2010, a visitor center and other park amenities opened at the refuge. The U.S. Fish and Wildlife Service used green building techniques for the visitor center, which includes a geothermal heating system and solar panels. The refuge provides recreation opportunities, including hiking, canoeing, guided tours of the military bunkers on-site, hunting and fishing.

The U.S. Fish and Wildlife Service's plans for the refuge include educational demonstration areas, restoration of on-site bunkers, an urban education area and a rail-to-trail project for the abandoned railroad on the south side of the refuge. The refuge receives about 75,000 visitors annually. In 2002, the U.S. Army transferred 4 acres to the U.S. Air Force. It uses the area for a radar and weather station. In 2003, the U.S. Army transferred about 72 acres of the site to the Federal Emergency Management Agency. It uses the land for its operations and training missions. It has cleared 6 acres for use as a temporary antenna field.

Hanscom Field/Hanscom Air Force Base

The 1,120-acre Hanscom Field/Hanscom Air Force Base Superfund site is located in an industrial area in eastern Massachusetts. It is in the towns of Bedford, Concord, Lexington and Lincoln. In 1942, the commonwealth of

Massachusetts leased the Bedford airport to the War Department for use by the Army Air Forces. In February 1943, the airport was renamed Laurence G. Hanscom Field. Military flight operations at the site ended in 1973. In August 1974, the U.S. Air Force terminated its lease of the airfield portion of Hanscom Field, which reverted to state control, but retained the right to use the field. Military use of the site resulted in contamination of groundwater and subsurface soil with chlorinated solvents, jet fuel and other petroleum compounds. Investigations identified 22 possible sources, including former fire training, disposal, underground storage tank and other spill areas.

Figure 103. Aerial view of the Hanscom Field/Hanscom Air Force Base site (Massachusetts). Sources: Imagery ©2022 Google, Imagery ©2022 CNES/Airbus, MassGIS, Commonwealth of Massachusetts EOEA, Maxar Technologies, USDA/FPAC/GEO, Map data ©2022.

Under state oversight before the site's National Priorities List (NPL) listing in 1994, the Air Force completed interim remedial actions, including excavation of contaminated soil and underground storage tanks, and installation of a groundwater extraction and treatment system. The Air Force's cleanup plans, which are overseen by the EPA, are documented in four Records of Decision issued between 2000 and 2007. Cleanup includes continued operation of the groundwater treatment system, land use controls, and monitoring of groundwater and surface water. Some site investigations, including for per- and polyfluoroalkyl substances (PFAS), are ongoing. Today, the Massachusetts Port Authority operates L.G. Hanscom Field as a civilian airport. Hanscom AFB, an active U.S. Air Force installation, operates nearby.

Materials Technology Laboratory (USARMY)

The 48-acre Materials Technology Laboratory (USARMY) Superfund site, better known as the Arsenal, is in Watertown, Massachusetts. In 1816, the U.S. Army began operations at the site; 10,000 people worked there by the end of World War II. The Army used the area for a variety of military- and war-related activities, including weapons and ammunition manufacturing and storage. In the 1960s, the U.S. Army used the site for nuclear reactor and molecular and atomic structure research activities. Waste generated by the facility contaminated soil and groundwater. The EPA added the site to the National Priorities List (NPL) in 1994. Cleanup removed contamination and demolished an on-site nuclear reactor. From 1996 to 2005, the Watertown Arsenal Development Corporation (WADC) helped redevelop 30 acres of the site. Harvard University bought the area and built a mixed-use complex called Arsenal on the Charles, which incorporates the style and architecture of the original brick buildings in the area. The complex includes stores, restaurants, a child-care facility, a fitness center, corporate offices and other businesses. The Arsenal Center for the Arts, also in the complex, is an important cultural asset in the community; it has a theater, gallery space, artists' studios, and other resources and services.

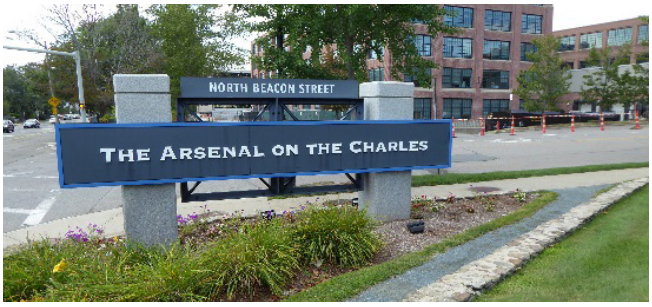

Figure 104. The mixed-use complex at the Materials Technology Laboratory (USARMY) site (Massachusetts).

The current owner, Alexandria Real Estate Equities, has transitioned many of the former Arsenal site's buildings from traditional office space to life-science based laboratories in the last few years. Many existing buildings have undergone renovations to allow for research and discovery, and to allow experts on every level to blend science and technology solutions to improve lives. Two new buildings with over 250,000 square feet combined are in the construction phase. The Commander's Mansion, a historic landmark, occupies a 7.2-acre area of the site; it provides space for meetings and formal functions. The popular Squibnocket Park is located on an 11-acre parcel along the Charles River; it provides biking and walking trails as well as access to the Watertown Yacht Club, a privately owned marina. The U.S. Army restored wetlands along the Charles River. The EPA deleted the site off the NPL in 2006; some cleanup activities are still ongoing at the Arsenal, as construction projects have found soils with chlorinated compounds.

Natick Laboratory Army Research, Development, and Engineering Center

Figure 105. The Natick Laboratory Army Research, Development, and Engineering Center site (Massachusetts).

The 78-acre site formerly known as the Natick Laboratory Army Research, Development, and Engineering Center now known as the U.S. Army Soldier Systems Center (SSC) is a Superfund site in Natick, Massachusetts. The site occupies a peninsula on the eastern shore of Lake Cochituate State Park and Recreation Area. The U.S. Army built the Natick Laboratory in 1954 and conducts research and development activities on-site. These activities contaminated soil, groundwater and surface water with hazardous chemicals. In 1989, personnel at the facility noticed a sheen on water running off the site during rainstorms. Construction workers also noticed a benzene-like odor in soil on-site. The U.S. Army conducted soil gas surveys and detected several volatile organic compounds. Soil, groundwater and surface waste sampling also showed contamination. The EPA added the site to the National Priorities List (NPL) in 1994. Ongoing cleanup activities include groundwater containment, treatment and monitoring. Former cleanup activities also included soil excavation and removal, and sediment removal. Treated groundwater is reused as non-drinkable water for irrigation and toilets. The SSC still operates a U.S. Army research and testing facility on-site. It includes buildings and open, uncovered areas including a softball field. The facility supports the research, development and management of food, clothing, shelters, airdrop systems and soldier support items. The facility currently employs about 1,000 people.

Otis Air National Guard Base/Camp Edwards

Figure 106. One of three 1.5-megawatt turbines used to offset electrical costs for powering multiple groundwater cleanup systems at the JBCC site (Massachusetts).

The 22,000-acre Otis Air National Guard Base/Camp Edwards Superfund site is located on western Cape Cod in Barnstable County, Massachusetts. Also known as Joint Base Cape Cod (JBCC) (formerly known as Massachusetts Military Reservation until July 13, 2013), the site lies about 60 miles south of Boston and is immediately southeast of the Cape Cod Canal. Since its establishment in 1935, JBCC's primary mission has been to provide training and housing to U.S. Air Force and U.S. Army units. Past chemical and fuel spills, fire training activities, and sewage treatment plant, landfill and drainage structure operations contaminated soil and groundwater. Investigations in 1983 and 1984 found volatile organic compounds (VOCs) in on-site and nearby monitoring wells, as well as in several hundred private wells. Other site contaminants include heavy metals and per- and polyfluoroalkyl substances (PFAS). The EPA added the site to the National Priorities List (NPL) in 1989. The EPA documented site cleanup plans in over 15 Records of Decision. Cleanup activities include extension of water supply lines to affected homes, installation of municipal water supply well treatment systems, treatment of 100,000 tons of soil, and construction and operation of many on-site and off-site groundwater treatment plants. Groundwater treatment systems operate on eight groundwater plumes.

The U.S. Air Force has completed cleanups at 25 source areas. Cleanup of four former plumes has been completed. The U.S. Air Force has taken actions to address immediate risks from PFAS in groundwater by providing bottled water, in-house drinking water treatment units, municipal water supply wellhead treatment and connection of homes to the public water supply. Investigations and feasibility studies of PFAS and former military munitions sites are ongoing, alongside long-term cleanup of contamination groundwater plumes and maintenance of land use controls. The Barnstable County Correctional Facility, a jail with capacity for about 580 inmates, opened on-site in 2004. The U.S. Air Force installed three 1.5-megawatt wind turbines – one in 2009 and two in 2011 – to offset electrical costs for

groundwater cleanup systems at the site. It estimates that the wind energy saves about $1.5 million a year in electricity costs. The EPA's plans enabled continued site operations during cleanup. Today, five organizations use the site: the Massachusetts Air National Guard (ANG) operates Camp Edwards, the ANG/Massachusetts ANG operates Otis ANG Base, the U.S. Air Force operates the Cape Cod Air Force Station, the U.S. Coast Guard operates Air Station Cape Cod and the U.S. Department of Veterans Affairs operates the Massachusetts National Cemetery. Ecological resources at the site include several ponds and wetland areas.

South Weymouth Naval Air Station

Figure 107. The Union Point development at the South Weymouth Naval Air Station site (Massachusetts). Photo used with permission of LSTAR Ventures.

The The South Weymouth Naval Air Station consists of 1,442 acres in the towns of Weymouth, Abington and Rockland, Massachusetts. Military operations at the site included aviation training, aircraft maintenance and refueling, personnel training, housing, and administrative support services. Waste disposal activities also took place at the site. Sampling confirmed on-site contamination in 1991. The EPA added the site to the National Priorities List (NPL) in 1994. The base closed under the Base Realignment and Closure Act (BRAC) and cleanup began in 1997. Cleanup activities included soil covers and removals, groundwater treatment and land use restrictions. The Navy, with EPA oversight, continues ongoing cleanups and investigations, including for per- and polyfluoroalkyl substances (PFAS). The local reuse authority, the U.S. Coast Guard, the Federal Aviation Administration, and the Towns of Rockland and Weymouth have received over 1,393 acres of the site. Redevelopment efforts are ongoing, with over 1,274 residences and a 25-acre athletic complex currently on-site. Current mixed-use zoning allows for up to 2 million square feet of commercial space, nearly 6,000 additional residences, and approximately 900 acres of open space. The site also includes ecological features such as rivers, wetlands and ponds.

Other Cleanup Sites

31 Water Street

Figure 108. Plaza and fountain at Heritage Park on the 31 Water Street site (Massachusetts).

The half-acre 31 Water Street site is located next to the Back and Powwow rivers in Amesbury, Massachusetts. Several industrial operations in the Lower Millyard contaminated site soils and surrounding surface waters. The city of Amesbury discovered the contamination during initial revitalization efforts for the historic Amesbury Wharf building area, where the site is located. The EPA's Superfund removal program committed $1.2 million to remove contaminated soil from the site and stabilize the riverbanks. The EPA dug up 1,400 tons of contaminated soil and disposed of it off site. The EPA also stabilized the riverbanks with 400 feet of sheet pile wall. The EPA completed cleanup actions in July 2015. The site, part of the community's Lower Millyard Project, is now home to Heritage Park. Funding from the commonwealth of Massachusetts and the EPA's Superfund removal program facilitated the site's cleanup and redevelopment. The park provides residents and visitors with a recreation resource next to the Powwow River. A bandstand and river walk will soon be added to the park. The Amesbury Riverwalk, a 1.3-mile walking and biking trail, runs next to the site. At a ceremony marking the completion of the Lower Millyard Project, Amesbury's mayor issued a proclamation thanking the EPA for its assistance.

Bendix Property (Former)

The 17.5-acre Former Bendix Property site is located in Greenfield, Massachusetts. A metalworking facility that made drill bits, taps and dies was located on site. A 94,000-square-foot, single-story building sat vacant for about 10 years

and deteriorated. Openings in the roof allowed in rain and snow. The rain and snow damaged the heat and water piping, which was wrapped with asbestos-containing insulation wrap. Chromium-containing powder was present in and around the building. The EPA removed contaminated materials and devices as well as chromium- containing powder, capacitors and contaminated water, and transported them to approved facilities. A metal tank and bin production company from Holyoke, Massachusetts, is interested in buying the site property to enlarge its operations.

Figure 109. View of the former Bendix Property site (Massachusetts).

Flynntan Tannery

The Flynntan Tannery site is located in Salem, Massachusetts. A leather tannery operated on site. The EPA worked to clean up the site after the tannery's closure. A real estate developer bought the site property and has begun redeveloping it with housing units and commercial space.

Intervale Street

The Intervale site is located in Quincy, Massachusetts. A metals recycling business operated on site. Sampling in 2012 detected polychlorinated biphenyls, lead, arsenic and chromium in site soils. The EPA removed about 4,400 tons of contaminated soil in 2014 and 2015. The city of Quincy will offer the site property for sale after completion of the EPA's cleanup activities.

Figure 110. Cleanup activities at the Intervale site (Massachusetts).

King Philip Mills

The King Philip Mills site is located in Fall River, Massachusetts. A cotton mill was built on site between 1871 and 1892. The EPA identified drums, containers and cylinders at the site. In November 2014, the EPA completed a time-critical removal action to remove contaminated drums and containers as well as asbestos-containing material. The EPA completed a second time-critical removal action in March 2017 to remove polychlorinated biphenyl oils from contaminated materials. In June 2017, a developer bought the site property at auction. The developer plans to create about 90 upscale residential units and open space with public access along Cook Pond.

Lawrence Metals (Former)

The Former Lawrence Metals site is located in Chelsea, Massachusetts. From the late nineteenth century until 1974, when a fire destroyed the building, owner operators used the site property for textile production, barrel cleaning and painting. From 1979 to 1986, operators used the property for warehouse space. In 1986, the Lawrence Metals Forming Company began operating on site. Its operations resulted in the contamination of soil and site materials. In 1999, the city of Chelsea acquired the site property under an Urban Renewal Plan. The city demolished the site building in 2000. The EPA, the city and state agencies coordinated cleanup, including the excavation of contaminated soil. The project was particularly challenging because of its proximity to a school and a city swimming pool. An upscale, extended-stay hotel is now located on site.

Figure 111. The hotel on the Former Lawrence Metals site (Massachusetts).

Lewis Chemical

The Lewis Chemical site covers 0.9 acres and consists of three properties in Suffolk County, Massachusetts. The city of Boston owns two of the properties. The commonwealth of Massachusetts owns the third. The site abuts the Neponset River to the south and the Fairmount Massachusetts Bay Transportation Authority (MBTA) Train Station to the north. Several businesses occupied the city-owned properties in the late 1800s and early 1900s. From 1940 until the early 1960s, Leather Manufacturing Co., Inc operated on-site. Lewis Chemical Corp. operated on-site from 1963 to 1983, collecting, transporting, storing and processing hazardous wastes. The city demolished the Lewis Chemical industrial facility in 2013.

Figure 112. Cleanup at the Lewis Chemical site (Massachusetts).

In 2022, the city requested EPA's assistance to address the inorganic and organic contaminants found on site. EPA assessed the site and found that there was potential for further release of contaminants. EPA recommended a time-critical removal action in the 2022 Site Investigation Closure Memorandum. The EPA began a removal action with the goal to eliminate the direct contact threat and remove the source contamination by removing and disposing of contaminated soil. Polychlorinated biphenyls (PCBs) were the primary contaminant of concern (COC). Cleanup included excavation and off-site disposal of over 5,700 tons of contaminated soil and site restoration. On October 4, 2024, EPA Region 1 staff, U.S. Senator Edward J. Markey, Boston Mayor Michelle Wu, Massachusetts Department of Environmental Protection Commissioner Bonnie Heiple and members of community organizations gathered at Hyde Park along the Neponset River to celebrate the completion of the cleanup at the Lewis Chemical site.

Mansell Field

The 1.5-acre Mansell Field site is in Salem, Massachusetts. In 2018, the city of Salem found high levels of arsenic, lead and chromium in soil at the site. The contamination likely came from tannery operations. In 2019 and 2020, the EPA removed contaminated soil from three residential properties. In 2019, the city contacted the EPA to help with removing contaminated soil from Mansell Field, a public park that closed in 2018. The EPA and the city agreed to each lead part of the cleanup. Following the EPA's cleanup, the city is now cleaning up remaining soil and restoring Mansell Field as a public park. Park restoration plans include a new basketball court and trees and a basin to manage stormwater.

Figure 113. View of Mansell Field, facing west (Massachusetts). Image used with permission of Tighe & Bond.

Parsons Paper

The 4.6-acre Parsons Paper site is located in Holyoke, Massachusetts. From 1896 to 2004, operators made writing and stationary paper as well as artist paper and archival paper for the art and framing industries on site. In 2008, a fire destroyed about 50% of the mill. The fire also damaged remaining parts of the interconnected building complex. In 2009, the EPA's sampling identified asbestos in the burned areas. Sources of asbestos includes asphalt shingles, window glazing and caulking, tank and pipe insulation, transite siding, cements and mastics, and floor tiles. In 2009 and 2010, the EPA removed hazardous materials and asbestos that posed a threat to public health. In 2016, building demolition began for the expansion of Holyoke manufacturer Aegis Energy Services on site.

Figure 114. View of the Parsons Paper Mill site (Massachusetts) prior to demolition.

Peabody Street Asbestos

The Peabody Street Asbestos site is located in Salem, Massachusetts. The city of Salem identified asbestos during construction of a park in the downtown area. The EPA excavated contaminated soil because of the urban setting and because the city and state did not have funds for the excavation. The EPA recovered most expenses from the polluter. The city resumed construction of the park after the EPA completed the excavation. Completed in 2010, the Peabody Street Park/Harborwalk serves as a gateway to the city of Salem's harbor. The park includes a playground, a canopy area, and seating for outdoor entertainment as well as game tables, benches and landscaping.

Figure 115. The Peabody Street Park/Harborwalk at the Peabody Street Asbestos site (Massachusetts).

Universtal Steel & Trading Corporation

The 1.2-acre Former Universal Steel site is located in Salem, Massachusetts. From 1936 to 1998, metal recycling and reclamation activities took place on the site property. Activities included processing scrap metals and demolition debris, dismantling and processing transformers, and stockpiling automotive batteries. These activities contaminated site soil. The EPA, the city of Salem, MassDevelopment and the Massachusetts Department of Environmental Protection worked together to clean up the site. Cleanup activities included excavation and off-site disposal of contaminated soil and debris, collection and disposal of lubrication oil, asbestos removal, and building demolition. FW Webb, a plumbing supply company, is buying the site property. FW Webb plans to use the property for parking, loading and storage as part of an 8,000-square-foot addition to an existing facility next door.

Figure 116. Cleanup activities at the Former Universal Steel & Trading site (Massachusetts).

NEW HAMPSHIRE REUSE SUMMARY PROFILES

National Priorities List Sites

Auburn Road Landfill

Figure 117. Model airplane flying field at the Auburn Road Landfill site (New Hampshire).

The 200-acre Auburn Road Landfill Superfund site is in Londonderry, New Hampshire. It includes three disposal areas that cover about 12 acres. A disposal area for chemical wastes, tires, demolition debris and solid waste was on-site from the 1960s to 1980. The state of New Hampshire found contamination in soil, groundwater and surface water and ordered the landfill's closure in 1980. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup activities included capping and fencing of contaminated areas as well as the extension of the public water supply to nearby homes. Groundwater sampling is ongoing. Parts of the site are now in residential reuse. A portion of the Whispering Pines Mobile Home Park lies on the northern part of the site. The town of Londonderry created about 7 acres of wetlands partially on-site to reduce the amount of groundwater keeping contact with the capped waste. In May 2021, the town requested EPA approval to build a radio transmission tower on-site to improve communication among the town's fire, police and public works departments. The EPA, in consultation with New Hampshire Department of Environmental Services, approved the location of the project. Local discussions for project next steps are ongoing.

Beede Waste Oil

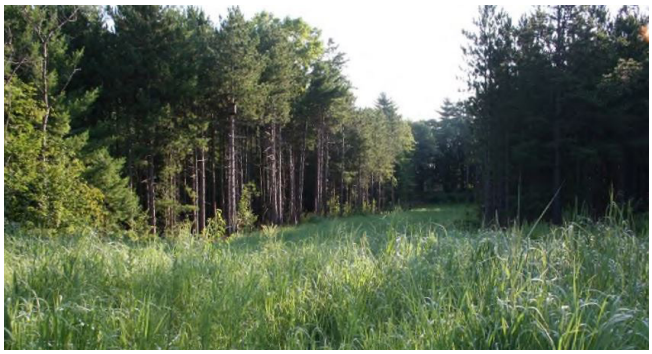

Figure 118. A tree removal for construction of the on-site treatment plant opened an area for pollinator and other wildlife habitat at the Beede Waste Oil site (New Hampshire).

The Beede Waste Oil Superfund site is in Plaistow, New Hampshire. The 40-acre area comprises two parcels of land. Commercial waste oil reclamation and asphalt batching operations were located on what is referred to as Parcel 1. Parcel 2 was primarily undeveloped land used for sand and gravel operations. In fall 1983, sampling found chemical contamination in a residential well near the site. About 100 aboveground storage tanks, a 140,000-gallon below-ground tank and 800 drums were on-site. The EPA added the site to the National Priorities List (NPL) in 1996. The EPA led a removal action in 2005 to reduce the 4-acre mobile oil plume under the former lagoon, tank storage and landfill area of the site that was migrating into nearby Kelley Brook. On-site soil is contaminated with polychlorinated biphenyls (PCBs), petroleum hydrocarbons, volatile organic compounds (VOCs) and lead. Phases 1 and 2 of thermal operations successfully treated deeper soils using steam injection to remove VOCs and residual oils for treatment. VOCs and 1,4-dioxane and metals are found in groundwater on-site as well as in nearby residential supply wells. Sampling also found per- and polyfluoroalkyl substances (PFAS) in the groundwater. In 2002, the town received an EPA Superfund Redevelopment Program pilot grant to evaluate future land use options for the site. It identified senior housing, recreation and a community center as community priorities.

The EPA selected the site's long-term remedy in 2004. It included excavation and off-site disposal of soils and the on-site landfill within the top 10 feet and treatment of soils at depth via thermal treatment to reduce VOC concentrations and leaching into groundwater, the removal of mobile light non-aqueous phase liquids (LNAPLs) and restoration of excavated

areas. It also included pumping and treating contaminated groundwater on-site, and long-term monitoring of surface water, sediment and groundwater. Residual mobile oils remain on-site. Actions to address this material are ongoing meanwhile belt skimmers continue to remove residual oil from the subsurface.

The site is not in use. Landowners and the town continue to assess reuse opportunities compatible with the residential cleanup, such as a park and as wildlife habitat. Currently there is a small, temporary habitat area maintained where tree removal took place for the site's groundwater treatment plant which provides habitat for local pollinators and wildlife. The final phase of the cleanup for Site soils is under design and updates to lead and PFAS cleanup standards will be considered as will the reuse and redevelopment.

Fletcher's Paint Works & Storage

Figure 119. Recreational trails and open space at Keyes Memorial Park on the Fletcher's Paint Works & Storage site (New Hampshire).

The Fletcher's Paint Works & Storage Superfund site is in Milford, New Hampshire. A paint manufacturing plant and retail outlet operated on-site from 1949 to 1991. In the early 1980s the New Hampshire Department of Environmental Services (NHDES) found leaking and open drums on-site and site-related contamination in the nearby Keyes Municipal Water Supply Well. The EPA added the 2-acre area to the National Priorities List (NPL) in 1989. Cleanup efforts included building demolition, drum and underground storage tank removal, excavation, removal, and replacement of PCB-contaminated soil and Souhegan River sediments. After the completion of soil removal and replacement with clean fill, parts of the site were redeveloped with an engineered soil and vegetative cover allowing for a public park along the Souhegan River and an asphalt cover to provide additional parking for the existing Keyes Memorial Park. The public park along the restored Souhegan riverbank now includes a Korean War Memorial, built in 1996, and an open-air public performance stage built from repurposed stone in 2019. Institutional controls prohibiting excavation and groundwater use remain in place to prevent exposure to any remaining contamination. Groundwater monitoring is ongoing.

Kearsarge Metallurgical Corp. (KMC)

Figure 120. The Kearsarge Metallurgical Corp. site's former groundwater treatment building is now home to an automobile workshop (New Hampshire).

The 9-acre Kearsarge Metallurgical Corp. (KMC) Superfund site is in Conway, New Hampshire, on the north shore of Pequawket Pond. From the mid-1960s through the early 1980s, KMC made stainless steel castings on-site. The manufacturing process created waste casting sands, wax and solvents. KMC dumped these wastes in a wooded wetland east of the facility. When operations ceased, the New Hampshire Department of Environmental Services (NHDES) and the EPA found a waste pile, soils and groundwater contaminated with solvents. The EPA added the site to the National Priorities List (NPL) in 1984. Cleanup began in 1992. It included removal of 13,620 tons of contaminated soils and construction of a groundwater treatment plant. During 12 years of operation, the plant treated over 250 million gallons of water and removed more than 225 pounds of contaminants. In 2013, the town sold the site property at auction to help invigorate the surrounding industrial park. The EPA and NHDES addressed remaining groundwater contamination with a soil treatment remedy in 2015. A towing company, a heating business, and a farm equipment and diesel truck repair facility are currently located in the former groundwater treatment plant and part of the original KMC building. The site's ecological resources include forested wetlands that provide habitat along the northern bank of Pequawket Pond.

Keefe Environmental Services (KES)

Figure 121. Wetlands at the Keefe Environmental Services site (New Hampshire).

The 7-acre Keefe Environmental Services (KES) Superfund site is in Rockingham County, New Hampshire. KES ran a chemical waste storage facility on-site from 1978 to 1981, when it filed for bankruptcy and abandoned its facility. Solvents, acids, caustics, heavy metals, paint sludges, waste oils and organic chemicals were disposed of at the site. Facility operations led to soil and groundwater contamination, on-site and off-site. The EPA added the site to the National Priorities List (NPL) in 1981. Short-term cleanup included drawing down a waste lagoon to prevent it from overflowing, removing the contents of the lagoon and nearby contaminated soil, and removing drums and aboveground tanks. Long-term cleanup included removing and treating contaminated groundwater and wetlands restoration. The EPA transferred responsibility for remaining cleanup to the state of New Hampshire in 2005 and updated the cleanup remedy from groundwater treatment to monitored natural attenuation. In 2021, the state removed liquid and solid waste for off-site disposal. Monitoring of groundwater and surface water is ongoing. Institutional controls in the form of deed notices are in place to manage the use of groundwater to prevent potential exposure to contamination. The site is in a state-protected watershed with wetland areas that drain to the Piscassic River and Fresh River. A solar array was considered for the site. The town of Epping owns the site property and uses the former treatment facility for maintenance equipment storage.

Ottati & Goss/Kingston Steel Drum

Figure 122. View of the Ottati & Goss/Kingston Steel Drum site (New Hampshire).

The 35-acre Ottati & Goss/Kingston Steel Drum Superfund site is in Kingston, New Hampshire. The site includes a 6-acre parcel, known as the Great Lakes Corporation area, and a 1-acre parcel, known as the Ottati & Goss area. From the late 1950s through 1980, various owners reconditioned steel drums at the Great Lakes Corporation area. Discharge of industrial wastes into lagoons, runoff and seepage from this area into nearby surface water killed fish and aquatic vegetation. From 1978 through 1979, site operators processed waste at the Ottati & Goss area. Activities contaminated soil, groundwater and surface water. After operations ended in 1979, the New Hampshire Bureau of Solid Waste Management (the Bureau) prohibited site operators from restarting operations. The Bureau ordered the removal of thousands of deteriorating and leaking drums from the site. The EPA placed the site on the National Priorities List (NPL) in 1983. Cleanup activities included the removal of leaking drums and thousands of tons of soil and debris, excavation and on-site treatment of soil and sediment using low temperature thermal desorption, treatment of site groundwater and soil using in-place chemical oxidation, and wetland restoration for ecological reuse. Wetland restoration included placing over 20,000 cubic yards of manufactured wetland material and planting more than 1,000 trees and shrubs. A Town Ordinance and Groundwater Management Zone is in place to prevent use of groundwater and disturbance to the wetlands while an Activity Use Restriction (AUR) is in place to restrict activities which would impact soils below 6 feet.

Savage Municipal Water Supply

The Savage Municipal Water Supply Superfund site is in Milford, New Hampshire. From the 1940s to the 1980s, four industrial facilities southwest of a municipal well released untreated process waters and wastes into the groundwater and surface water. In February 1983, during routine sampling, the New Hampshire Water Supply and Pollution Control Commission found groundwater contamination above drinking water standards in the municipal well. It was immediately closed. The EPA added the site to the National Priorities List (NPL) in 1984. The EPA, the New Hampshire Department of Environmental Services (NHDES) and the potentially responsible parties worked together to clean up the site.

Cleanup included pumping and treating groundwater on-site, installing a slurry wall to isolate groundwater contamination, and extracting harmful vapors from soil. It also included institutional controls to prohibit the use of contaminated groundwater and to protect occupants of new buildings from vapor intrusion in some areas of the Site. Groundwater treatment and monitoring is ongoing. Land uses in the area include residential, agricultural, industrial and commercial areas. Uses on-site include agricultural, commercial, recreational and ecological areas. Examples of these include a baseball park and the Souhegan River Trail.

Figure 123. Recreational facilities include a baseball diamond and open space at the Savage Municipal Water Supply site (New Hampshire).

Somersworth Sanitary Landfill

The 26-acre Somersworth Sanitary Landfill Superfund Site is in Somersworth, New Hampshire. The City of Somersworth operated a waste disposal area at the Site from the mid-1930s until 1981. The City burned residential, commercial and industrial wastes at the Site. In 1958, the City stopped burning waste and converted the area into a landfill. Improper disposal practices contaminated the soil, sediment and groundwater at the Site. The EPA added the Site to the National Priorities List (NPL) in 1983. Cleanup included groundwater containment and treatment, a landfill cover and gas venting, as well as land and groundwater use restrictions. Prior to the Site's listing on the NPL, the City covered a 10-acre portion of the Site with clean fill for use as a recreation area. This area was available for passive recreation, such as walking, until the City closed it in 2011. The rest of the Site is undeveloped as it contains the former landfill and wetlands downgradient from it. In 2013, the EPA presented the City with an initial assessment of renewable energy opportunities for the Site. On August 20, 2021, land use restrictions were recorded on the property that allowed for solar development.

Figure 124. Stakeholders gathering for the groundbreaking of the solar development at the Somersworth Sanitary Landfill site (New Hampshire).

In early 2022, Ameresco, Inc. contacted the EPA regarding the compatibility of a solar co-generation facility within the Site. After several discussions, they requested that the EPA provide them with a CERCLA comfort letter. In August 2022, the EPA issued a comfort letter that described the Site cleanup and use restrictions. In early 2023, the City contracted Ameresco to re-develop the 10-acre former recreation area of the site into a solar array facility that will be leased from the City. Ameresco visited the Site and held preliminary discussions with the EPA and the New Hampshire Department of Environmental Services (NHDES), which culminated in the submittal of a Reuse Report to both agencies and the submittal of an application for an Alteration of Terrain (AOT) permit to NHDES in September 2023. The plan includes the use of concrete-ballasted foundations designed to maintain the integrity of the landfill cover.

The EPA and NHDES reviewed and discussed the submittals with Ameresco, the City and the City's consultant (Geosyntec Inc.). These discussions resulted in a revised version of both documents, which were submitted in March 2024. The EPA and NHDES reviewed and discussed the revised version of the Reuse Report and approved it on April 1, 2024. NHDES, after consultation with the EPA, approved the AOT permit on April 24, 2024.

On August 12, 2024, the EPA and stakeholders held a groundbreaking ceremony for the solar farm, which will be New Hampshire's first solar project to be placed on a Superfund site. The installation is expected to generate over 67 million kilowatt-hours of energy over 20 years, offsetting 2,461 metric tons of carbon dioxide per year, or the equivalent to the annual electricity use of 486 homes. The energy produced will be sold to the City under the State's group net metering program, with the City receiving a lease payment and a payment in lieu of taxes. Construction and maintenance of the project will use local labor and trade workers. Ameresco expects to begin work on the project in September 2024 and finish it by the end of the same year. Local officials see this initiative as an important step toward advancing the City's sustainability efforts to align with similar efforts in the region and State.

South Municipal Water Supply Well

Figure 125. The groundwater treatment facility at the South Municipal Water Supply Well site (New Hampshire).

The 250-acre South Municipal Water Supply Well Superfund site is in the Contoocook River Valley in Peterborough, New Hampshire. Installed in 1952, the South Municipal Water Supply Well provided water to Peterborough for nearly 30 years. In 1982, testing by the state of New Hampshire found contaminants in the groundwater, which resulted in the closing of the well. Investigations found that the nearby New Hampshire Ball Bearings facility was the source of the contamination. The facility has made precision ball bearings since 1956. Activities at the facility contaminated soil, groundwater, and wetland sediments. The EPA added the site to the National Priorities List (NPL) in 1984. Initial cleanup activities included groundwater and soil treatment, off-site disposal of contaminated sediments, and wetland restoration. Later, the EPA determined that restoration of some of the contaminated groundwater at the site was not possible. The EPA updated the remedy to contain the groundwater instead of treating it. In 2008, the EPA found that the remedy was not functioning as intended. The EPA updated the cleanup plan in 2010 to change source control and migration management activities. To manage migration of contaminated groundwater, New Hampshire Ball Bearings installed a permeable reactive barrier (a below-ground wall) in 2014. In-place thermal treatment of an on-site source area finished in 2016. The permeable reactive barrier is not functioning as intended and a replacement permeable reactive barrier is currently being constructed. Current site uses include the 24-acre New Hampshire Ball Bearings manufacturing plant, commercial and residential properties, part of U.S. Route 202 and wetlands.

Tinkham Garage

Figure 126. Commercial reuse at the Tinkham Garage site (New Hampshire).

The 375-acre Tinkham Garage Superfund site is in Londonderry, New Hampshire. In 1978, residents downgradient of the site complained of foam and odors in a small unnamed stream that crosses the site and goes through the nearby neighborhood. Investigators found impacted public and private water supply wells along the northwest part of the site as well as soil and groundwater contamination across the site. In 1983, the EPA added the site to the National Priorities List (NPL). Cleanup activities included groundwater and soil treatment, extension of the public water line to the condominium complex and nearby houses and groundwater monitoring. The remedy changed to monitored natural attenuation in 2003 and long-term monitoring started. Connection to a water line was required in 2016 to address contamination found in water supply wells in a neighborhood east of the garage. An ongoing investigation has found emerging contaminants in groundwater and the migration of site contaminants into downgradient neighborhoods where residents rely on groundwater as a drinking water source; selection of an alternative water source is being considered. Groundwater use is monitored under a groundwater management permit issued by the New Hampshire Department of Environmental Services. A revised groundwater remedy is expected at the completion of the investigation. Today, a shopping complex with a Home Depot, Staples and Dunkin' Donuts occupies the northeast area of the site. The Woodland Village Condominium complex and several single-family homes remain on the north/northwestern part of the site. The Nevins Retirement Cooperative Association completed construction of over 125 senior housing single-family homes on the central part of the site. Site redevelopment has increased property values in Londonderry. Increased economic activity at the site has also encouraged local infrastructure improvements.

Town Garage/Radio Beacon

The Town Garage/Radio Beacon Superfund site is in Londonderry, New Hampshire. The U.S. Department of Defense owned part of the site from the early 1940s until 1968 and operated a radio beacon there during World War II. Afterwards, the area hosted residential wells and one commercial well. A 1984 state inspection found groundwater contamination in many of the wells. In the late 1980s, six homes with impacted wells connected to the local public water supply. As a precaution, several other homes have since connected to the public water supply. The EPA added the site to the National Priorities List (NPL) in 1989. Cleanup activities included annual monitoring of natural processes to clean up groundwater and placing restrictions to prevent groundwater use for household purposes. The success of the EPA's cleanup plan allowed for site reuse. Today, the site includes two residential developments, a garage operated by the Londonderry Department of Public Works, and a wetland area. The Holton Circle development includes about 25 homes. The Saddlebrook development includes 20 new homes. In 2014, the EPA deleted the site from the NPL.

Figure 127. Aerial view of the Town Garage/Radio Beacon site (Massachusetts). Sources: Imagery ©2022 Google, Imagery ©2022 MassGIS, Commonwealth of Massachusetts EOEA, Maxar Technologies, USDA/FPAC/GEO, Map data ©2022.

Troy Mills Landfill

The Troy Mills Landfill Superfund Site is part of a larger 270-acre parcel in Troy, New Hampshire. From 1967 until 1978, Troy Mills Inc. used the property to dispose of solid waste and hazardous materials generated by its manufacturing plant. In 1978, the state of New Hampshire ordered the company to stop these disposal practices. During the 1980s and 1990s, environmental investigations confirmed site soil, groundwater, surface water and sediment contamination. Troy Mills Inc. filed for bankruptcy in 2001. The EPA placed the site on the National Priorities List (NPL) in 2003. Cleanup actions included the removal of 7,692 drums containing flammable liquid waste, waste sludge, and contaminated soil. The cleanup also installed a system to collect hazardous materials from groundwater and placing a deed restriction on part of the property to prevent groundwater uses until groundwater cleanup levels were achieved. After removing the drums and associated contaminated soil, the EPA backfilled excavated areas and capped them. In 2005, the EPA supported community efforts to identify reuse options for the site. The community expressed interest in a recreation area. Most recently, the Appalachian Mountain Club has expressed interest in re-routing part of the adjacent Monadnock Recreational Rail Trail system through a portion of the 270-acre parcel. Possible future recreation opportunities at the site include hiking, horseback riding, mountain biking and cross-country skiing. Reuse of a portion of the Site, and an adjacent solid waste landfill managed by the New Hampshire Department of Environmental Services (NHDES), as a potential solar co-generation facility is being explored by the EPA and NHDES, working with an EPA reuse contractor.

Figure 128. Plans are in development to reuse open space areas for recreational uses at the Troy Mills Landfill site (New Hampshire).

Federal Facility Site

Pease Air Force Base

The 4,000-acre former Pease Air Force Base is in Rockingham County, New Hampshire. From the 1950s until 1991, the U.S. Air Force (Air Force) used the facility to maintain military aircraft. Aircraft maintenance operations contaminated soil and groundwater with solvents and fuel. The EPA added the site to the National Priorities List (NPL) in 1990. In 1992, the Air Force transferred 1,702 acres of the site to the local government for use as a public airport. The Air Force kept 229 acres for the New Hampshire Air National Guard. The New Hampshire Department of Transportation leased 20 acres for a highway expansion project.

Figure 129. Entrance to the airport at the Pease Air Force Base site (New Hampshire).

The Air Force also transferred 1,054 acres to the U.S. Fish and Wildlife Service for creation of the Great Bay National Wildlife Refuge. The refuge is a designated National Estuarine Research Reserve that supports ecological reuse, recreation, scientific study, and a community wildlife garden. In 1997, the Air Force transferred 1,300 more acres to the U.S. Fish and Wildlife Service. In 2000, the Pease Development Authority completed the Pease International Tradeport. In 2005, the Air Force transferred the remaining 268 acres of the site to the Pease Development Authority. Redevelopment of this area is ongoing. In 2015, the EPA issued an Administrative Order to the Air Force under the Safe Drinking Water Act requiring the design and construction of two treatment systems to address groundwater contamination that impacted and threatened public and private well drinking water supplies while also expediting the investigation and cleanup of the emerging contaminants perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) in the aquifer. The Air Force operates two treatment systems for contaminated groundwater and continues to conduct investigations on-site. Both groundwater treatment systems are operational and removing per- and polyfluoroalkyl substances (PFAS) from extracted groundwater. The Air Force also financed a new drinking water treatment facility. The facility was designed and constructed by the city of Portsmouth to treat PFAS-contaminated drinking water from the three Pease Tradeport supply wells. In early 2021, the Air Force began the remedial investigation under Superfund to determine the full nature and extent of these emerging contaminants in the Pease environment. Results of the remedial investigation will be used to assess potential remedial options that are required to address any unacceptable risks posed to human health and the environment. The assessment of remedial options will be detailed in a future feasibility study. The Pease International Tradeport is home to over 200 commercial and industrial businesses, education facilities and government offices. The site also supports Portsmouth International Airport, the New Hampshire Air National Guard and a golf course.

Other Cleanup Site

Synergy (Former)

The Former Synergy Site is located in Claremont, New Hampshire. From the turn of the century until the mid-1940s, a manufactured gas plant operated on site. Operations contaminated soil with coal tar, a common contaminant of that process. Between 2010 and 2012, investigations identified waste perched on bedrock that was leaching into the Sugar River. Cleanup activities included removing structures and soil, stabilization, and capping. Because of the historical importance of the gas plant to the town's textile history and the EPA's obligations under the Historical Preservation Act, the EPA coordinated with the State Historic Preservation Office during cleanup activities. A brick-and-concrete structure with informative plaques now memorializes the site's history. The site is located near a visitor's center and is part of the community's historic downtown area. The site is currently a picturesque open space on the banks of the Sugar River. Looking forward, the town will consider reuse options for the property.

Figure 130. View across the Sugar River of the Former Synergy site (New Hampshire).

RHODE ISLAND REUSE SUMMARY PROFILES

National Priorities List Sites

Central Landfill

Figure 131. Rhode Island Resource Recovery Corporation at the Central Landfill site (Rhode Island).

The Central Landfill Superfund site is a 154-acre former landfill in Johnston, Rhode Island. During the 1970s, operators disposed of industrial liquid waste in the landfill's hazardous material disposal area. In 1982, the state ordered the site owner to close this area. The EPA placed the site on the National Priorities List (NPL) in 1986. Cleanup activities included construction of a multi-layer cap, containment and treatment of groundwater, deed restrictions on groundwater use and land use, and evaluation of the site's landfill gas collection system. Today, the site remains in continued use. Central Landfill, which is owned and operated by the Rhode Island Resource Recovery Corporation (RIRRC), is on-site. It receives over 90% of Rhode Island's municipal solid waste. RIRRC leads tours of the landfill and recycling center for community groups and local schools. The capped part of the landfill also includes a pollinator garden. Broadrock Renewables, LLC also owns and operates a facility on-site. It turns gas collected from the landfill into electricity. The company expanded the energy-generating facility in stages. The facility includes 15 engine generator sets that produce up to 20 megawatts of electricity.

Centredale Manor Restoration Project

Figure 132. View of the Centredale Manor Restoration Project site (Rhode Island).

The Centredale Manor Restoration Project Superfund site includes a 9-acre property in North Providence, Rhode Island, and downstream areas. A chemical company and a drum reconditioning facility were on-site at different times beginning in the early 1940s. Operations ended in 1972 when a fire destroyed most of the facility. Disposal practices included burying waste or releasing chemicals directly onto the ground or into the river. These practices resulted in widespread contamination on-site and downstream. Residential development followed – Brook Village Apartments in 1977 and Centredale Manor Apartments in 1983. EPA investigations found contamination in soil, sediment, groundwater, surface water and animals on site. The EPA added the site to the National Priorities List (NPL) in 2000. The EPA's early actions included capping and fencing the site, as well as removing some contaminated soil from low-lying residential properties and restoring the Allendale Dam. In 2018, the site's potentially responsible parties began the site's long-term cleanup with oversight from the EPA and the Rhode Island Department of Environmental Management. Since then, the site's potentially responsible parties completed a hazardous waste cap in the source area on the peninsula, repaired a sluice gate on the Lyman Mill Dam to make it operational, and developed cleanup design plans for other areas of the site. In 2019, 2020 and 2024, the EPA's Superfund Redevelopment Program supported regional seed projects at the site to help facilitate reuse discussions among the EPA and local stakeholders and plan for future uses at the site. Today, the Brook Village and Centredale Manor apartment complexes remain on-site. The EPA's cleanup approach has been compatible with the continued residential use at the site.

Davis (GSR) Landfill

The 58-acre Davis (GSR) Landfill Superfund site includes a 21-acre inactive landfill in the towns of Glocester and Smithfield, Rhode Island. The landfill first received municipal wastes in 1974. In 1978, the public expressed concern about the landfill's effect on the local groundwater drinking supply. The state cited several violations and later took legal action. The landfill closed in 1982. It was never properly capped or stabilized. The state found contamination in several on-site and nearby wells in the early 1980s. The EPA added the site to the National Priorities List (NPL) in 1986. An EPA investigation found that while the landfill was a source of contamination, the spread of the contamination was not extensive and posed little risk to human health. Residential well tests starting in the 1980s confirmed no site-related contamination. The EPA and the state agreed to continue to monitor the site for potential future risks and that no further cleanup action was needed. The EPA took the site off the NPL in 1999. Five rounds of residential well tests since then have found no contamination. The site's ecological resources include a forested area and wetlands.

Peterson/Puritan, Inc.

The Peterson/Puritan, Inc. Superfund site spans over 500 acres in Providence County, Rhode Island. In 1959, a plant at the north end of the site began packaging aerosol consumer products. A rail car accident and tank spill on the property in 1974 released 6,000 gallons of solvent. In 1979, the Rhode Island Department of Health found contamination in groundwater affecting nearby public well fields. Immediate measures were taken to provide an alternative water supply to local communities. The EPA found that the Peterson/Puritan, Inc. facility was the source of the groundwater contamination. The EPA added the site to the National Priorities List (NPL) in 1983. In 1990, the EPA divided the site into two cleanup areas, known as operable unit 1 (OU1) and OU2. The cleanup design for OU2, which includes wetlands and wildlife habitat, began in 2016. For OU1, systems are in place to clean up contaminated groundwater and soil.

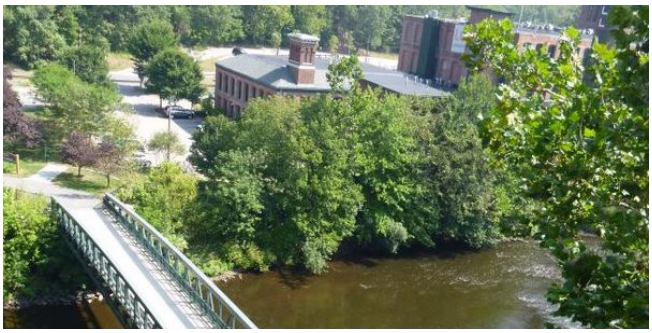

Figure 133. Blackstone River Bikeway river crossing at the Peterson/Puritan, Inc. site (Rhode Island).

Cooperation among EPA, the Rhode Island Department of Environmental Management and the community enabled on-site businesses to remain open during cleanup. Megawatt Energy Solutions installed over 2,000 solar panels on the roof of a warehouse building on-site in 2014. The solar array produces about 650,000 kilowatts of electricity per year. The warehouse owner also installed a similar system on a second building at the site. The state of Rhode Island and the municipality also completed redevelopment projects on-site, including a town dog pound. Other projects in the area include a riverside park and a bike path along the Blackstone River and Canal. The Blackstone River remains an important natural, recreational and cultural resource for the region. In 2014, the area became part of the national park system as the Blackstone River Valley National Historic Park. The EPA's Superfund Redevelopment Program provided assistance for a regional support project at the site between 2018 and 2020 to help EPA Region 1 make sure the site's remedy aligns well with the recreation and cultural heritage goals of area communities.

Picillo Farm

The 10-acre Picillo Farm Superfund site is in Coventry, Rhode Island. During the 1970s, a pig farm was on-site. In 1977, farm owners allowed for the disposal of liquid chemical wastes, solid wastes and at least 10,000 drums of hazardous substances in several unlined trenches. These actions contaminated soil, surface water and groundwater with chemicals, including industrial solvents, pesticides, oils and paint sludges. In 1977, regulatory agencies found the site after an explosion and fire. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup included removal of bulk wastes and buried drums, removal and off-site disposal of contaminated soils, treatment of on-site soils, groundwater

Figure 134. One of three wind turbines located on the groundwater institutional control area of the Picillo Farm site (Rhode Island).

extraction and treatment, surface drainage controls, fencing and institutional controls. Groundwater monitoring is ongoing. In 2016, a wind energy developer installed three wind turbines next to the site. One of the turbines is in the groundwater institutional control area. Power generated by the turbines is sold back to the grid.

Rose Hill Regional Landfill

The Rose Hill Regional Landfill Superfund site is a former municipal landfill in South Kingstown, Rhode Island. From 1967 to 1983, South Kingstown leased the area for use as a domestic and industrial waste disposal facility. Improper disposal activities contaminated site groundwater, soils and three nearby private wells. Runoff contaminated nearby surface water bodies. The EPA found the contamination in 1981. In 1983, the facility stopped operations and the operator graded and seeded the disposal areas. In 1989, the EPA added the site to the National Priorities List (NPL). Early investigations found landfill gases moving off-site, toward nearby homes. Cleanup activities included extending the public water supply to homes with contaminated wells, putting in gas alarms for nearby homes and relocating one residence. Landfill cleanup activities include consolidating landfill areas, capping the landfill, installing a landfill gas destruction system, monitoring and restricting groundwater use. The EPA will determine the need for more cleanup activities based on monitoring. A South Kingston transfer station for municipal wastes is on part of the site. Surrounding land uses include a hunting preserve, a bird dog kennel and field training facilities, and a pet cemetery. South Kingstown Town Council also authorized development of a solar photovoltaic energy farm on-site. The 4.7-megawatt solar farm is located on the landfill caps. It opened in 2018.

Figure 135. Aerial view of solar facility at the Rose Hill Regional Landfill site (Rhode Island). Photo used with permission of Kearsarge Energy.

West Kingston Town Dump/URI Disposal Area

The 18-acre West Kingston Town Dump/URI Disposal Area Superfund site is in South Kingston, Rhode Island. A gravel mine opened on part of the site, the West Kingston Town Dump, in the 1930s. From the late 1940s to 1975, a gravel mine also operated on-site, at the URI Disposal Area. Starting in 1951, area towns and URI began disposing of unregulated waste on-site. The dump closed in 1978. However, disposal continued until at least 1987. Starting in 1988, the state connected affected residential wells nearby to the city water supply. A 1989 inspection found leaking drums next to the site. Drum contents contaminated subsurface soil and groundwater. The EPA added the site to the National Priorities List (NPL) in October 1992. For cleanup, the potentially responsible parties combined waste from both areas and capped it on-site. In 2009 and 2011, the EPA injected chemicals to help break down contaminants in the groundwater. Operation and maintenance activities and groundwater monitoring are ongoing. Residents and URI students use walking trails on-site. Solar facilities at the West Kingston Town Dump, the URI Disposal Area and an adjacent field opened in 2018. These facilities have a combined capacity of 4.6 megawatts.

Figure 136. Drone image of the solar farm installed at the West Kingston Town Dump/URI Disposal Area site (Rhode Island). Photo used with permission of Kearsarge Energy.

Western Sand & Gravel

The Western Sand & Gravel Superfund site includes about 25 acres in a rural area on the boundary of Burrillville and North Smithfield, Rhode Island. From 1953 to 1975, a sand and gravel quarry was active on-site. From 1975 to 1979, a waste disposal area was on-site. Operators disposed of wastes in unlined lagoons and pits. These waste handling practices resulted in contamination of soil and groundwater. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup included a groundwater recirculation system, an alternate water supply, restrictions on groundwater

and land use, and monitoring of natural processes to clean up groundwater. It also included waste removal, capping of a 2-acre area and fencing of the 6-acre area of contaminated soil. In 2001, Supreme Mid-Atlantic purchased the site property through a Prospective Purchaser Agreement (PPA). A PPA encourages the reuse of Superfund site properties by addressing purchaser and lessee liability concerns. In 2004, the company completed construction of a 20,000-square-foot truck-body assembly building and open space for truck parking. Supreme Mid-Atlantic conducted assembly, sales and service activities at the site until 2016, when it closed its Rhode Island operation. Doering Equipment Company bought the property in 2018. It operates a body shop for service and utility trucks on-site.

Figure 137. Truck body assembly plant on the Western Sand & Gravel site (Rhode Island).

Federal Facility Sites

Davisville Naval Construction Battalion Center (Davisville NCBC)

The former Davisville Naval Construction Battalion Center (Davisville NCBC), North Kingston, Rhode Island site is 18 miles south of Providence, Rhode Island. It includes 1,290 acres along Narragansett Bay. From 1951 to 1994, Davisville NCBC supported mobilization of naval construction forces. Operations and waste disposal practices at the site resulted in widespread soil and groundwater contamination. Operations also contaminated surface water in nearby Allen Harbor. In 1989, the EPA added the site to the National Priorities List (NPL). Davisville NCBC was selected for closure during the 1991 Base Realignment and Closure (BRAC) program. Operational closure took place on April 1, 1994. After its closure, various state entities managed and developed the former Davisville NCBC property. The property had three parts: the Main Site (about 846 acres), West Davisville (about 70 acres, located 1 mile from the Main Site) and Camp Fogarty (about 374 acres, located 4 miles west of the Main Site). To date, 1,202 of the 1,290 acres have been transferred or conveyed. The remaining 88 acres will be conveyed at a later date.

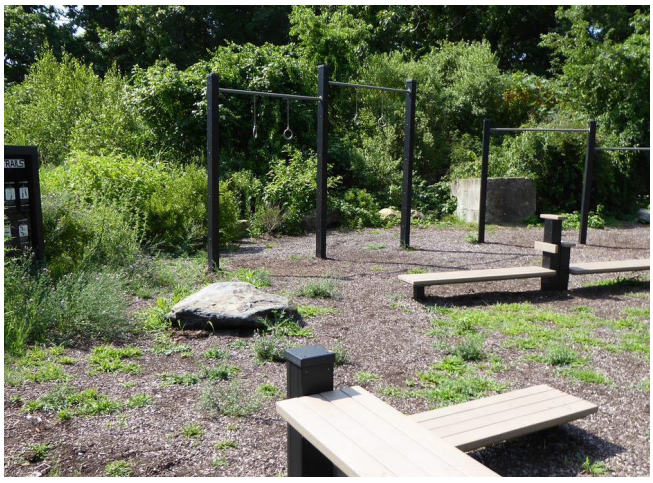

Figure 138. The town of North Kingston operates several recreational facilities at the Davisville Naval Construction Battalion Center site (Rhode Island).

In January 1993, the U.S. Navy transferred 374 acres to the U.S. Army for use in training the Rhode Island National Guard. About 445 acres, including the West Davisville parcel, were conveyed to the Rhode Island Economic Development Corporation (RIEDC) via negotiated sale through conveyances in 1998, 2000 and 2004. Additional conveyances included 211 acres to the town of North Kingston in 2000 under a Public Benefit Conveyance (PBC) for parks and recreation purposes through the U.S. Department of the Interior's National Park Service, and a 1-acre area to Bayside Family Healthcare in 1998 under a PBC for public health. RIEDC also received 96 acres under a PBC for port facility purposes through the U.S. Department of Transportation's Maritime Administration in 1998. In July 2004, the Rhode Island General Assembly created the Quonset Development Corporation (QDC). The QDC is a special-purpose subsidiary of RIEDC, now known as Rhode Island Commerce Center (RICC). It is responsible for the development and management of the Quonset Business Park.

Newport Naval Education & Training Center (NETC)

Figure 139. Shoreline restoration at the Newport Naval Education & Training Center site (Rhode Island).

The 1,063-acre Newport Naval Education & Training Center (NETC) Superfund site (currently named Naval Station (NAVSTA) Newport) is on the west coast of Aquidneck Island in Portsmouth, Middletown, Newport and on the northern third of Gould Island in Jamestown, Rhode Island. NETC has been used by the U.S. Navy since the Civil War era. Activities increased during wartime but decreased later as naval forces were reorganized. Between 1900 and the mid-1970s, the facility was used as a refueling depot. NETC was established at NAVSTA Newport in the 1970s. In the mid-1990s, several new laboratories were constructed at the Naval Undersea Warfare Center (NUWC, formerly the Naval Undersea Systems Center, or NUSC) to provide research, development, testing, evaluation, engineering and fleet support for submarines and underwater systems. In 1998, NAVSTA Newport was established as the primary host command, taking over base operating support responsibilities from NETC. The NAVSTA Newport facility encompasses about 1,000 acres on the west shore of Aquidneck Island, facing the east passage of Narragansett Bay in the towns of Portsmouth, Middletown and Newport. The facility also encompasses the northern third of Gould Island, which is part of the town of Jamestown. The EPA added the site to the National Priorities List (NPL) in 1989. The U.S. Navy continues to lead ongoing investigations and cleanup at 17 recognized site areas and continues to host different commands on the naval base. Several non-Superfund parcels and buildings have already been transferred and redeveloped as a marina, a community college campus and other recreational, commercial and industrial uses. Parcels continue to be considered for transfer. Solar arrays have been constructed on two site areas (a landfill (Solar Breakers McAlister) and a former tank farm (Solar Breakers 4)) through a U.S. Navy lease with a private party. The power, approximately 11 megawatts (MW) from these two facilities, is reportedly sold to Rhode Island universities. System upgrades are in progress.

VERMONT REUSE SUMMARY PROFILES

Bennington Landfill

Figure 140. A waste and recycling service station at the Bennington Municipal Sanitary Landfill site (Vermont).

The 15-acre Bennington Landfill Superfund site is a former municipal sanitary landfill in Bennington, Vermont. The landfill received residential, industrial and commercial waste from 1969 to 1987. Several local industries dumped liquid wastes in an unlined lagoon on-site. In 1986, the Vermont Department of Environmental Conservation found contamination in groundwater. The town of Bennington closed the landfill in 1990. The EPA added the site to the National Priorities List (NPL) in March 1989. A non-time-critical cleanup action included digging up contaminated soil and sediment and consolidating them in the landfill, capping the landfill, diverting surface water and groundwater, collecting landfill liquids, and managing landfill gases. After these activities, an investigation confirmed that no further action was necessary. Monitoring and long-term operation and maintenance activities are ongoing. Institutional controls limit access to and use of the site and prevent disturbance of the remedy. A waste and recycling service station is active on the non-landfill part of the site.

Burgess Brothers Landfill

Figure 141. The capped landfill at the Burgess Brothers Landfill site (Vermont).

The Burgess Brothers Landfill Superfund site is in Bennington, Vermont. Burgess Brothers Construction Company ran a sand pit, salvage yard and landfill on-site from the 1940s to the mid-1970s. Two lagoons received liquid wastes and sludge from about 1967 to 1976. Union Carbide Corp.'s Bennington Plant disposed of wastes from battery manufacturing, an unknown quantity of lead sludge and the equivalent of 47,780 drums of hazardous wastes at the site. Facility operations contaminated soil, groundwater and surface water with heavy metals and volatile organic compounds. The EPA added the site to the National Priorities List (NPL) in 1989. The site's potentially responsible parties (PRPs) led cleanup efforts, with EPA oversight. Cleanup included removal of contaminated soil, capping of the landfill area, and groundwater treatment and monitoring. Institutional controls prevent exposure to contamination and a fence surrounds the landfill area. The site lies within the Green Mountain National Forest.

Commerce Street Plume

The Commerce Street Plume Superfund site is in Williston, Vermont. It includes a former wastewater lagoon and a 70+ acre groundwater plume that extends beneath a commercial and residential area. Between 1979 and 1984, an electroplating business discharged rinse waters and sludge wastes containing heavy metals and industrial solvents into the unlined lagoon. After an employee report to the Vermont Agency of Environmental Conservation in 1982, the state found the company in violation of hazardous waste regulations for the disposal of chromium-contaminated wastes. The EPA added the site to the National Priorities List (NPL) in 2005. Cleanup included digging up and disposing of contaminated soil, replacing it with clean material, and planting and re-seeding the excavated area. It also includes groundwater treatment and monitoring and addressing groundwater vapors in buildings as needed. The EPA has taken steps to mitigate vapors in one home. Institutional controls restrict access to contaminated soil and groundwater. In December 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites, including implementation of the groundwater remedial action at this site. Current site uses include a mix of light-industrial/commercial businesses and single-family residences.

Elizabeth Mine

Figure 142. Solar array at the Elizabeth Mine site (Vermont). Image used with permission of Weston and Sampson, Conti Solar, and Elizabeth Mine Solar.

The Elizabeth Mine Superfund site is in Strafford and Thatford, Vermont. The site contains waste rock, roast beds and mine tailings left behind after 150 years of mining activity. Mining wastes contaminated groundwater, soil and sediment with heavy metals and acid-rock drainage. Mining wastes also contaminated the adjacent West Branch of the Ompompanoosuc River, Lord Brook and two tributaries. The EPA added the site to the National Priorities List (NPL) in 2001. In 2005, the EPA stabilized the tailing pile with soil and repaired the tailing dam, preventing the release of large quantities of mining waste and potential catastrophic loss of life and property downstream. The EPA built an active water treatment system in 2008 that operated until 2018. The active water treatment was replaced with a passive treatment system in 2019. The EPA consolidated and covered the mining waste in 2012 with reuse in mind. During cleanup, the EPA restored 15 acres of wetland for ecological reuse. In 2014, the U.S. Army Corps of Engineers Sustainability Award Program presented the Green Dream Team Award to the Elizabeth Mine Superfund Site Project Delivery Team for wetland restorations at the site. As a result of the cleanup, the state of Vermont delisted the 4 miles of the impaired West Branch of the Ompompanoosuc River and portions of Lord Brook from the Clean Water Act's impaired waters list based on the recovery of the benthic and fish communities. In 2017, a developer installed a 7-megawatt solar array on the radiated tailings pile. Today, the project supplies electricity to the Green Mountain Power grid and produces enough energy to power about 1,200 homes. The EPA completed the cleanup of the South Mine and South Open Cut areas in 2020. The EPA completed construction of all remedial actions in 2021. The EPA also worked with the Elizabeth Mine Historic Preservation Trust, the Stafford Historical Society, the Vermont Department of Environmental Conservation and the Vermont Division of Historic Preservation to develop and install interpretive panels at the site.

Ely Copper Mine

Figure 143. Former entrance to main mining shaft at the Ely Copper Mine site (Vermont).

The 350-acre Ely Copper Mine Superfund site is in Vershire, Vermont. From 1821 until 1920, copper mining operations generated piles of waste rock, smelter waste and tailings. Operators disposed of the materials on-site. Activities to remove dump-ore took place between 1949 and 1950. The EPA added the site to the National Priorities List (NPL) in 2001. The EPA finalized cleanup plans for the site in 2011 and 2016. Institutional controls in place prevent groundwater use and restrict site activities to protect the cleanup actions. The design for the cleanup actions finished in 2020. In December 2021, the site was among those selected by the EPA to receive cleanup funding under the Bipartisan Infrastructure Law (BIL). With this funding, the EPA is already initiating work on backlogged remedial construction projects and accelerating cleanups at NPL sites. BIL funding will enable cleanup activities at the site to begin. Cleanup will include excavation and on-site consolidation of mine waste and contaminated sediment as well as closure of adits, or mine openings. Since 1950, activities at the site have included commercial timber management as well as hunting, snowmobile riding and horseback riding. The site also provides habitat for several species of state and federal threatened and endangered bats. An archaeological dig to document historic mining-related artifacts and resources that will be impacted by the cleanup began in 2023 and was completed in June 2024. The US Army Corps was retained by the EPA to procure and manage a contract for the cleanup work. The US Army Corps awarded a contract for the cleanup work in June 2024. This work will involve the excavation of the mine waste and consolidation of the waste into an on-site 6-acre waste cell. This work is expected to begin in fall 2024 and continue through 2026.

Pine Street Canal

Figure 144. Aerial view of Pine Street Canal site (Vermont).

The 38-acre Pine Street Canal Superfund site is in Burlington, Vermont. It consists of a canal and turning basin, wetlands, an area formerly known as Maltex Pond and other land. From 1908 to 1966, a coal gasification plant was on-site. Plant operators disposed of wastewaters, residual oil and wood chips saturated with organic compounds in the canal wetland. These actions contaminated soils, surface water, sediments, groundwater, air and wetlands. While investigating the site for a proposed major highway development, the state of Vermont found high levels of organic compounds associated with coal tar. The EPA added the site to the National Priorities List (NPL) in 1983. Cleanup has taken place in phases. Cleanup activities include removing coal tars, capping underwater sediments in the canal and Maltex Pond sediments, restoring habitat, putting in vertical barrier walls and monitoring groundwater. Cleanup efforts also established institutional controls that restricts residential use, daycare facilities and activities that could affect the remedy. Habitat restoration allowed wetlands to continue functioning. Wetland restoration took place from 2003 to 2004. The wetlands support mammals, birds, reptiles, amphibians and fish. The Burlington Electrical Department headquarters has been on-site since before the site's NPL listing.

Cleanup also spurred commercial development east of Maltex Pond, outside the site's eastern boundary. While not on-site, businesses and construction in the Maltex Partnership development area comply with site-related land use restrictions. Sunken barges in the canal and other features at the site are eligible for the National Register of Historic Places. The EPA, the Vermont State Historic Preservation Officer and the Performing Defendants agreed to a mitigation plan for these historic resources when the remedy was put in place. The site is in a federal Opportunity Zone, which are census tracts of low-income and distressed communities designated by state governors and certified by the U.S. Department of the Treasury. In 2022, $6 million was provided for brownfield cleanup and redevelopment at a parcel next to the site. The proposed redevelopment projects include a bathhouse and wellness space and a multi-tenant commercial retail building. Developers and the city are also exploring the possible creation of a green gateway and utilize city-owned parcels on-site as public open space.

Pownal Tannery

Figure 145. Aerial view of the Pownal Tannery site (Vermont).

The 28-acre Pownal Tannery Superfund site is in North Pownal, Vermont. In the late 1880s, a woolen mill began operations in the area, followed by a hide tanning and finishing facility that began operating there in 1935. After the facility's closure in 1988, the EPA found contamination in groundwater, soil and sludge and led removal actions before and after adding the site to the National Priorities List (NPL) in 1999. These actions included removing contaminated materials and the tannery mill building, decontaminating a facility warehouse, and capping a facility landfill. The EPA completed these activities in 2001. Further investigations resulted in a 2002 cleanup decision that included treating soil and sludge within a former onsite lagoon area and consolidating it under a protective cap. The final remedy also required land use restrictions and long-term monitoring of groundwater and river sediments. The EPA worked with the town of Pownal to coordinate reuse planning as part of the cleanup process. Funded by a 1999 Superfund Redevelopment Program pilot grant, the town developed plans for recreation areas and a new wastewater treatment plant onsite. The treatment plant, completed in 2006, occupies part of the former lagoon area. The town reused old forest beams from the former tannery building to build a recycling center and equipment shed. Multi-use facilities on-site include a small park and benches, a historical marker near the North Pownal Bridge, and the Hoosic Trail walking path and boardwalk in the former lagoon area.

Tansitor Electronics, Inc.

Figure 146. Facilities at the Tansitor Electronics, Inc. site (Vermont).

The 44-acre Tansitor Electronics, Inc. Superfund site is in Bennington, Vermont. About 36 acres of the site are north of Route 9; the remainder of the site is south of Route 9. Since 1956, various owners have made electrical components on part of the site. In 1981, Vishay-Tansitor notified the EPA that operations between 1956 and 1979 had disposed of organic solvents and acids at the site. Disposal practices contaminated soil, sediment, groundwater and surface water. The EPA added the site to the National Priorities List (NPL) in 1989. The cleanup plan included a waiver of groundwater standards for a 10-acre area. It also included steps to address monitoring results and place restrictions on groundwater use. Outside the 10-acre area, groundwater contaminant levels are all below cleanup goals. The EPA took the site off the NPL in 1999. Groundwater monitoring is ongoing. Vishay-Tansitor continues to run its manufacturing facility on-site. Forested wetlands cover most of the site south of Route 9.

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Back cover photos: Industri-Plex (Massachusetts), Winthrop Landfill (Maine), Wells G&H (Massachusetts)

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