

PUTTING SITES TO WORK

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

2021 DATA

REGION 1
ECONOMIC
PROFILE



Cover page photos:

*Iron Horse Park (Massachusetts), Otis Air National Guard Base/Camp Edwards (Massachusetts), Wells G&H site (Massachusetts),
Wells G&H (Massachusetts), Conway Park (Massachusetts)*

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Figure 1. The restored Souhegan River and a public performance space at the Fletcher’s Paint Works & Storage site. (Massachusetts).

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PREFACE

EPA's Superfund program is a cornerstone of the work that the Agency performs for people 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 EPA's Superfund Redevelopment Program, the Agency contributes to these communities' economic vitality by supporting the return of sites to productive use.

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, EPA is providing necessary funding to enable delayed cleanup efforts at 49 Superfund sites to begin. More than 60% of these sites are in historically underserved communities.

EPA is leading the way to support the return of these and other once-contaminated sites back to productive use.

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

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INTRODUCTION

America's Industrial Revolution had its origins in New England. The resulting innovations had far-reaching impacts across the United States and internationally. While each state in EPA Region 1 – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont – has grown in different ways, each one has had to address contamination resulting from past industrial operations. Today, New England states and communities are working diligently to find new uses for their old industrial sites, 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.

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 supports 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 cleaned up under Superfund can continue operating in ways that protect 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.¹

Superfund sites across Region 1 are now the locations of office and business parks, shopping centers, supermarkets, restaurants, homes, condominiums, apartments and hotels. Other sites support public uses, including a commuter train and bus station. Many sites continue to host industrial operations, including manufacturing facilities. Some sites now support energy projects. Other sites host soccer fields, hiking trails, an ice-skating arena and a model airplane flying field. On-site businesses and organizations at current and former Region 1 Superfund sites provide an estimated 10,624 jobs and contribute an estimated \$874 million in annual employment income. Sites in reuse and continued use in Region 1 generate \$26.3 million in annual property tax revenues for local governments.¹

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

<i>Businesses:</i>	<i>673</i>
<i>Total Annual Sales:</i>	<i>\$1.9 billion</i>
<i>Number of People Employed:</i>	<i>10,624</i>
<i>Total Annual Employee Income:</i>	<i>\$874 million</i>



Figure 2. Chik-Fil-A restaurant 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 48 Superfund sites in reuse or continued use in Region 1 for which 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 47 sites in reuse or continued use in Region 1 for which EPA does not have property value or tax data, including 13 NPL federal facilities.

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. 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. Left: A locally owned ice cream shop at the South Municipal Water Supply Well site (Massachusetts). Right: Industrial use 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 supporting the return of 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, 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 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.

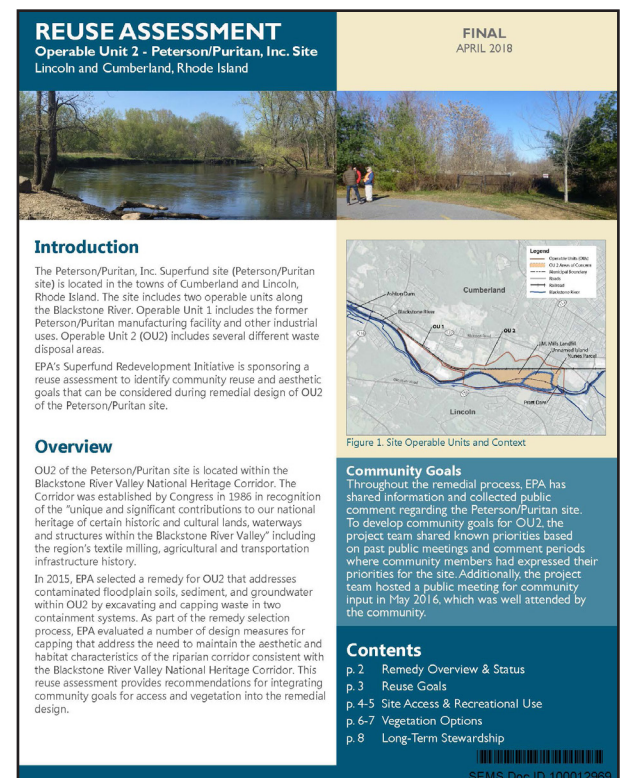


Figure 4. Reuse Assessment for operable unit 2 at the Peterson/Puritan Inc. site (Rhode Island).

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 the potential for future use opportunities 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

EPA can take and oversee immediate actions at contaminated sites through short-term cleanup activities, also called removal actions.² EPA refers sites warranting long-term cleanup to its remedial program or to state programs. The National Priorities List (NPL) is a list of sites targeted by EPA for further investigation and possible remediation through the Superfund program. Once EPA places a site on the NPL, the Agency studies the contamination, identifies technologies to address it and evaluates alternative cleanup approaches. 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. EPA has placed 120 sites in Region 1 on the NPL.

Whenever possible, EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 1, EPA currently tracks 77 NPL sites and 12 non-NPL Superfund sites that 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 support culturally and historically significant uses on site areas. Many redeveloped sites support multiple uses and have the capacity to support more uses and further redevelopment. The following sections take a closer look at the beneficial effects of businesses operating at current and former Superfund sites in Region 1.

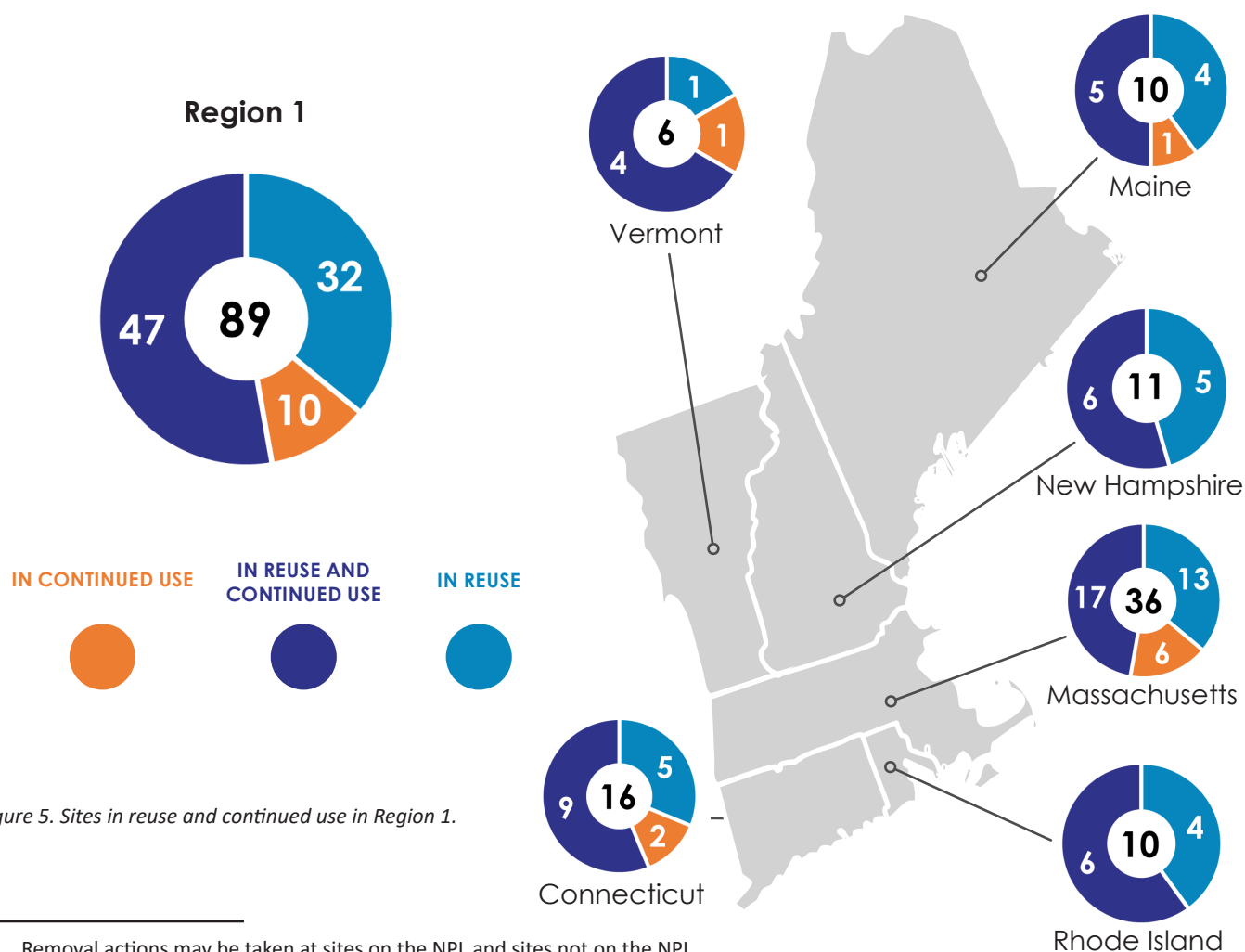


Figure 5. Sites in reuse and continued use in Region 1.

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



Figure 6. Left: The basketball court at the Somersworth Sanitary Landfill site (New Hampshire). Right: Restored waterway at the GE-Pittsfield/Housatonic River site (Massachusetts).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 1 Example
<i>In Reuse</i>	<i>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.</i>	<i>Nutmeg Valley Road (Connecticut) – Local officials credit site improvements and the site's deletion from the NPL as important factors supporting commercial redevelopment and economic revitalization at the site and in nearby areas.</i>
<i>In Continued Use</i>	<i>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.</i>	<i>Somersworth Sanitary Landfill (New Hampshire) – In 1978, the city covered 10 acres of the site with clean fill, so the community could use it for recreation. Today, the area hosts a basketball court and is open for passive recreation (i.e., walking).</i>
<i>In Reuse and Continued Use</i>	<i>Part of a site is in continued use and part of the site is in reuse.</i>	<i>GE - Pittsfield/Housatonic River (Massachusetts) - A reuse plan funded by an EPA Superfund Redevelopment Program pilot grant has guided a variety of continued and new uses at the site, including a recreation facility, commercial and industrial spaces, a solar facility, a school and homes.</i>

Enabling Reuse at Removal Action Sites

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

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 1

Businesses and Jobs

EPA has collected economic data for 673 businesses, government agencies and civic organizations operating on 37 NPL sites and four non-NPL sites in reuse and continued use in Region 1.³ (See the State Redevelopment Profiles for each state's reuse details, beginning on page 34). 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 current and former Region 1 Superfund sites such as the Raymark Industries, Inc. site include large retail operations such as Home Depot and Walmart. Other sites are home to manufacturing and production companies such as the Linemaster Switch Corporation, Elkay Plastics and General Dynamics Advanced Information Systems. Hope Global, a manufacturing corporation specializing in engineered textiles for automotive, commercial and industrial uses, continues to run its operations from its international headquarters at the Peterson/Puritan, Inc. site in Rhode Island.

The businesses and organizations at these sites generate about \$1.9 billion in estimated annual sales and employ about 10,624 people, earning an estimated \$874 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.⁴

Table 1. Site and Business Information for Region 1 Sites in Reuse and Continued Use (2021)

	Sites ^a	Sites with Businesses ^b	Businesses ^c	Total Annual Sales ^d	Total Employees	Total Annual Employee Income ^e
<i>In Reuse^f</i>	32	13	17	\$106 million	271	\$12 million
<i>In Continued Use^g</i>	10	3	5	\$44 million	194	\$13 million
<i>In Reuse and in Continued Use</i>	47	25	651	\$1.8 billion	10,159	\$849 million
Totals	89	41	673	\$1.9 billion	10,624	\$874 million

^a Fifteen sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

^b See footnote 1, page 1. Also includes other organizations such as government agencies, nonprofit organizations and civic institutions.

^c Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^d For information on the collection of business, jobs and sales data, see the Sources section.

^e Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

^f A site "in reuse" refers to a site where a new use or uses are occurring such that there has been a change in the type of use (e.g., industrial to commercial), or the property was unused and now supports a specific use. This means that the developed site is actually used for its intended purpose by customers, visitors, employees, residents, or fauna, in the case of ecological reuse.

^g A site "in continued use" refers to areas that are being used in the same general manner as they were when the site became subject to the Superfund or Federal Facilities Programs.

³ See footnote 1, page 1.

⁴ For more information on the collection of business, jobs and sales data, see the Sources section.

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. For example, site properties at the Central Landfill site in Rhode Island are now valued at over \$130 million. This increased value can boost property tax revenues, which help pay for local government operations, schools, transit systems and other public services.

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.

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

Total Property Value: \$1.3 billion
Total Annual Property Taxes: \$26.3 million



Figure 8. Sign for The Nevins, an adult living community at the Tinkham Garage site (New Hampshire).

EPA has collected property value data and property tax data for 42 and 41 Superfund sites in reuse and continued use in Region 1, respectively.⁵ These sites span 1,069 property parcels and 7,026 acres. They have a total property value of \$1.3 billion. The average total property value per acre is \$188,000.

Land and improvement property value information is available for 42 sites. These properties have a total land value of \$500 million and a total improvement value of \$822 million.⁶

Property tax information is available for 41 sites. The properties generate a combined \$26.3 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) ^b	Total Improvement Value (42 sites)	Total Property Value (42 sites)	Total Property Value per Acre (42 sites) ^c	Total Annual Property Taxes (41 sites)
\$500 million	\$822 million	\$1.3 billion	\$188,000	\$26.3 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 2018 to 2022. For more information, see the Sources section. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

^b Detailed (land and improvement) property value data as well as tax data were not available for every site.

^c Based on total property value amount of \$1.3 billion divided by total acreage of 7,026. Please note, total property value is rounded.

5 There are 47 more sites in reuse or continued use in Region 1 for which EPA does not have property value or tax data, including 13 NPL federal facilities. See footnote 1, page 1.

6 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.

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 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 recreational activities can include outdoor recreation spending and reduced public costs related to healthcare and infrastructure. In 2017, outdoor recreation contributed \$887 billion to the U.S. economy, supporting 7.6 million jobs and generating \$65.3 billion in national tax revenue and \$59.2 billion in state and local tax revenue.⁷ 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.



Figure 9. Wetlands provide wildlife habitat for diverse species at the Coakley Landfill site (New Hampshire).

⁷ The Outdoor Recreation Economy. Outdoor Industry Association. Available at outdoorindustry.org/wp-content/uploads/2017/04/OIA_RecEconomy_FINAL_Single.pdf.

CALLAHAN MINE

EXPEDITING A COMPLEX CLEANUP

The over 150-acre Callahan Mine Superfund site is in Brooksville, Maine. Most mining activity took place from 1968 to 1972. Investigations found hazardous substances in site soil and nearby residential properties, site groundwater and on-site mining waste materials. EPA added the site to the NPL in 2002. In 2013, EPA completed soil cleanup at impacted residential properties and the former mine operations area. EPA is cleaning up the tailings dam, the tailings impoundment and contaminated sediment, as well as restoring area wetlands. Groundwater investigations are ongoing.

The site is one of 49 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. Almost 13% of people living within 1 mile of the site had incomes below the federal poverty level in the past 12 months. EPA supported a community-driven reuse assessment for the site in 2009. It recommended a nature conservation area with optional recreational uses for the site.



Figure 10. A view of Goose Pond at the Callahan Mine site (Maine).

PINE STREET CANAL

PRESERVING HISTORY AND WETLANDS

The 38-acre Pine Street Canal Superfund site is in Burlington, Vermont. It consists of a canal, turning basin, wetlands and upland areas. From 1908 to 1966, a coal gasification plant operated on site. Improper waste disposal practices contaminated soil, surface water, sediment, groundwater, air and wetlands. EPA added the site to the NPL in 1983. Cleanup activities have included removal of coal tars, capping of underwater sediment, habitat restoration, construction of vertical barrier walls, institutional controls and groundwater monitoring.

Habitat restoration in 2003 and 2004, in accordance with the site's Wetland Restoration Plan, allowed on-site wetlands to continue functioning. These wetlands support mammals, birds, reptiles, amphibians and fish. Sunken barges in the canal and other features at the site are eligible for the National Register of Historic Places. EPA, the Vermont State Historic Preservation Officer, and the Performing Defendants agreed on a mitigation plan to minimize damage to these historic resources during remedy implementation. One business operates on site. It provides local jobs and generates almost \$1 million in estimated annual income. 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 May 2022, \$6 million was provided for brownfield cleanup and redevelopment at a parcel adjacent to the Site. The proposed redevelopment projects consist of Silt Botanica Nordic-inspired bathhouse and wellness space; and Backside Bowl with two-story contemporary bowling alley, entertainment, and community gathering space. In addition, the developers and the city are exploring the potential creation of a green gateway to the city-owned parcel located on the site as public open space.



Figure 11. Early rendering of proposed Silt Botanica Nordic-inspired bathhouse and wellness redevelopment adjacent to the Pine Street Canal site (Vermont). Source: Silt Botanica, used with permission.

SULLIVAN'S LEDGE

WETLAND RESTORATION PROVIDING 13 ACRES OF HABITAT

The Sullivan's Ledge Superfund site is in New Bedford, Massachusetts. In 1935, the city of New Bedford took over a former granite quarry and turned it into a dump for hazardous materials. Waste disposal activities took place on site until the 1970s. EPA added the site to the NPL in 1984. In total, around 18% of people living within 1 mile of the site had incomes below the federal poverty level in the past 12 months, compared to the state average of 10%.

Cleanup activities included treatment of groundwater, removing contaminated soil and sediment, capping the site, and the implementation of institutional controls. Cleanup also removed contamination from a neighboring golf course using an approach that enabled the facility to remain open throughout the efforts. EPA also restored 13 acres of wetlands.

In 2013, EPA approved the installation of a 1.76-megawatt solar project on the capped part of the site. In addition to the array, the wetland habitat restoration has been an ecological reuse success. A contractor put in a new stream channel, including short-term and long-term erosion protection measures, such as heavy erosion control blankets and seeding of native plants. The restored wetland area now provides habitat for many wildlife species, including the great blue heron, great egret, red-tailed hawk, red fox and spotted turtle. The mystic valley amphipod (*Crangonyx aberrans*), a globally vulnerable invertebrate, has also been found in the restored habitat areas.



Figure 12. Red foxes are one of many wildlife species frequenting wetlands at the Sullivan's Ledge site (Massachusetts).

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 1. At the Ottati & Goss/Kingston Steel Drum Superfund site in Kingston, New Hampshire, wetland restoration work included the planting of more than 1,000 trees and shrubs. 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. Cleanup at the South Municipal Water Supply Well Superfund site in Peterborough, New Hampshire, included wetlands restoration in 1994. Today, the site hosts ecologically significant surface water features, including a sedge meadow, a shallow marsh, the Coontoocook River and Noone Pond system, and its associated deep marsh.



Figure 13. Cleanup of the Kearsarge Metallurgical Corp. site (New Hampshire) restored wetland habitat and helps protect Pequawket Pond (pictured), which borders the site to the south.

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 \$14.9 trillion benefit 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 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. 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, 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, 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:

- 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 260 businesses. The site also supports Portsmouth International Airport, the New Hampshire Air National Guard and a golf course. Site businesses employ about 6,300 people, providing estimated annual employment income of \$587 million and generating \$1.6 billion in estimated annual sales revenue.
- 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 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 over 800 people and generate an estimated \$9 million in annual sales revenue.
- EPA placed 9,000-acre Fort Devens in Massachusetts on the NPL in 1989. While cleanup and investigations continue, a successful partnership between 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. Over 140 establishments are active on site, including warehouses and distribution centers,



Figure 14. Entrance to Loring Job Corps Center on the Loring Air Force Base Superfund site (Maine).



Figure 15. Commercial and industrial redevelopment of the Fort Devens site (Massachusetts) supports about 4,600 jobs.

manufacturing and industrial spaces, and research and development facilities. These businesses employ about 4,600 people and generate about \$1.8 billion in estimated annual sales. Redevelopment also includes a Native American cultural center and residential 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 2022, two major developments are underway including a \$500 million 45-acre bio-manufacturing campus and a \$300 million 47-acre fusion energy research and manufacturing facility.

- 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 1,700 people and generate about \$360 million in estimated annual sales revenue.
- EPA placed the Davisville Naval Construction Battalion Center in Rhode Island on the NPL in 1989. Today, about 90 companies are on site, employing about 1,400 people. 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 over 200 companies that employ 11,000 people.

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



Figure 16. Attractions at the Davisville Naval Construction Battalion Center (Rhode Island) include commercial and recreational developments, as well as cultural heritage preservation.

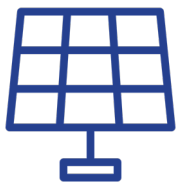


Figure 17. The commercial redevelopment of the Materials Technology (USARMY) site (Massachusetts) has attracted many businesses to the area.

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 EPA's mission to protect human health and the environment.

As of September 2022, EPA is tracking 24 alternative energy projects at 23 Superfund sites in Region 1. These projects have an installed capacity of about 153 megawatts. Four of these projects offset on-site energy demands of cleanup efforts or directly power site-related cleanup activities.



18
Solar Projects



2
Wind Projects



2
Biomass Projects



1
Landfill Gas
Project



1
Hydroelectric
Project

Alternative energy projects tracked in **Region 1** generate an estimated **524,476 megawatt hours** each year.⁸ This is equivalent to...



371,687 metric tons of carbon dioxide.



The greenhouse gas emissions of **80,087** gasoline-powered passenger vehicles driven for one year.



The carbon dioxide emissions from **46,819** homes' energy use for one year.

⁸

Equivalencies were calculated using power production. Production values were not available for two projects 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.

OPPORTUNITY ZONE TAX INCENTIVES AS A SUPERFUND REDEVELOPMENT TOOL

Opportunity Zones are a powerful tool that encourages economic revitalization in distressed communities by incentivizing long-term, sustainable investment in redevelopment and stimulating economic growth. State governors have designated 8,756 Opportunity Zones across the country in geographic areas that suffer double the national poverty rate. Socio-economic metrics show that Opportunity Zones are among the highest-need communities in the nation. The U.S. Department of the Treasury estimates that Opportunity Zones may attract up to \$100 billion in investments, which strengthens the financial viability of redevelopment projects at Superfund sites located in Opportunity Zones.

Redevelopment of current or former Superfund sites may qualify for Opportunity Zone tax benefits. Nationally, there are 343 NPL sites located entirely or partially in Opportunity Zones. Estimates indicate there are thousands of Superfund removal sites in Opportunity Zones across the nation. In Region 1, there are 18 NPL sites located entirely or partially in an Opportunity Zone. Redevelopment investments that meet appropriate qualifying criteria may be eligible for Opportunity Zone tax benefits. EPA and the U.S. Department of Housing and Urban Development (HUD) have tools and resources to help local leaders achieve equitable outcomes in Opportunity Zone development projects.

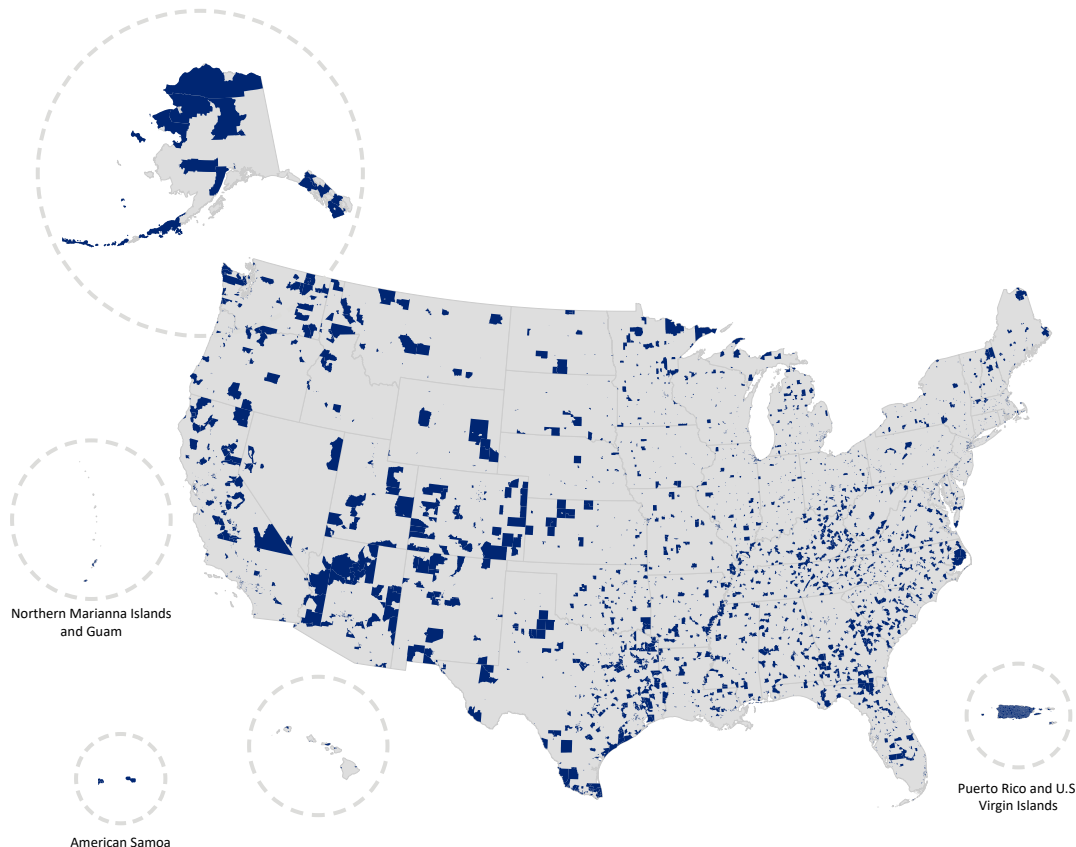


Figure 18. About 8,756 Opportunity Zones were established in all 50 states, the District of Columbia, and the five U.S. territories.

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REDEVELOPMENT IN ACTION

CONWAY PARK COLLABORATION RETURNS PARK TO PUBLIC USE

The 2.8-acre Conway Park Superfund site is in Somerville, Massachusetts. A bleachery and dye works facility once operated on site. After the city took ownership of the property, it became a park in the early to mid-20th century. In 2017, a city contractor sampled soil as part of a site assessment. Subsequent sampling found widespread PCB contamination in soil along with subsurface debris, which led the city to restrict access to the site.

In 2019, the Massachusetts Department of Environmental Protection (MassDEP) asked EPA to assist with the cleanup. EPA worked closely with the city of Somerville on an approach that shared responsibility for cleanup activities and costs. Cleanup started in early 2021, after a series of community meetings and information-sharing events hosted by the city. Between July and September 2021, the city and EPA disposed of about 9,000 tons of PCB-contaminated soil. The cleanup included air monitoring and dust control to make sure contamination did not spread off site during cleanup activities. Site restoration activities included preparing the area for new field construction, repairing and replacing retaining walls, putting in utilities, planting new trees and updating the complex's playground.

The site is in a densely populated residential and commercial area. About 18,000 people live within a half mile of the site. Close collaboration among EPA and state and local partners resulted in a timely cleanup and restoration of the site, returning the popular recreation amenity to beneficial use for the community.

In December 2021, the city of Somerville celebrated the completion of a new, synthetic-turf ballfield at the site. The city completed playground and other facility updates in May 2022.



Figure 20. Reuse at the Conway Park site (Massachusetts).

PARSONS PAPER MILL FORMER MILL BUILDING AND PROPERTY REPURPOSED BY HOLYOKE BUSINESS

The 4.6-acre Parsons Paper Mill Superfund site is in Holyoke, Massachusetts. From 1896 to 2004, Parsons Paper Company made writing and stationary paper as well as artist paper and archival paper on site. In 2008, a fire destroyed parts of the mill and the interconnected building complex. In 2009, EPA found asbestos in samples from the burned areas of the buildings and approved a time-critical removal action, including the removal of asbestos containing material, formaldehyde resin, metal containing fly ash and drums with hazardous wastes. In 2009 and 2010, EPA removed hazardous materials and asbestos that posed a threat to public health. EPA removed five 30-cubic



Figure 21. Historical photo of the Parsons Paper Company facility at the Parsons Paper Mill site (Massachusetts).

yard roll-off containers and over 500 tons of asbestos containing material, as well as metal containing fly ash, formaldehyde resin, and drums with hazardous wastes from the property.

The site is in a historic canal mill district. Within 1 mile of the site, 67% of residents are considered low income, compared to the state average of 22%. The city of Holyoke identified the site as a redevelopment opportunity in its Urban Renewal Plan. In 2014, the Holyoke Redevelopment Authority (HRA) signed an agreement with Northeast Utilities to conduct an environmental assessment and address remaining cleanup needs. In 2015, the HRA worked with state and local partners to further remediate the site and spur interest in redevelopment.

In 2016, Aegis Energy Services (Aegis), a combined heat and power systems manufacturer, partnered with the HRA to expand its adjacent business operations onto the site. Aegis restored the remaining 40,000-square-foot building on site to accommodate the company's headquarters and expand production space. Aegis also put in a new parking lot and a 4-megawatt, grid-connected solar array. Aegis' \$7 million expansion is the city's largest manufacturing expansion in recent years. In addition to increased property tax contributions to the city, Aegis also added 30 new jobs for the community. The former mill building and property will continue to provide community benefits for years to come.

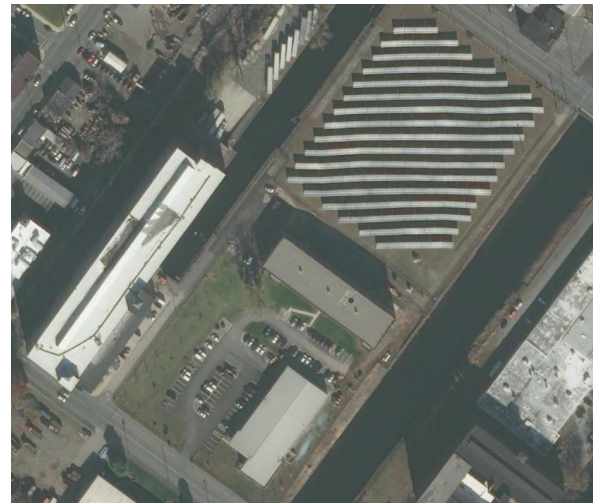


Figure 22. After demolition of the damaged former paper mill building, Aegis renovated the second building and installed a solar field at the Parsons Paper Mill site (Massachusetts). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

GE-PITTSFIELD/HOUSATONIC RIVER CLEANUP SUPPORTS INVESTMENT TO SPUR ECONOMIC GROWTH

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. This permit is currently under appeal. 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 are now complete. Cleanup of 2 miles of the Housatonic River is also already complete.



Figure 23. Berkshire Innovation Center opened in 2020 at the GE-Pittsfield/Housatonic River site (Massachusetts).

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 Program 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 including the construction of walking path, benches and the extensive planting of native trees and shrubs. In 2014, PEDAs 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. Announced in 2022, the BIC will receive an additional \$1M from American Rescue Plan Act for establishing a manufacturing academy to spur economic growth and jobs. Two large employers continue to operate on the GE-owned portion of the 254-acre facility. Continued uses on the non-GE-owned portion of the site (excluding the Rest of River) include an elementary school, about 86 residential properties, about 35 commercial properties and a city park.

INDUSTRI-PLEX

SAFE REDEVELOPMENT INSPIRES NEW PROJECTS

The Industri-Plex Superfund site in Woburn, Massachusetts, is located 12 miles outside of Boston. Nearly 20,000 people live within 1 mile of the site. From 1853 to 1969, manufacturers made chemicals, insecticides, munitions and glue products at the site. Improper waste management practices contaminated groundwater, surface water, soil and sediment. EPA added the site to the NPL in 1983. Cleanup included placement of protective covers over contaminated parts of the site, dredging and off-site disposal of contaminated sediment, construction of wetlands, and institutional controls.

From 1997 to 2009, several development projects took place on site. EPA worked with the Site Custodial Trust on agreements with the Massachusetts Port Authority, the Massachusetts Bay Transportation Authority and the Massachusetts Highway Department that allowed for the development of a new interstate highway exchange, expanded public roadways and development of the 34-acre James Anderson Regional Transportation Center. EPA also worked with the Site Custodial Trust on agreements with developers for a connector road, a 200,000-square-foot shopping center, commercial business space, an office park and a hotel complex. EPA also worked with developers to redevelop formerly industrial property as a Chipotle restaurant and Bob Stores. From 2015 to 2017, EPA led more cleanup activities downstream of the site in Woburn, Massachusetts.

In 2018, developers collected data and prepared baseline risk assessments assessing potential future residential use for two site properties. Based on the results, EPA found there was no risk for residential use of the site at the 200 Presidential Way property and that some restrictions would allow for residential reuse of the 120 Commerce Way property. EPA issued an Explanation of Significant Differences that updated the remedy, enabling two mixed-use projects to move forward.

Construction of the first project, a 200-unit apartment community at the 200 Presidential Way property began in 2018, finished in 2019 and EPA deleted the property from the NPL in 2020. Construction of the second project, multi-family housing with 289 units and over 9,000 square feet of commercial space at the 120 Commerce Way property, is underway. Developers installed vapor mitigation systems beneath occupied building spaces, began leasing in 2022 and anticipate project completion by the end of 2022.



Figure 24. Top: The James Anderson Regional Transportation Center on the Industri-Plex site (Massachusetts) provides the community with passenger rail, commuter train and bus service. Bottom: The Emery Flats apartment complex at the site.

With EPA continuing to provide support for the safe redevelopment of the site, more projects are on the horizon. They include construction of the New Boston Street Rail Road Bridge, several solar rooftop projects, a 4.0-megawatt solar facility, mixed residential and commercial reuse, a life science laboratory and an office building. Today, 47 businesses on site employ over 1,000 people who earn an estimated combined annual income of nearly \$71 million. On-site businesses generate over \$212 million in sales annually. Site property parcels had a total value of over \$234 million in 2022, generating more than \$4.3 million in annual property taxes. EPA recognized the site's successful redevelopment with a Phoenix Award in 2000.

NYANZA CHEMICAL WASTE DUMP RESTORATION, REDEVELOPMENT TO DELIVER LASTING ENVIRONMENTAL BENEFITS

The 35-acre Nyanza Chemical Waste Dump Superfund site is in Ashland, Massachusetts. From 1917 to 1978, companies made textile dyes and other products at the site. Companies buried solid waste on site and on Megunko Hill, which was used as an unsecured landfill. Companies also released wastewater into a system of lagoons and storage areas that drained into nearby wetlands and the Sudbury River. These improper waste handling practices resulted in groundwater, soil and sediment contamination. EPA added the site to the NPL in 1982.

To clean up the site, EPA excavated contaminated soil, sediment and sludge and placed a landfill cap over contaminated soil from 1990 to 1992. In 2007, EPA also put in 41 vapor mitigation systems to prevent volatile organic chemical vapors from migrating into buildings from the groundwater plume. In 2013, EPA installed two extraction and recovery wells to remove residual DNAPL from the source area. In 2020, EPA selected a final remedy to address VOC contaminated groundwater, and is currently in the design phase.

From 1999 to 2001, EPA worked to restore impacted wetlands, including the 5.5-acre Eastern Wetland on site. EPA dug up mercury-contaminated sediment and put them in the on-site landfill, which was later capped. EPA also does periodic fish tissue sampling to monitor mercury in the Sudbury River. Fish consumption advisories have been posted in areas along the Sudbury River in six communities. Over 3,700 people live within 1 mile of the site.

Several businesses, including NYACOL Nano Technologies, continue to operate on the site. These businesses employ over 40 people who earn an estimated combined annual income of nearly \$3.9 million. On site businesses generate over \$9.6 million in sales annually. Site property parcels had a total value of over \$8.5 million in 2022, generating \$61,300 in annual property taxes.

Developer Ashland Solar reached out to EPA and the MassDEP regarding the site's solar potential. EPA and MassDEP worked with the developer to make sure a solar array would be compatible with the site's remedy and protective of the landfill cap. In December 2019, Ashland Solar completed construction of the new grid-connected solar array and began operating on the site's landfill cap. This array, together with a nearby off-site solar array, generates up to 5.8 megawatts of electricity.



Figure 25. A developer built a solar project on the landfill cap at the Nyanza Chemical Waste Dump site (Massachusetts).

SCOVILL INDUSTRIAL LANDFILL

INFRASTRUCTURE FUNDING TO ADVANCE CLEANUP

The 25-acre Scovill Industrial Landfill Superfund site is in Waterbury, Connecticut. From 1919 to 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 southern part of the site. Within a 1-mile radius of the site, 63% of residents are people of color and 43% of residents are considered low income. The northern part of the site is an undeveloped 6.8-acre parcel known as the Calabrese parcel. In 1988, residential development at the 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. EPA added the site to the NPL in 2000.



Figure 26. The undeveloped 6.8-acre Calabrese Parcel at the Scovill Industrial Landfill site (Connecticut).

In 2004, EPA provided support to the city of Waterbury for a reuse planning process for the site to develop future land use recommendations for the Calabrese parcel. EPA selected a cleanup plan in 2013, and completed the remedial design in 2016.

In 2021, Congress passed the Bipartisan Infrastructure Law to initiate cleanup and clear the backlog of 49 previously unfunded Superfund site cleanups across the nation, particularly in disadvantaged communities. EPA received funding to begin cleanup activities at the site.

Cleanup will include targeted excavations in areas exceeding regulatory contaminant levels and consolidation of contaminated soil under a soil cap on the Calabrese parcel or disposal off site. Excavated areas will be backfilled with clean fill and restored to original conditions with either new pavement or vegetation. Wetland cleanup is also planned. Institutional controls will prevent contact with contaminated soil and protect the cap.

EPA's cleanup design has allowed for continued residential and commercial use at the site. Today, 22 businesses on site generate nearly \$14.6 million in sales annually. These businesses employ over 160 people who have an estimated combined annual income of over \$4.7 million. Site property parcels had a total value of over \$9.1 million in 2021, generating \$576,022 in annual property taxes.

BLACKBURN & UNION PRIVILEGES

MEETING COMMUNITY NEEDS WITH NEW POLICE STATION AND SENIOR CENTER

The Blackburn & Union Privileges Superfund site is in Walpole, Massachusetts. Industrial and commercial processes using chromium, arsenic and mercury at the site date back to the 1600s. From 1891 to 1915, facilities made tires, rubber goods and insulating materials on site. From 1915 to 1937, a facility operated on site, crushing raw asbestos to use in brake and clutch linings. Various cotton and fabric production processes took place at the site from 1937 to 1985, when the facility was abandoned. Industrial operations contaminated soil, sediment and groundwater. EPA added the site to the NPL in 1994.

EPA approved the site's cleanup plan in 2008. It includes excavation and dredging of contaminated soil and sediment, followed by off-site disposal. It also includes groundwater extraction and treatment, long-term monitoring, and land and groundwater use restrictions. Cleanup began in 2015 and is ongoing. The town of Walpole has taken ownership of many site parcels for unpaid taxes. More than 5,000 people live within 1 mile of the site.

In 2000, EPA awarded the town of Walpole a Superfund Redevelopment Program grant to develop reuse plans for the site. The town completed its redevelopment plan in 2004. It proposed several reuse options, including commercial, industrial, municipal and recreational uses.

In May 2018, town officials, police and community members attended a ribbon-cutting ceremony for a new police station. The facility provides space for the growing department and includes state-of-the-art safety equipment and emergency response technologies as well as training space for seminars and training sessions. The station has an evidence room, a processing area, and a police and fire services dispatch center.

In December 2018, another ribbon-cutting ceremony marked the completion of a senior center – the Walpole Co-operative Bank South Street Center – on site. The Walpole Council on Aging officially opened the facility in January 2019.

The 13,000-square-foot center houses a veterans’ services office, offers several recreation department adult education classes and hosts community gatherings. The town’s new rail trail, which opened in 2018, is behind the senior center building, offering seniors easy access to the recreation resource.

During the ribbon-cutting ceremony, EPA recognized the town of Walpole and the Walpole Council on Aging for their exceptional reuse leadership and hard work transforming this former industrial area into the community’s first stand-alone senior center. In August 2019, EPA and the town of Walpole held an event celebrating EPA’s Superfund Redevelopment Program’s 20th anniversary. In 2021, the police station employed about 50 people. Site property parcels had a total value of over \$12.7 million in 2020.



Figure 27. The police station at the Blackburn & Union Privileges site (Massachusetts).

FLETCHER'S PAINT WORKS & STORAGE REDEVELOPMENT BRINGS NEW PUBLIC PERFORMANCE SPACE

The Fletcher’s Paint Works & Storage Superfund site is in Milford, New Hampshire. The 2-acre site includes two areas – a former manufacturing plant and retail outlet on Elm Street and a storage area on Mill Street. The plant operated from 1948 to 1991. An inspection by the New Hampshire Department of Environmental Services (NHDES) found leaking and open drums on site. NHDES also found site-related contamination in the Keyes Municipal Water Supply Well next to the site. Facility operations contaminated soil, groundwater and nearby sediment in the Souhegan River. Nearly 4,000 people live within a mile of the site. EPA added the site to the NPL in 1989.

Early cleanup efforts included building demolition, drum removal, fencing installation, use of temporary cover systems and removal of contaminated soil from residential properties. In 1996, at the request of the town of Milford, General Electric, the potentially responsible party (PRP) removed soil with low levels of contamination from the Elm Street area of the site to allow for construction of a Korean War memorial. A removal action in 2016 included excavation and off-site disposal of contaminated sediment from the Souhegan River.



Figure 28. This public performance space at the Fletcher’s Paint Works & Storage site (New Hampshire) is partly built with locally quarried stone.

In 2017, the site's PRP completed remedy construction. Cleanup of the Mill Street area included excavating soil, backfilling the area with clean soil and putting in a grass cover, and relocating Mill Street on part of the area to improve traffic management. Cleanup of the Elm Street area included excavating soil and putting in a soil and grass cover engineered for recreation. An asphalt cover on parts of the site provides the town with more parking for nearby Keyes Memorial Park. In 2019, construction of a public performance space at the on-site entrance to Keyes Memorial Park finished. The three-sided stage was built with locally quarried stones repurposed from another structure. All materials and labor for the project were donated.

IRON HORSE PARK

CONTINUED COMMERCIAL/INDUSTRIAL USES WITH NEW SOLAR FACILITY

The Iron Horse Park Superfund site is a 553-acre industrial complex in North Billerica, Massachusetts. Industrial activities at the site, including manufacturing, rail yard maintenance and landfiling (a number of landfills were developed on site), began in the early 1900s. Improper materials handling and waste disposal practices contaminated site soil, sediment, groundwater and surface water. In 1984, EPA led a short-term cleanup and capped a 13.3-acre asbestos landfill. Later that year, EPA added the site to the NPL. Cleanup included the removal and treatment of contaminated soil and sediment, landfill closure and capping, marsh restoration and new wetland habitat. Cleanup construction work was completed in 2022.

EPA's cleanup incorporated reuse planning efforts and supported the continued operation of industrial businesses on site. These areas include lumber, manufacturing and railyard maintenance facilities. Together, these businesses support nearly 300 jobs and provide more than \$23 million in estimated annual employment income. Site businesses generate an estimated \$89 million in annual sales. More than 4,000 people live within 1 mile of the site. In 2020, site property parcels had a total value of over \$23 million, generating nearly \$574,000 in annual property taxes.

EPA also coordinated with developers on plans to support energy infrastructure at the site. While remedy protectiveness measures prevented the site's Shaffer Landfill from supporting conventional redevelopment projects, the landfill drew the attention of alternative energy developer Urban Green Technologies (UGT) as a potential location for solar power infrastructure. EPA and MassDEP worked with UGT on plans to maximize use of available land, account for the landfill's steep slopes, and ensure the integrity of the landfill cap. After plan approval in 2012, UGT began construction of the first solar installation at the site – a 6-megawatt, 25-acre array – in 2013. To account for the landfill's steep slopes, UGT installed the array's 20,000 solar panels in small sub-arrays rather than one large installation. The project employed about 50 people during construction.

Since project construction finished in 2014, two more solar projects have followed. Through a net metering agreement, one of the site's solar projects provides the energy for four school systems and the local government. Together, the three solar arrays have a total generating capacity of 16 megawatts. In 2014, EPA Region 1 recognized the project team – including the town of Billerica, UGT and investment company Capital Dynamics – with its first Excellence in Site Reuse Award.



Figure 29. Top: Signage for several businesses and part of the one of the three solar arrays at the Iron Horse Park site (Massachusetts). Bottom: Pan Am Railways supports about 200 jobs at the Iron Horse Park site (Massachusetts).

KEARSARGE METALLURGICAL CORP.

PLANNING FOR FUTURE USES FACILITATES COMMERCIAL AND INDUSTRIAL REUSE

The 9-acre Kearsarge Metallurgical Corp. (KMC) Superfund site is in Conway, New Hampshire, on the north bank of Pequawket Pond. From the mid-1960s through the early 1980s, KMC made stainless steel valves and other materials on site. Facility operations included the disposal of hazardous wastes in piles on site, the discharge of waste solvents into a septic system and the storage of wastes in rusted drums. These practices contaminated site groundwater and soil. EPA added the site to the NPL in 1984.

EPA and the New Hampshire Department of Environmental Services made sure to consider the site's potential future use early in the cleanup process and completed a reuse assessment in 2004. The assessment found that the site would likely support commercial or industrial uses in the future. Cleanup included the removal of waste pile materials, other contaminated source materials and contaminated soil, and groundwater treatment. Cleanup also included land and groundwater use restrictions and treatment of contaminated soil in the forested wetland area on site. The cleanup restored the wetland habitat and helps protect nearby Pequawket Pond, a local recreation amenity. Groundwater monitoring is ongoing.

With the site sitting idle for decades, the town of Conway was eager to support its return to productive use. The town took ownership of the site in 2012 and began preparing the property for reuse. Part of the original KMC building posed a hazard and the town demolished it. In 2013, the town sold the property to a new owner, who restored the remaining original KMC buildings and converted the former groundwater treatment building into an automobile workshop. The property's transformation spurred activity in the surrounding industrial park, an important local economic resource that had mostly stood vacant. Within a 1-mile radius of the site, 39% of residents are considered low income. Today, three businesses are on site – a towing company, a heating business, and a farm equipment and diesel truck repair facility. These businesses provide about \$150,000 in estimated annual employee income and generated about \$613,000 in estimated annual sales.



Figure 30. The Kearsarge Metallurgical Corp. site's former groundwater treatment building is now home to an automobile workshop (New Hampshire).

PETERSON/PURITAN, INC.

PRESERVING CULTURAL HERITAGE WHILE SUPPORTING CONTINUED USE

The 500-acre Peterson/Puritan, Inc. Superfund site is located in Lincoln and Cumberland, Rhode Island. The site spans 2 miles of recreational, commercial and industrial property along the banks of the Blackstone River. Past site operations included aerosol packaging, chemical manufacturing, warehousing and landfilling. Improper waste management and chemical spills contaminated site soil and groundwater. EPA added the site to the NPL in 1983.

Cooperation among EPA, the Rhode Island Department of Environmental Management, and other stakeholders resulted in the successful cleanup and reuse of parts of the site. By remaining open during cleanup, site businesses continue to support jobs that generate revenues, income and local spending. Nearly 4,000 people live within 1 mile of the site. Today, site businesses employ more than 740 people and contribute an estimated \$37 million in annual employment income. In 2021, site businesses generated



Figure 31. The 30 Martin Street building at the Peterson/Puritan, Inc. site is home to several small businesses (Rhode Island).

over \$85 million in estimated annual sales. In 2021, the combined value of site property parcels was over \$27 million, resulting in the generation of nearly \$397,952 in annual taxes.

Cooperation between EPA and site stakeholders led to the deletion of 19.8 acres from the site. In 2005, landowners planned to redevelop the Macklands and Berkeley properties for residential uses. After environmental investigations, EPA, with concurrence from the state of Rhode Island, determined that the release impacting the site poses no significant risk to human health or the environment at the Macklands and Berkeley properties, as these properties were not affected by site-related contamination. In May 2005, EPA deleted these two properties from the site. This step helped facilitate the successful redevelopment of the area. Today, the Berkeley Commons and River Run subdivisions are located there.



Figure 32. Former factory spaces host apartments on part of the site now deleted from the NPL.

The site also provides recreation and cultural opportunities, including the Blackstone River State Park and Bikeway. The cleanup contributes to the rehabilitation of the Blackstone River and to the preservation of a designated national heritage corridor. In 1986, the Blackstone River State Park became a key part of the larger Blackstone River Valley National Heritage Corridor. The corridor is a 46-mile network of parks and natural areas stretching from Providence to Worcester.

A second phase of cleanup is currently in the design stage, consistent with EPA's 2015 cleanup decision. The cleanup is focused on three parcels along the Blackstone River, including a landfill, island, and a vacant abandoned lot. EPA sponsored a reuse assessment for the site, collaborated with the towns of Cumberland and Lincoln, held community workshop and municipal stakeholder discussions in 2016, and prepared a 2018 reuse assessment plan summarizing its findings. The assessment highlights the potential to link the river and existing bikeway with recreation and park reuse opportunities at the site's capped landfill areas. EPA continues to work with potentially responsible parties and municipal stakeholders to finalize site cleanup plans and explore reuse opportunities.

RAYMARK INDUSTRIES, INC. LATEST REDEVELOPMENT EFFORTS FOCUS ON REUSE OF A FORMER BALL FIELD

The Raymark Industries, Inc. Superfund site includes over 500 acres near the Housatonic River in Stratford, Connecticut. From 1919 to 1989, Raymark Industries, Inc. (Raymark) and its predecessors made automotive brakes, clutch parts and other friction components on a 34-acre area. The facility disposed of manufacturing wastes and wastewater in lagoons on the facility property. Raymark also used industrial waste as fill material to cover wetlands to expand the factory and later gave the waste away as free fill, which was used all over town at homes, schools, businesses and a nearby ballfield. These practices contaminated site groundwater and soil. EPA added the site to the NPL in 1995.

EPA considered future use during the development of cleanup plans for the site. The area is centrally located with nearby access to Interstate 95, attracting developers interested in commercial redevelopment. EPA coordinated closely with a developer, their engineer and U.S. Army Corps of Engineers to make sure the remedy at the former facility would be compatible with commercial projects. Cleanup included decontamination and demolition of buildings, capping of contaminated soil, and institutional controls.



Figure 33. Cleanup underway in 2020 at Raybestos Field at the Raymark Industries, Inc. site (Connecticut).

After cleanup, a consortium of companies acquired the site property at a bankruptcy auction in January 2000. In 2002, these companies began work on the Stratford Crossing Shopping Center. Construction finished in 2005. Today, the shopping center is a bustling commercial area home to regional and national companies, including Walmart, Home Depot, ShopRite, Subway and Webster Bank. More than 10,000 people live within 1 mile of the site. On-site businesses employ over 1,100 people, contribute about \$57 million in estimated annual employee income and generate over \$273 million in estimated annual sales. In 2020, the total value of site properties exceeded \$120 million, resulting in the generation of nearly \$2.4 million in local property taxes.

In 2015, the town announced reuse plans for Raybestos Field, a former ball field. Currently, waste from several properties is being consolidated and capped in place. The cap's design will support reuse, including a building. The town is working with developers and EPA on potential redevelopment plans for other parts of the site. In 2022, EPA committed \$33 million under the Bipartisan Infrastructure Law (BIL) to ensure cleanup at the site. The BIL will fund continued soil excavation, disposal, and capping of ball fields in a faster and more efficient manner, and construct necessary storm water management features.

SOLVENTS RECOVERY SERVICE OF NEW ENGLAND

ESTABLISHING RAILS-TO-TRAILS BIKE PATH AND PARKING FOR RECREATIONAL USE

The Solvents Recovery Service of New England (SRSNE) Superfund site is in Southington, Connecticut. It includes a 4-acre former operations area and a 42-acre plume of contaminated groundwater. From 1955 to 1991, a hazardous waste treatment and storage facility operated at the site. During operations, spills occurred and operators stored process wastes in unlined lagoons. These practices contaminated soil and groundwater. In 1979, the town of Southington found contamination in two public water supply wells downgradient of the site. The town closed these wells. EPA added the site to the NPL in 1983.

In 1992, EPA removed 19 drums of contaminated materials from the site to address immediate threats to human health. The site's long-term cleanup includes groundwater containment and treatment, consolidation and capping of contaminated soil and sediment, treatment of contaminated soil in place, land use and groundwater restrictions, and long-term monitoring. Thermal treatment removed 500,000 pounds of volatile organic compounds from the soil in the former solvent recycling operations area. The U.S. Fish and Wildlife Service provided nearly \$800,000 from natural resource damage settlements at the site and the Old Southington Landfill Superfund site for the removal of two dams and an exposed inactive water line to expand the Upper Quinnipiac River recreational canoe trail.

The site's PRPs completed remedy construction in 2017. Long-term groundwater monitoring and maintenance of the landfill cap are ongoing. A 53-kilowatt solar array, installed on the capped area in 2017, generates energy needed to power the groundwater hydraulic containment system. It will also be used to support future operation and maintenance activities at the site.



Figure 34. Top: Access point to the Farmington Canal Heritage Trail at the SRSNE site (Connecticut). Image used with permission of De Maximis, Inc. Bottom: Solar array above cap at the site.

Throughout the cleanup, EPA, the Connecticut Department of Energy and Environmental Protection, and the site's PRPs worked on ways to enhance the project and provide long-term community benefits. Nearly 6,000 people live within 1 mile of the site. Stakeholders looked for ways to support recreation opportunities in Southington and help expand the local rails-to-trails corridor. Two miles of the trail in the center of Southington and another 2-mile stretch on the southern side of town were already complete. The site's PRPs expanded the trail system across the on-site cap and built a trail parking area. The parking area also provides overflow parking for the nearby Southington Police Station. In September 2017, EPA, the state, stakeholders and community members held a ribbon-cutting ceremony to celebrate the completion of the new section of the nearly 80-mile Farmington Canal Heritage Trail that crosses the site.

SUTTON BROOK DISPOSAL AREA SOLAR PROJECT PROVIDES REVENUE AND ENERGY

The 100-acre Sutton Brook Disposal Area Superfund site is in eastern Tewksbury, Massachusetts, with a small part of the site extending into the neighboring town of Wilmington. Sutton Brook runs east to west across the former landfill, which was also alternately known as Rocco's Landfill or Tewksbury Town Dump. Waste disposal at the unlined landfill started in the 1950s. The Tewksbury Board of Health ordered the closure of the landfill in 1979, though waste disposal is believed to have continued until around 1988. The main sources of the contamination were two landfill areas separated by Sutton Brook and an area where drums were buried. EPA added the site to the NPL in 2001.

In 2000, prior to listing the site on the NPL, EPA excavated and removed highly contaminated soil and drums. In 2007, EPA selected a final cleanup plan, including removal of soil and sediment, consolidation of this material in on-site landfills, landfill capping, groundwater treatment, land and water use restrictions, and wetlands restoration. The site PRPs began construction of the remedy in 2014 and completed it in 2016. Groundwater treatment is ongoing.

In 2018, the town of Tewksbury announced it had signed a letter of intent with Syncarpha Capital, a private equity firm with prior experience redeveloping landfill sites for solar projects. Town leaders expressed enthusiasm that the project would increase renewable energy use in the region and provide revenue for the town through a portion of the lease payments. In 2020, MassDEP approved a permit for the solar project, determining that it would not disturb the cap and other site maintenance or monitoring activities. In 2022, the company announced it had received permission to operate the solar project.

The project consists of three, ballast-mounted solar arrays that have a capacity of 3.6 megawatts and will provide power to the nearby city of Everett, Tufts University and National Grid, a private utility company that serves customers in Massachusetts, New York and Rhode Island. The projected green energy production of this solar project is equivalent to avoiding more than 3,000 tons of carbon dioxide, or the greenhouse gas emissions of around 700 gas-powered passenger vehicles driven for one year.

Cleanup has also allowed for the protection and restoration of wetland and stream habitat on site, which provides myriad local benefits, including habitat for plants and animals. Effective cleanup and collaboration between EPA, MassDEP, the town of Tewksbury and the developer have allowed for the beneficial reuse of the site and a step toward a greener future for energy production in the region.



Figure 35. An aerial view of the 3.6-megawatt solar array on the Sutton Brook Disposal Area site (Massachusetts).

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REDEVELOPMENT ON THE HORIZON IN REGION 1

MOHAWK TANNERY MIXED-USE DEVELOPMENT TO SPUR GROWTH

The Mohawk Tannery Superfund site is in Nashua, New Hampshire. From 1924 to 1984, a facility produced tanned hides for leather on site. The tannery produced sludge and acidic residues that were put in two lagoons and other areas on the site. Past waste disposal practices at the site pose a risk to human health and the environment, including the adjacent Nashua River.

EPA's cleanup to date has included removal and off-site disposal of asbestos-containing material, drums and tanks from the former tannery building. EPA demolished the former tannery building in 2012. Future cleanup work at the site will include excavation of contaminated soil, landfill material and asbestos containing material, and consolidation of waste in a new containment cell where hazardous tannery wastes are located, followed by site restoration.

In 2021, EPA reached an agreement with local developer Blaylock Holdings regarding further cleanup and beneficial reuse of the site. EPA, the city of Nashua and Blaylock Holdings will share the costs of cleanup, saving EPA an estimated \$8 million. Blaylock Holdings, with assistance from another development company, Thorndike Development and Construction, will lead all cleanup activities and be partially reimbursed for its costs.

About 11,500 people live within 1 mile of the site. The city is in the process of rezoning the site area to support future redevelopment opportunities. After cleanup, Blaylock Holdings and Thorndike Development and Construction plan to redevelop the site as a mixed-use project with commercial and residential space, providing opportunities for economic growth and much-needed housing in the area.



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

ELIZABETH MINE REMEMBERING THE PAST, LEARNING FOR THE FUTURE

The Elizabeth Mine Superfund site is in Strafford and Thetford, Vermont. Around 200 people live within 1 mile of the site. From the early 1800s to 1958, copper mining took place at the site, leaving behind mine tailings and waste rock, which generate acid mine drainage. The acid mine drainage and erosion of mine waste into streams contaminated sediment, surface water and groundwater. EPA added the site to the NPL in 2001.

Cleanup included consolidation and capping of contaminated mine wastes, construction of a water treatment system, stabilization of the tailings dam and construction of surface water diversion channels. During cleanup, EPA also restored 15 acres of wetlands for ecological reuse. As a result of the cleanup, the state of Vermont delisted 4 miles of the West Branch of the Ompompanoosuc River and parts of Lord Brook from the Clean Water Act's impaired waters list.

In 2017, a developer installed a 5-megawatt solar array on site. The project supplies electricity to the Green Mountain Power grid and produces enough energy to power about 1,200 homes. In 2021, EPA completed cleanup and transferred remaining site responsibilities to the Vermont Agency of Natural Resources. EPA also worked with the Elizabeth Mine Historic Preservation Trust, Stafford Historical Society, Vermont Department of Environmental Conservation, and Vermont Division of Historic Preservation to develop and install interpretive panels at the Site.



Figure 37. This historical marker tells the story of the area's rich mining history and Superfund cleanup at the Elizabeth Mine site (Vermont).

NEW BEDFORD

BRINGING NEW LIFE TO A FORMER DEWATERING FACILITY

The 18,000-acre New Bedford Harbor Superfund site is in New Bedford, Massachusetts. At two shoreline facilities located adjacent to the site, companies made capacitors and other electronics containing polychlorinated biphenyls (PCBs) from 1940 to the late 1970s. Operations from these two facilities discharged industrial wastes into the harbor, resulting in sediment contamination of the estuary from the upper Acushnet River into Buzzards Bay. EPA added the site to the NPL in 1983. Over 75,000 people live within 1 mile of the site.

Ongoing cleanup activities include the removal and disposal of contaminated shoreline soil, saltmarshes and mudflats at approved off-site facilities, and replanting of impacted saltmarsh areas with thousands of native grasses, shrubs and trees. To aid in cleanup, EPA built a 5-acre shoreline sediment dewatering facility on the waterfront. Subtidal dredging (below the low tide line) finished in March 2020 at which time the dewatering facility was no longer needed for cleanup.



Figure 38. EPA's former dewatering facility for the New Bedford site (Massachusetts) cleanup, now in use as a staging area for construction of the port's North Terminal.

In December 2020, after extensive decontamination, EPA transferred the former dewatering facility to the city of New Bedford. Starting in April 2021, the city used the facility as a COVID-19 vaccination site for seafood industry workers and community members. The facility vaccinated up to 800 to 1,000 people per day. 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 city ultimately plans to use the former dewatering facility as a heavy duty, multi-purpose port facility, possibly including an off-shore wind energy project. With a 55,000-square-foot warehouse, berthing space for freighters and commercial fishing vessels, and a rail spur that connects to the city's rail yard, it is an ideal port facility located on the city's working waterfront.

In 2022, EPA announced with MassDEP that the site had received \$72 million in Bipartisan Infrastructure Law (BIL) funding. These BIL funds will allow completion of all remaining remediation at this mega site by December 2025 including: four shoreline intertidal zones; offsite disposal of RCRA/TSCA dredged material stored at EPA's Sawyer Street facility; capping of the pilot CDF (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.

“ For decades, the PCB contamination of New Bedford Harbor has been an environmental blight on our region and a barrier to investment in the Port of New Bedford. The acceleration of the cleanup will pave the way for more maritime investment and jobs in the Port, and open up recreational opportunities for our residents, especially in the Near North End. We are grateful for the Biden Administration's commitment to get this project over the goal line, which will improve the City's quality of life for generations to come. ”
- Jon Mitchell, Mayor of New Bedford

WELLS G&H WOBBURN LANDING SPURS LOCAL ECONOMIC GROW

The Wells G&H site is in Woburn, Massachusetts. For more than a century, Woburn was home to many tanneries and other heavy industries. In 1979, contamination was found in two of Woburn's municipal drinking water wells. EPA added the site to the NPL in 1983. Cleanup included treatment of contaminated soil, excavation and disposal of debris and contaminated soil, extraction and treatment of source area groundwater, removal of contaminated sediment and restoration. Cleanup is ongoing.

In 2000, EPA awarded the city a \$55,000 grant to complete a comprehensive land use plan for the site. Since the completion of the plan in 2005, an array of successful reuse projects has followed. Site reuses include Holland Arena, an ice arena for local hockey leagues, and several other commercial and retail businesses. The Aberjona Nature Trail, which is a nature area, wetland and recreation resource, opened in 2017 along the Aberjona River. Woburn Landing, a commercial and retail complex, was completed in 2019 and includes Homewood Suites and Hampton Inn hotels and three restaurants, including 110 Grill and Chick-Fil-A. Most recently, the owner of the UniFirst property built a rooftop solar array on top of their commercial building. At full capacity, the rooftop array generates 310 kilowatts of energy.



Figure 39. Commercial area at the W.R. Grace property at the Wells G&H site (Massachusetts).

The Aberjona Nature Trail, which is a nature area, wetland and recreation resource, opened in 2017 along the Aberjona River. Woburn Landing, a commercial and retail complex, was completed in 2019 and includes Homewood Suites and Hampton Inn hotels and three restaurants, including 110 Grill and Chick-Fil-A. Most recently, the owner of the UniFirst property built a rooftop solar array on top of their commercial building. At full capacity, the rooftop array generates 310 kilowatts of energy.

The cleanup and redevelopment of the 330-acre site serves as a model of cooperation among EPA, state officials, responsible parties and the community. Nearly 13,000 people live within one mile of the site. The site now supports nearly 400 businesses that generate over \$575 million in annual sales and employ over 3,000 people earning nearly \$295 million in annual wages. Site property parcels have a total value of over \$238 million, according to the most recent data, generating more than \$4.8 million in annual property taxes.

CONCLUSION

The redevelopment of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among EPA, tribes, state agencies, local governments, communities, PRPs, 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, midsize developments and small businesses providing services to surrounding communities. EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Site Redevelopment Resources

EPA Region 1 Superfund Redevelopment Program 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-superfund-sites-reuse

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

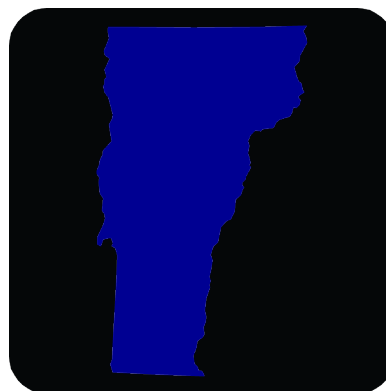
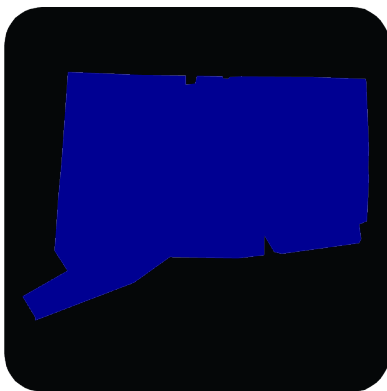
EPA Office of Site Remediation Enforcement Website: tools that address landowner liability concerns www.epa.gov/enforcement/landowner-liability-protections



Figure 40. The James Anderson Regional Transportation Center opened at the Industri-Plex Superfund site in 2001 (Massachusetts).

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STATE REDEVELOPMENT PROFILES





CONNECTICUT REDEVELOPMENT PROFILE

EPA partners with the Connecticut Department of Energy & Environmental Protection to oversee the investigation and cleanup of Superfund sites in Connecticut. Connecticut has 16 Superfund sites with either new uses in place or uses remaining 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

EPA has collected economic data for 68 businesses and organizations operating at 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 (2021)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	5	2	2	\$6 million	18	\$2 million
<i>In Continued Use</i>	2	2	4	\$43 million	184	\$12 million
<i>In Reuse and in Continued Use</i>	9	6	62	\$336 million	1,436	\$72 million
Totals	16	10	68	\$385 million	1,638	\$86 million

^a One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.

^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^c Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for eight Superfund sites in reuse or continued use in Connecticut. These sites span 126 property parcels and 924 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)
\$63 million	\$172 million	\$235 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 2020 to 2021 for all data collected.

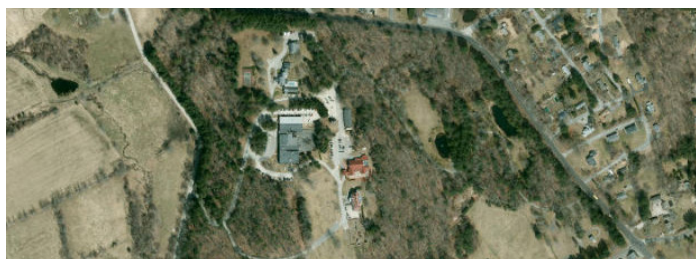


Figure 41. Aerial view of the Linemaster Switch Corp. site (Connecticut). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS user community.

Did You Know?

Since 1952, an electrical and pneumatic footswitch and wiring harness manufacturer has operated at the Linemaster Switch Corp. Superfund site in Woodstock, Connecticut. Past disposal practices at the facility resulted in soil, sediment and groundwater contamination. Cleanup and ongoing groundwater treatment facilitated the continued use of the manufacturing facility and an inn on site. Site businesses employ 175 people. They provide \$12 million in estimated annual employee income and generate over \$42 million in estimated annual sales.



MAINE REDEVELOPMENT PROFILE

EPA partners with the 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 remaining 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

EPA has collected economic data for five businesses and organizations operating at 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 (2021)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	4	3	5	\$28 million	147	\$4 million
<i>In Continued Use</i>	1	0	-	-	-	-
<i>In Reuse and in Continued Use</i>	5	0	-	-	-	-
Totals	10	3	5	\$28 million	147	\$4 million

^a Three sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^c Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for four Superfund sites in reuse or continued use in Maine. These sites span 20 property parcels and 169 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)
\$517,000	\$2 million	\$2 million	\$32,000

^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 2021 for all data collected.

^b Total land value and total improvement value do not sum to total property value presented due to rounding.



Figure 42. Corundel Commons senior housing was one of the first reuses at the Eastland Woolen Mill site (Maine).

Did You Know?

Improper disposal practices at the Eastland Woolen Mill Superfund site in Corinna, Maine, resulted in soil, sediment and groundwater contamination. EPA coordinated closely with the community to support returning this well-located area to productive use. Today, the site is home to community recreation spaces, the Corinna War Memorial, a community bandstand, a senior living community, and the historic Odd Fellows Building, which hosts a country store and restaurant. Several other site properties are available for reuse.



MASSACHUSETTS REDEVELOPMENT PROFILE

EPA partners with MassDEP to oversee the investigation and cleanup of Superfund sites in Massachusetts. Massachusetts has 36 Superfund sites with either new uses in place or uses remaining 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

EPA has collected economic data for 526 businesses and organizations operating at 13 sites in reuse or continued use in Massachusetts.

Table 7. Detailed Site and Business Information for Sites in Reuse and Continued Use in Massachusetts (2021)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	13	4	4	\$63 million	34	\$2 million
<i>In Continued Use</i>	6	0	-	-	-	-
<i>In Reuse and in Continued Use</i>	17	9	522	\$1.2 billion	7,270	\$696 million
Totals	36	13	526	\$1.2 billion	7,304	\$698 million

^a Eleven sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^c Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for 16 Superfund sites in reuse or continued use in Massachusetts. These sites span 496 property parcels and 4,214 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 (16 sites)
\$287 million	\$512 million	\$799 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 2020 to 2022 for all data collected.



Figure 43. Aerial view of the Cannon Engineering Corp. (CEC) site (Massachusetts). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS user community.

Did You Know?

Mishandling of waste and reported violations led to soil and groundwater contamination at the Cannon Engineering Corp. (CEC) Superfund site in Bridgewater, Massachusetts. Cleanup included removal of contaminated soil, buildings and structures, wetlands restoration and institutional controls. A cellular communications tower has been on site since 1998. Today, an appliance manufacturer and retail facility operate on site. They generate nearly \$63 million in estimated annual sales and almost \$740,000 in estimated annual employee income.



NEW HAMPSHIRE REDEVELOPMENT PROFILE

EPA partners with the New Hampshire Department of Environmental Services to oversee the investigation and cleanup of Superfund sites in New Hampshire. New Hampshire has 11 Superfund sites with either new uses in place or uses remaining 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

EPA has collected economic data for 13 businesses and organizations operating at 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 (2021)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	5	1	1	-	-	-
<i>In Continued Use</i>	0	0	-	-	-	-
<i>In Reuse and in Continued Use</i>	6	3	12	\$167 million	586	\$33 million
Totals	11	4	13	\$167 million	586	\$33 million

^a One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.

^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^c Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for seven Superfund sites in reuse or continued use in New Hampshire. These sites span 348 property parcels and 713 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 (6 sites)
\$11 million	\$97 million	\$108 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 2022 for all data collected.



Figure 44. A Dunkin' Donuts is part of the shopping complex at the Tinkham Garage site (New Hampshire).

Did You Know?

In 1978 and 1979, discharges from washing out septic tank trucks contaminated groundwater and surface water at the Tinkham Garage Superfund site in Londonderry, New Hampshire. Cleanup included groundwater and soil treatment, connection of a condominium complex to the municipal water supply, new sewer line installation and monitoring. Today, several residential properties, including a 125-unit senior housing development, and a shopping complex remain on site. Site businesses employ nearly 250 people. They provide over \$8 million in estimated annual employee income and over \$92 million in estimated annual sales.



RHODE ISLAND REDEVELOPMENT PROFILE

EPA partners with the 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 remaining 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

EPA has collected economic data for 55 businesses and organizations operating at six 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 (2021)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	4	2	4	\$8 million	72	\$4 million
<i>In Continued Use</i>	0	0	-	-	-	-
<i>In Reuse and in Continued Use</i>	6	4	51	\$86 million	750	\$37 million
Totals	10	6	55	\$94 million	822	\$41 million

^a Two sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^c Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for four Superfund sites in reuse or continued use in Rhode Island. These sites span 66 property parcels and 903 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)
\$135 million	\$24 million	\$159 million	\$3 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 2018 to 2021 for all data collected.



Figure 45. View of the truck body assembly plant operating at the Western Sand & Gravel site (Rhode Island).

Did You Know?

Improper waste disposal caused soil and groundwater contamination at the Western Sand & Gravel Superfund site in Burrillville and North Smithfield, Rhode Island. Cleanup included groundwater treatment and provision of an alternate water supply, waste removal, cap installation and institutional controls. Monitoring is ongoing. Today, a truck body assembly plant operates on site. It generates over \$2 million in estimated annual employee income and about \$7.5 million in estimated annual sales.



VERMONT REDEVELOPMENT PROFILE

EPA partners with the Vermont Department of Environmental Conservation to oversee the investigation and cleanup of Superfund sites in Vermont. Vermont has six Superfund sites with either new uses in place or uses remaining 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

EPA has collected economic data for six businesses and organizations operating at 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 (2021)

	Sites	Sites with Businesses	Businesses ^a	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	1	1	1	-	-	-
<i>In Continued Use</i>	1	1	1	\$647,000	10	\$965,000
<i>In Reuse and in Continued Use</i>	4	3	4	\$19 million	117	\$11 million
Totals	6	5	6	\$20 million	127	\$12 million

^a Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^b Annual sales figures are not available (or applicable) for every business.

Property Values and Property Tax Revenues

EPA has collected property value data for three Superfund sites in reuse or continued use in Vermont. These sites span 13 property parcels and 103 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 (3 sites)
\$3 million	\$15 million	\$18 million	\$319,000

^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 2022 for all data collected.



Figure 46. An electronic components manufacturer operates on Tansitor Electronics, Inc. site (Vermont).

Did You Know?

Beginning in 1956, various owners made electrical components on part of the Tansitor Electronics, Inc. Superfund site in Bennington, Vermont. Past disposal practices at the site contaminated soil, sediment, groundwater and surface water. Cleanup included management of groundwater migration and monitoring. An electronic components manufacturer operates on site, generating \$15 million in estimated annual sales.

SOURCES

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 EPA's Superfund Redevelopment Program case studies and other resources are included below.

EPA Resources

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Photos

Image of Elizabeth Mine solar facility used with permission of Weston and Sampson, Conti Solar and Elizabeth Mine Solar I, LLC.

Image of Gallup's Quarry Greenleaf biomass facility used with permission of Greenleaf Power, LLC.

Image of Higganum Cove used with permission of Connecticut Department of Energy and Environmental Protection.

Image of Pine Street Canal planned future use rendering used with permission of Silt Botanica.

Image of Rose Hill Regional Landfill used with permission of Kearsarge Energy.

Image of Solvents Recovery Service of New England recreational trail used with permission of De Maximis Inc.

Image of South Weymouth Naval Air Station used with permission of LSTAR Ventures.

Image of West Kingston Town Dump/URI Disposal Area used with permission of Kearsarge Energy.

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) (www.dnb.com) database. 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, EPA used the Reference Solutions database (www.thereferencegroup.com). In cases where Reference Solutions did not include employment and sales volume for on-site businesses, EPA used the Manta database (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.

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.

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, EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To estimate the annual income earned from jobs at site businesses, 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 2021. Estimated annual employment income was calculated using 2021 jobs data and BLS average weekly wage data for those jobs from 2020 (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

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 2018 to 2022 where date information was provided. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

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REUSE SUMMARY PROFILES

CONNECTICUT REUSE SUMMARY PROFILES

National Priorities List Sites

Barkhamsted-New Hartford Landfill

The 97.8 acre Barkhamsted-New Hartford Landfill Superfund site is located in the towns of Barkhamsted and New Hartford, 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 and subsequent investigations further identified the nature and extent of the contamination. EPA added the site to the National Priorities List (NPL) in 1989. Remedy construction began in 1999 and consisted of: a landfill cap; a runoff & 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.



Figure 47. The Barkhamsted-New Hartford Landfill site (Connecticut).

Of the 97.8 acres, approximately 13 acres consist of the capped landfill and appurtenances; a second part of the site is currently used as a transfer station and recycling center for the Regional Refuse Disposal District No. 1 (RRDD1); and a third part of the Site is used as an active 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 located 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, EPA placed the site on the National Priorities List (NPL). Cheshire Associates, under state and EPA orders, cleaned up the site by removing some contaminated soil. EPA extended the public water supply to residents with drinking water wells affected by site contamination. Carten Controls relocated to the site in 1996. After cleanup, EPA took the site off the NPL in 1997. Carten Controls continues to operate its semiconductor parts manufacturing facility on site.



Figure 48. 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

The Durham Meadows Superfund site is located in Durham, Connecticut. Merriam Manufacturing Company and Durham Manufacturing Company made metal cabinets, boxes and other items on site from 1851 until 1998. Improper storage and disposal practices contaminated site 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.

EPA placed the site on 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 is expected to be completed in 2023. CT DEEP and 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 present on site. The site is also home to a volunteer ambulance corps, the District Board of Education, churches and many businesses.



Figure 49. Construction of an alternative water supply to affected properties is underway at the Durham Meadows site (Connecticut).

Gallup's Quarry

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 site soil and groundwater contamination. After the Connecticut Department of Energy & Environmental Protection removed waste drums and contaminated soil, EPA placed the site on the National Priorities List (NPL) in 1989. 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.

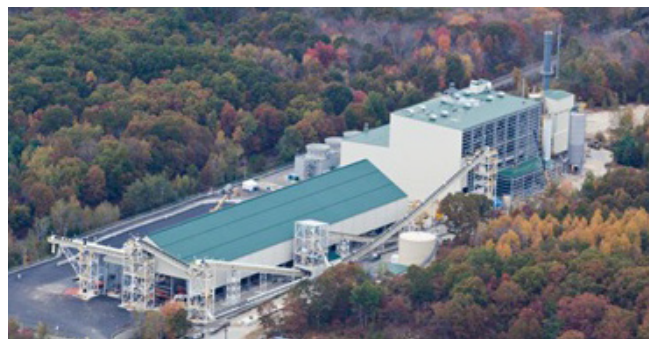


Figure 50. The Greenleaf biomass facility at the Gallup's Quarry site (Connecticut). Image used with permission of Greenleaf Power LLC.

Today, the Plainfield Renewable Energy biomass facility is located 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, while 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.

Kellogg-Deering Well Field

The Kellogg-Deering Well Field Superfund site is located in Norwalk, Connecticut. The site consists of a 10-acre municipal well field and the adjacent upland area that has 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 elevated levels of trichloroethylene (TCE) at the well field. Afterwards, the city shut down wells with unacceptable levels of TCE. Inspections by the Connecticut Department of Energy & Environmental Protection between 1975 and 1980 found several hazardous chemicals in site groundwater and soils.



Figure 51. Commercial space and groundwater treatment building at the Kellogg-Deering Well Field site (Connecticut).

EPA placed the site on the National Priorities List (NPL) in September 1984. Cleanup included installing 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 identified the primary source of contamination was located about a half-mile east of the well field along Main Avenue. Cleanup of source-area soils and groundwater began in 1996 and soils met cleanup goals in 2006. Groundwater remediation in the source area is ongoing. The First District Water Department currently operates the well field and provides water to more than 40,000 residents in Norwalk and small areas of surrounding communities each day. Commercial and residential uses remain onsite. Commercial uses include office space, a shopping plaza, a car wash and automotive repair facilities.

Linemaster Switch Corp.

The 45-acre Linemaster Switch Corporation Superfund site is located in Woodstock, Connecticut. Electrical and pneumatic foot switches and wiring harness manufacturing has occurred on site since 1952. Site operations use chemicals, paint and thinners. Past operation practices resulted in groundwater, sediment, surface water and soil contamination.

In 1990, EPA added the site to the National Priorities List (NPL). Cleanup activities include soil and groundwater treatment. The groundwater treatment system remains in operation. Today, the Linemaster Switch Corporation continues to manufacture electrical power switches, air valves, electrical cord sets and metal name plates on site. Several residences, a banquet facility, a restaurant and an inn are also located on site.

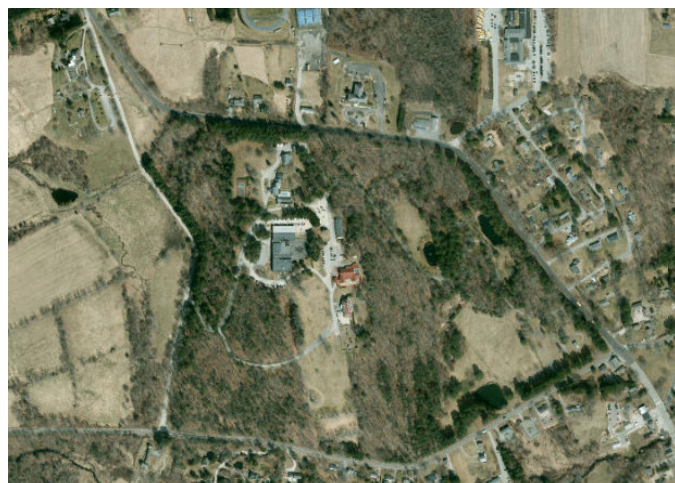


Figure 52. Aerial view of the Linemaster Switch Corp. site (Connecticut). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS user community.

Nutmeg Valley Road

The 28-acre Nutmeg Valley Road Superfund site is located in Wolcott, Connecticut. Beginning in the 1940s, metalworking and finishing shops operated 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, EPA placed the site on 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. 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 the site's removal from the NPL as factors that led to the construction of a



Figure 53. Aerial view of the Nutmeg Valley Road site (Connecticut). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS user community.

\$2 million state-of-the-art greenhouse next to the site. The town of Wolcott expects these factors to encourage more commercial and industrial development at the site. Recently, a new commercial building for Ultimate Services Professional Grounds Management was constructed at the site.

Old Southington Landfill

The 13-acre Old Southington Landfill Superfund site is located in Southington, Connecticut. The municipal landfill operated from the early 1920s until 1967. Closure activities included compacting loose waste, covering the landfill with clean soil, and reseeding the area with grass. Between 1973 and 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 revealing groundwater, soil, sediment, and surface water contamination at the landfill.

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 were placed at the landfill to prevent damage to the cap and at two downgradient properties keep vapors from landfill contaminated groundwater from migrating through cracks into the buildings.

The northern part of the landfill was developed into a passive recreational park where people can walk their dogs, watch wildlife and canoe in the adjacent Black Pond. The southern part of the landfill is fenced with no public access. All remedial activities have been completed. EPA deleted the site from the NPL in 2018. Long-term groundwater monitoring and Five-Year Reviews continue to take place to ensure 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.

Precision Plating Corp.

The Precision Plating Corporation Superfund site is located in Vernon, Connecticut. Since 1969, the Precision Plating Corporation has conducted chromium plating operations. The facility is one of several tenants in the 3-acre Hillside Industrial Park, a small industrial complex. In 1979, Vernon's Health Department found chromium contamination in the groundwater well serving the Hillside Industrial Park. The well was removed from service and past releases are understood to be primarily associated with improper waste storage and disposal practices and damage to waste storage containers. EPA placed the site on the National Priorities List (NPL) in 1989.

Initial cleanup activities included connecting the Hillside Industrial Park and nearby residences to a public water supply, removing contaminated soil and operation and monitoring of a groundwater treatment system. The Connecticut Department of Energy and Environmental Protection (CT DEEP) was initially designated the lead agency and oversaw investigation and cleanup activities with EPA's support.



Figure 54. The northern portion of the capped Old Southington Landfill site, used by the community for passive recreation (Connecticut).

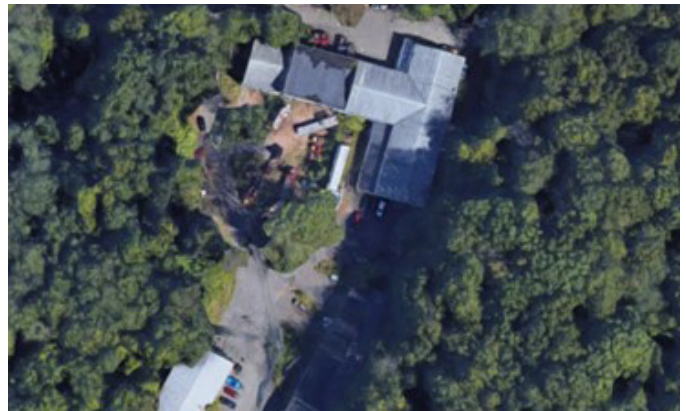


Figure 55. Aerial view of the Hillside Industrial Park operating at the Precision Plating Corp. site (Connecticut). Sources: Imagery ©2022 Google, Imagery ©2022 Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2022.

EPA became the lead agency in 2011. EPA is currently working with the support of CT DEEP to complete a Remedial Investigation/Feasibility Study (RI/FS) to support a final cleanup decision.

Precision plating continues to operate at a limited capacity. Other light industrial facilities, including a specialized machine shop, also operate at the Hillside Industrial Park.

Raymark Industries, Inc.

The Raymark Industries, Inc. Superfund site includes over 500 acres near the Housatonic River in Stratford, Connecticut. From 1919 until 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.



Figure 56. Shopping center at the Raymark Industries, Inc. site (Connecticut).

EPA placed the site on the National Priorities List (NPL) in 1995. Cleanup activities included removing contaminated soil and waste from several residential properties, capping the former manufacturing property, installing vapor mitigation systems in more than 100 homes, and temporarily covering and restricting access to other properties. People near the site do not currently use groundwater for drinking purposes.

EPA considered reuse in the construction of the cap over the former 34-acre manufacturing property. The cap allowed for redevelopment of the property while ensuring the remedy remained protective. EPA awarded the site a Superfund Redevelopment Program pilot grant in 2001. The Stratford Crossing Shopping Center, completed in 2003, currently occupies the site. The shopping center 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 continue on the other contaminated properties around town. In 2015, local and federal partners, including EPA, completed a removal action at Sikorsky Memorial Airport. The cleanup realigned Main Street to facilitate the extension of an airport runway safety zone. In 2015, 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 EPA in 2016. The cap is being designed by EPA to support a commercial or municipal building based on the town's needs. Active cleanup of the additional contaminated properties began in September 2020. Commercial properties will be restored to existing use including an office building, dry cleaner, karate studio, liquor store, boat yard and a pair of car dealerships. Open spaces, wetlands and public parks will be restored to their natural state.

Scovill Industrial Landfill

The 25-acre Scovill Industrial Landfill Superfund site is located 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 portion of the site. The northern portion of the site is an undeveloped 6.8-acre parcel known as the Calabrese parcel. In 1988, residential development that was underway at the Calabrese parcel uncovered industrial wastes. The



Figure 57. The undeveloped parcel at the Scovill Industrial Landfill site (Connecticut).

Connecticut Department of Energy & Environmental Protection (CT DEEP) subsequently 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.

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. A Record of Decision (ROD) was signed on September 30, 2013 followed by an Explanation of Significant Differences (ESD) signed on September 21, 2016, that further refined the remedy.

The remedy consists of excavation of contaminated soils and consolidation of contaminated soil under a two-foot thick, 1.4-acre soil cap on the Calabrese property. Excavated soils that exceed the State of Connecticut Pollutant Mobility Criteria will be excavated down to the water table and disposed off site at an approved licensed facility. The excavated areas will be backfilled with clean fill and restored to their original state (i.e., pavement or vegetation). An active vapor collection system was installed under one of the commercial buildings by the property owner to prevent potential future risk to those residents. Wetland areas impacted by cap construction at the Calabrese property will be restored and replicated as appropriate. Institutional controls will also be implemented throughout the site to prevent contact with contaminated soils and damage to the cap. This cleanup project has been approved for funding via the Bipartisan Infrastructure Law legislation, and EPA is working towards selecting a cleanup contractor.

Solvents Recovery Service of New England

The Solvents Recovery Service of New England Superfund site is located in Southington, Connecticut. The site includes a 4-acre former operations area and a 42-acre groundwater contamination plume. From 1955 until 1991, a hazardous waste treatment and storage facility operated at the site. During operations, spills occurred and operators stored process wastes in unlined lagoons. These practices resulted in soil and groundwater contamination. In 1979, the town of Southington discovered contamination in two public water supply wells downgradient of the site. The town closed these wells.

PA placed the site on the National Priorities List (NPL) in 1983. EPA conducted short-term cleanup activities to remove 19 drums of contaminated materials. Cleanup activities also include treating groundwater, consolidating and capping contaminated soil, treating soil, monitoring, and restricting groundwater and land use. Cleanup construction completed in 2017; long-term monitoring and maintenance is 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 the site. In September 2017, construction was completed for a new section of the nearly 80-mile-long Farmington Canal Heritage Trail, which runs across the site, and a trail access parking lot. A 50-kilowatt solar array was also constructed to provide power for the long-term operation of the groundwater extraction system.



Figure 58. Trail and signage at the Solvents Recovery Service of New England site (Connecticut). Image used with permission of De Maximis, Inc.

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 EPA for a removal evaluation. After EPA identified the need for a removal action in 2014, EPA began emergency cleanup actions at CT DEEP's request. These actions included excavation and disposal of contaminated soils and wetlands restoration. EPA completed cleanup in late 2015. The cleanup actions facilitated reuse at the site. Through collaboration between 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 59. 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 EPA for removal evaluation. Beginning in 2007, EPA conducted cleanup activities. EPA removed asbestos-contaminated products, demolished an old factory building, removed sludge and storage tanks, removed and treated soil, and treated water. After 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 more evergreens to sell as Christmas trees. They are considering selling the trees to benefit the Fidelco Guide Dog Foundation.



Figure 60. 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. 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. 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 61. 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 located 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 conducted more sampling in 1999. The studies found hazardous substances in site soils and nearby residential properties, site groundwater and on-site waste materials.

EPA placed the site on the National Priorities List (NPL) in 2002. EPA finalized the cleanup plan for part of the site in 2011. From 2010 to 2013, EPA conducted soil cleanup of residential properties and removed contamination from the former Mine Operations Area. Cleanup plans for the rest of the site are yet to be determined. Institutional controls to restrict land use and prevent groundwater use were completed in 2017. The design work for the disposal of contaminated sediments in an underwater containment cell, wetlands restoration, institutional controls and monitoring was completed in 2019. In 2020, EPA installed a stone buttress against the tailings dam and graded the tailings impoundment in preparation for the installation of the cover system in 2021. The site is one of 49 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.

EPA conducted a reuse assessment for the former Callahan Mine property and Goose Pond. The reuse assessment 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.



Figure 62. The Callahan Mine property and adjacent marsh (Maine).

Eastern Surplus

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, operated on site from 1946 until the early 1980s. Facility operations contaminated soil and groundwater with hazardous substances. A facility inspection in 1984 identified evidence of a release and the Maine Department of Environmental Protection (MEDEP) initiated emergency cleanup in 1985. EPA took responsibility for the cleanup in 1986 and added the site to the National Priorities List (NPL) in 1996.



Figure 63. Commemorative patio area at the Eastern Surplus site (Maine).

To clean up the site, EPA removed contaminated soil and materials and disposed of them off site and began operating a groundwater treatment system in 2000. EPA issued an Explanation of Significant Differences (ESD) to document a significant change in the remedial approach in which the operation of the groundwater extraction and treatment system portion of the remedy was suspended for further enhanced in situ bioremediation based on the success of a 2012-2013 pilot-study and post-treatment monitoring. The groundwater treatment system is currently offline while additional treatment is implemented and EPA and the MEDEP evaluate the effects of the remedy improvements.

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 and is listed on the National Register of Historic Places. In 2012, EPA constructed a commemorative plaza and pathway for the area. Land use in the vicinity of the site remains primarily residential (both year-round and seasonal) and agricultural. EPA anticipates continued recreational use on the northern portion of the site as well as residential and agricultural use on the southern portion 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 operated at the site from 1909 until 1996. Disposal practices resulted in contamination of sediments in the East Branch of the Sebasticook River as well as soil and groundwater. In 1999, EPA placed the site on the National Priorities List (NPL). 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. EPA's close coordination with the community ensured the productive reuse of the well-located property.



Figure 64. Eastland Woolen Mill site (Maine).

In 2001, 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. 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. The remainder of the site includes commercial, residential and mixed-use development. In 2012, EPA took 80% of the site's land area off the NPL after determining cleanup of the areas was complete. This area includes several properties that are currently available for reuse. Site stakeholders hope the area's deletion from the NPL will further clarify the site's cleanup status and help support even more reuse.

“ EPA made every effort to work with the Town in the planning and implementation stages of both the cleanup and redevelopment of Corinna. The opening of the Corundel Commons housing facility is a prime example of what can be accomplished when agencies share the same goals.”

- Dalton Mullis, former Town Manager of Corinna, Maine

Pinette's Salvage Yard

The 12-acre Pinette's Salvage Yard Superfund site is located 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.



Figure 65. The vehicle repair and salvage yard business at the Pinette's Salvage Yard site (Maine).

In 1982, EPA placed the site on the National Priorities List (NPL). In 1983, EPA removed some contaminated soil and disposed of it off site. EPA's cleanup plan addressed contaminated groundwater and remaining contaminated soil. After cleanup, EPA took the site off the NPL in 2002. 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.

Saco Municipal Landfill

The 90-acre Saco Municipal Landfill Superfund site is located 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, EPA placed the site on the National Priorities List (NPL). Under 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.



Figure 66. Platform overlooking soccer fields at the Saco Municipal Landfill site (Maine).

In 1998, the city of Saco began planning for site reuse. 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 city has completed construction of two soccer fields for elementary and middle-school children. Reuse planning is ongoing for unused portions of the site for additional city facilities.

Saco Tannery Waste Pits

The 212-acre Saco Tannery Waste Pits site is located in Saco, Maine. Saco Tannery Corporation operated from 1959 until 1981. The company 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. EPA placed the site on the National Priorities List (NPL) in 1983.

EPA performed 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; re-vegetated the site; created compensatory wetlands; and constructed permanent security fencing. EPA removed the site from the NPL in 1999. Wetlands cover a large part of the site.



Figure 67. 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. After initially supporting a civilian airport, the U.S. Navy established Brunswick Naval Air Station during World War II. Wastes generated by the U.S. Navy as part of installation activities contaminated soil and groundwater. EPA placed the Brunswick Naval Air Station on the Superfund program's National Priorities List (NPL) in 1987. The U.S. Navy continues to conduct site investigations and cleanup activities.

Naval air station operations continued at the site until May 2011, when the air station was officially decommissioned. Today, the site supports a wide range of commercial, industrial, recreational, educational, ecological, military 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. The site is also home to neighborhoods, including converted former naval air station housing, colleges, schools and vocational training centers, and a general aviation airport. Housing has also expanded, with over 4,000 residents estimated to be living at the former base.



Figure 68. The Aroostook National Wildlife Refuge on the Brunswick Naval Air Station site (Maine).

Loring Air Force Base

Located in Limestone, Maine, the roughly 9,000-acre Loring Air Force 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.

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 69. 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, which worked with the U.S. Air Force and EPA to establish the Loring Commerce Centre, an industrial complex, aviation center and business park. 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, which provides space for recreation while protecting a diverse array of native wildlife habitats and species. The Loring Military Heritage Center is also located on site, preserving the history and legacy of Loring Air Force Base through education and museum exhibits.

Portsmouth Naval Shipyard

The 278-acre Portsmouth Naval Shipyard Superfund site is located in Kittery, York County, Maine. The site 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 May 1994, EPA added the site to the National Priorities List (NPL). Following the immediate removal of heavily contaminated storage tanks and containment of those areas with a soil cap, EPA and the U.S. Navy removed localized areas of contaminated soil. They also installed stormwater controls along riverbanks and restored saltwater wetlands. The site remains an active U.S. Navy shipyard; a Final Preliminary Close-out was issued in September 2019. Long-term and compliance monitoring are ongoing. PFAS investigations were conducted in 2021, and a final report is planned in Fall 2022.



Figure 70. Naval facilities at the Portsmouth Naval Shipyard site (Maine).

Other Cleanup Sites

Bangor Gas Works

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.



Figure 71. Entrance to the Shaw's Supermarket at the Bangor Gas Works site (Maine).

MASSACHUSETTS REUSE SUMMARY PROFILES

National Priorities List Sites

Atlas Tack Corp.

The Atlas Tack Corporation Superfund site is located 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.



Figure 72. View of the Atlas Tack Corp. site (Massachusetts).

In 1990, EPA placed the site on the National Priorities List (NPL). Cleanup activities included demolition of most remaining site structures, removal of contaminated soil, groundwater monitoring and site restoration. 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 site 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 the commonwealth of Massachusetts. Potential future development at the site could include commercial and industrial reuse of upland areas.

Blackburn & Union Privileges

The Blackburn & Union Privileges Superfund site is located in Walpole, Massachusetts. Industrial and commercial processes on the site using chromium, arsenic, and mercury date back to the 1600s. Between 1891 and 1915, the site was used for manufacture of tires, rubber goods and insulating materials. The crushing of raw asbestos in the manufacture of brake and clutch linings occurred at the site between 1915 and 1937. Various cotton and fabric production processes were conducted at the site from 1937 until 1985, when the facility was abandoned. Industrial operations contaminated soil, sediment and groundwater.



Figure 73. The police station at the Blackburn & Union Privileges site (Massachusetts).

EPA placed the site on the NPL in 1994. In 1999, EPA entered into a settlement with parties to perform the remedial investigation and feasibility study. In 2000, EPA awarded the town of Walpole a Superfund Redevelopment Program (SRP) pilot grant to develop reuse plans for the property. EPA approved the site's cleanup plan in 2008. The cleanup plan 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, EPA entered into a settlement with the parties to design and perform the site's cleanup. Cleanup construction began in 2015. The town took over site parcels for unpaid taxes and developed a new police station and senior center. 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. The site also includes continued residential use and a community rail trail for recreation.

Cannon Engineering Corp. (CEC)

The 7-acre Cannon Engineering Corporation (CEC) Superfund site is located 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.

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. The Responsible Parties completed the cleanup in 2013. In the mid-1990s, Osterman Propane Distribution (Osterman) relocated to the former CEC facility and is currently operating at the site. In 1998, Omnipoint Communications Enterprises began leasing the property and built a cellular communication tower. In 2013, EPA, with concurrence from MassDEP, took the site off the NPL. EPA continues to monitor the site, conducting a review of the cleanup actions every five years to make sure the remedy remains protective of human health and the environment.



Figure 74. Aerial of the CEC site (Massachusetts). Map image is the intellectual property of Esri and is used herein under license. Copyright © 2022 Esri and its licensors. All rights reserved. Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS user community.

Charles George Reclamation Trust Landfill

The 70-acre Charles George Reclamation Trust Landfill Superfund site is located 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 of Massachusetts ordered the landfill closed in 1983. Site operations contaminated groundwater.

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 MassDEP operates the landfill gas collection/destruction system and the groundwater/leachate collection system and maintains the cap. EPA's Superfund Redevelopment Program and Region 1 conducted an assessment in 2010 to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. In 2016, Citizens Energy Corporation completed construction of a 3.56-megawatt solar photovoltaic facility on the landfill.



Figure 75. Solar panels at the Charles George Reclamation Trust Landfill site (Massachusetts).

Groveland Wells

The 850-acre Groveland Wells Superfund site is located off of Washington Street in Groveland, Essex County, Massachusetts. The former Valley Manufacturing Products Company produced metal and plastic parts on site until 2001. The site's responsible party (PRs) released cutting oils and chlorinated hazardous solvents at the site. Additional



Figure 76. The solar facility at the Groveland Wells site (Massachusetts).

waste leaked from underground storage tanks and disposal systems that were located at the facility. Site releases contaminated the town of Groveland's public water supply.

EPA placed the site on the National Priorities List (NPL) in 1982. In late 1987 and early 1988, the PRPs installed and used soil vapor extraction (SVE) to remove contaminants from site soils. The PRPs also installed a small groundwater treatment system in 1988. However, these systems were ineffective. EPA then designed and installed a large groundwater treatment system in 2000. In 2006, EPA removed abandoned underground storage tanks, a former disposal system and contaminated soils from the site. In addition, from 2009 to 2011, EPA designed, installed and operated an electrical resistive heating treatment system to replace the SVE system. All of these treatment activities were effective and concluded in 2014.

The Groveland Department of Public Works continues to operate a portion of the site. EPA's Superfund Redevelopment Program and Region 1 conducted 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 area 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 portions of Johnson Creek are also located on site. MassDEP is decommissioning the large groundwater treatment facility on site. The Roman Catholic Archdiocese of Boston owns the property and plans to use the decommissioned treatment facility building. EPA continues to monitor conditions, conducting a review of the cleanup actions every five years to make sure the remedy remains protective of human health and the environment.

Hatheway & Patterson

The 38-acre Hatheway & Patterson Superfund site is located 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 site includes the area where the Hatheway and Patterson Company operated a wood-preserving facility 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.



Figure 77. The commuter parking lot at the Hatheway & Patterson site (Massachusetts).

EPA placed the site on the National Priorities List (NPL) in 2002. Cleanup included removal of contaminated soil, capping of a 2-acre area, institutional controls, and long-term monitoring of groundwater, surface water, fish tissue and sediment. 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 Site was deleted from the NPL because EPA determined that the all-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 a remaining building for office space. The Mansfield portion of the site along County Street is not currently in use.

Industri-Plex

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, EPA placed the site on the National Priorities List (NPL). Cleanup included placement of protective covers over contaminated parts of the site, dredging and off-site disposal of contaminated sediments, construction of wetlands, and institutional controls. The covers were compatible with productive reuse of the areas.



Figure 78. The Aberjona Nature Trail on the Industri-Plex site (Massachusetts).

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. EPA, the state and 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. 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 was completed 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 completed in 2022. In addition, EPA deleted the 200 Presidential Way parcel from the NPL in 2020. In 2021, two solar roof top projects were completed generating 1.7 and 0.8 megawatts respectively. With EPA continuing to provide support for the safe redevelopment of the site, more projects are on the horizon. They include construction of the New Boston Street Rail Road Bridge, a 4.0 megawatt Solar Electric Generating Facility, mixed residential and commercial reuse, a life science laboratory and an office building.

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 landfiling. These operations resulted in soil, groundwater and surface water contamination.

EPA added the site to the National Priorities List (NPL) in 1984. Cleanup construction work was completed in 2022. This 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



Figure 79. The solar array on the Shaffer Landfill at the Iron Horse Park site (Massachusetts).

facilities. Cleanup also restored natural marshes and 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 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.

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. 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, EPA, MassDEP, 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.

New Bedford Harbor

The 18,000-acre New Bedford Harbor Superfund site is located in New Bedford, Massachusetts. At least two companies produced capacitors and other electronics containing polychlorinated biphenyls (PCBs) on site from 1940 to the late 1970s. Operations discharged industrial wastes into the harbor, which contaminated the estuary from the upper Acushnet River into Buzzards Bay. In 1983, EPA placed the site on the National Priorities List (NPL). Ongoing cleanup activities include the removal and disposal of contaminated shoreline soils, saltmarshes and mudflats at approved off-site facilities, and replanting impacted saltmarsh areas with thousands of native grasses, shrubs and trees. Subtidal dredging (below the low tide line) was completed in March 2020. Cleanup of the site is ongoing, is 97.5% complete by volume, and is expected to be complete by December 2025.

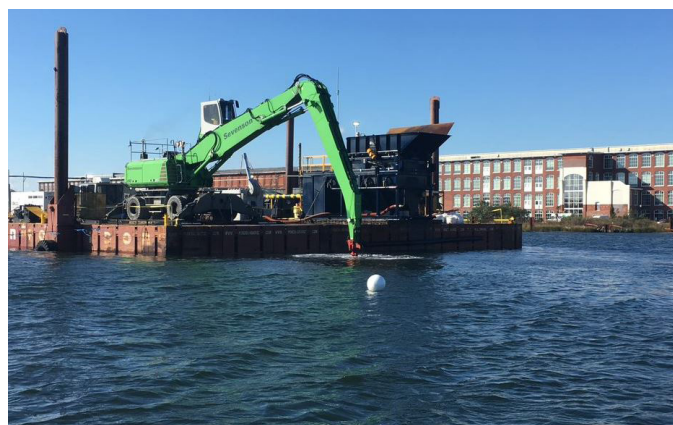


Figure 80. Dredging of contaminated sediment has helped pave the way for commercial port development at the New Bedford Harbor site (Massachusetts).

In December 2020, after extensive decontamination, 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 city ultimately plans to use the former dewatering facility as a heavy-duty, multi-purpose port facility, potentially supporting off-shore 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 adjacent to the harbor in 2011, EPA completed demolition of the 11-acre Aerovox mill, located along the Acushnet River.

Additionally, the cleanup plan 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 to the commercial port. It paved the way for the recent construction of the New Bedford Marine Commerce Terminal, a 28-acre marine terminal designed to support development of off-shore wind energy.

Redevelopment along the river is ongoing. Projects include the repurposing of many former mills for apartments and commercial space. Finally, plans include a riverwalk along the Upper Harbor and habitat restoration, which will draw residents back to the waterfront for recreational activities. EPA's cleanup will address contamination along the shoreline

prior to construction of the riverwalk. Completion of the cleanup will allow for further redevelopment and repurposing of buildings along the shoreline.

Once the ongoing state-led cleanup of the upland portion of the former Aerovox mill is completed, 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 located in Norwood, Massachusetts. From 1942 through the mid-1980s, several businesses made and maintained electrical components on site. During site investigations, EPA found polychlorinated biphenyls in soil and groundwater on site and in the sediment of a nearby brook.

In 1986, EPA placed the site on the National Priorities List (NPL). Cleanup included removing contaminated soil and sediment and consolidating it beneath an asphalt cap. It also included demolition of on-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 retail facility on site. Developers located 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 located in the facility. EPA took the site off the NPL in 2011. A new redevelopment plan will convert part of the existing building to a supermarket, making additional improvements to the building and parking lot while maintaining the protectiveness of the cap.



Figure 81. One of several commercial facilities at the Norwood PCBs site (Massachusetts).

Nyanza Chemical Waste Dump

The 35-acre Nyanza Chemical Waste Dump Superfund site is located in Ashland, Massachusetts. From 1917 to 1978, various companies made textile dyes, dye intermediates and other products at the site. Operators buried solid waste on site and released wastewater into a system of lagoons and storage areas that were periodically drained. Solid material was placed on Megunko hill, and wastewater was directed to series of drainageways and wetlands to the Sudbury River. These improper waste-handling practices resulted in groundwater, soil and sediment contamination.

EPA placed the site on the National Priorities List (NPL) in 1982. In the mid-1990s, data from indoor air samples collected in buildings located above a contaminated groundwater plume emanating from the site indicated potentially unsafe levels of volatile organic chemicals (VOCs) in indoor air. Site remedial activities have included excavating sludge and contaminated soils and sediments from the Site property and surrounding wetland areas, placing a landfill cap over contaminated soils, and installing sub-slab depressurization systems to stop VOC vapors from migrating into buildings. A new redevelopment plan will convert part of the existing building to a supermarket, making additional improvements to the building and parking lot while maintaining the protectiveness of the cap. Several businesses, including NYACOL Nano Technologies, continue to operate on or adjacent to the site. In December 2019, a solar array was constructed and began operating on the site's landfill cap. Together, this array along with a nearby off-site solar array, can generate up to 5.8 megawatts of electricity.



Figure 82. Restored wetlands at the Nyanza Chemical Waste Dump site (Massachusetts).

PSC Resources

The 4-acre PSC Resources Superfund site is located in Palmer, Massachusetts. From 1974 to 1978, waste oil and solvent recovery and disposal resulted in spills contaminating soils, sediments and groundwater. EPA placed the site on the National Priorities List (NPL) in 1983. EPA dug up contaminated soils and sediment, treated them, and put them under an impermeable cap, which has been vegetated. A fence preventing access has been placed around the capped material. A Mobil Oil Company pipeline runs along a corridor south of the site. The site includes forest and wetland areas that are used by local residents for recreation activities.



Figure 83. Drainage along the capped area of the PSC Resources site (Massachusetts).

Re-Solve, Inc.

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.



Figure 84. Solar panels are used to power the groundwater treatment system at the Re-Solve, Inc. site (Massachusetts).

EPA placed the site on the National Priorities List (NPL) in 1983. EPA and the site's potentially responsible parties (PRPs) constructed a groundwater pump-and-treat system at the site. The system has operated continuously since 1998. As part of the cleanup, EPA and the PRPs restored 1 acre of wetlands at the site. The PRPs also worked closely with EPA and the U.S. Fish & 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. An annual fishing derby at Cornell Pond on site engages the community in fish monitoring activities. 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 located on site. The systems are underground, contained biological treatment beds where living organisms break down contamination. This process reduces the use of chemicals and the need for waste disposal. The groundwater treatment system is powered entirely by 644 solar panels.

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 on the site. 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.

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 site for unrestricted land use. EPA took the site off the NPL in 2001. In 2019, a developer expanded a nearby neighborhood of single-family homes onto part of the site.



Figure 85. Solar array at the Salem Acres site (Massachusetts).

Shpack Landfill

The 9.4-acre Shpack Landfill site is located in Attleboro and Norton, Massachusetts. The landfill operated from 1946 until the 1970s. The landfill 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. EPA placed the site on 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. Routine maintenance and monitoring activities are ongoing to ensure wetland system health.



Figure 86. Aerial view of the Shpack Landfill site (Massachusetts). Sources: Imagery ©2022 Google, Imagery ©2022 CNES/Airbus, MassGIS, Commonwealth of Massachusetts EOE, Maxar Technologies, RIGIS, USDA/FPAC/GEO, Map data ©2022.

Sullivan's Ledge

The Sullivan's Ledge Superfund site is located in New Bedford, Massachusetts. A 12-acre quarry operated on site until 1921. In 1935, the city of New Bedford took over the site and turned it into a dump for hazardous materials. Waste disposal activities took place on site from the 1940s through the 1970s. The city then closed the dump and backfilled the disposal areas. 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 87. Aerial view of the solar array at the Sullivan's Ledge site (Massachusetts).

EPA conducted studies in the area and placed the site on 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.

Cleanup also included removing contamination from a neighboring golf course. EPA's approach allowed for continued use of the golf course during cleanup. 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.

EPA's Superfund Redevelopment Program and Region 1 conducted 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, 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 is supporting 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, EPA recognized the project team, including the city of New Bedford, BlueWave Capital and SunEdison, with Region 1's first Excellence in Site Reuse Award.

Sutton Brook Disposal Area

The 100-acre Sutton Brook Disposal Area Superfund site is located in Tewksbury, Massachusetts. From 1957 until 1988, a landfill operated on site, accepting municipal, commercial and industrial wastes. Waste disposal practices led to soil, sediment, surface water, groundwater and air contamination. Sampling showed the presence of contamination that exceeded risk levels.

EPA placed the site on the National Priorities List (NPL) in 2001. EPA performed three short-term cleanups on and near the site, excavating and removing highly contaminated soils and drums. The site's long-term remedy included excavation of additional soils and sediments, consolidation of this material in on-site landfills, landfill capping, and wetlands restoration. It also included groundwater collection and treatment, monitored natural attenuation for groundwater outside the extraction system area, institutional controls and long-term monitoring. Cleanup finished in July 2016. The site now includes restored wetlands, providing habitat for local plants and animals. In June 2020, MassDEP approved the town of Tewksbury's request to install ballast-mounted solar arrays at the site. In 2022, National Grid energized the 3.6 megawatt solar arrays project.



Figure 88. Solar arrays at the Sutton Brooks Disposal Area site (Massachusetts).

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

The 260-acre W.R. Grace & Co., Inc. (Acton Plant) Superfund site is located in the towns of Acton and Concord, Massachusetts. For over 100 years, different companies operated 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. EPA directed W.R. Grace to begin interim cleanup actions at the site.

EPA placed the site on 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, capping of site soils and sludges, sediment dredging and removal, additional groundwater extraction and treatment, and restoration of site wetlands. EPA's Superfund Redevelopment Program and Region 1 conducted an assessment of the site in 2010 as part of an effort to evaluate opportunities for using Superfund sites in Massachusetts for solar energy. After the site's remedy was in place, the town of Concord took ownership of a 70-acre parcel at the site in 2016. The first phase of the town's three-phase reuse plan involved construction of a 4.5-megawatt solar array, which was completed in early 2017. This project added more green, competitively priced energy to the town's power supply portfolio. It is expected to supply 4.5% of the town's power supply needs, enough to power 625 homes. Additionally, the solar array will reduce greenhouse gas emissions and offset the town's peak demand for electricity by 10%. The phases of Concord's reuse plan, construction of a school bus depot at the site, was completed in August 2017. Planning for a second solar array on the Site northwest of the current installation is currently under way.



Figure 89. Aerial view of the solar array at the W.R. Grace & Co., Inc. (Acton Plant) site (Massachusetts).

Wells G&H

The Wells G&H Superfund site includes 330 acres of land and contaminated groundwater in Woburn, Massachusetts with a mixture of commercial/industrial and residential properties. Past operations at the site include dry cleaning, solvent storage, truck terminals, drum disposal and plastics manufacturing. In 1979, MassDEP discovered significant levels of hazardous chemicals in two municipal supply wells. The wells were known as wells G and H. MassDEP closed the wells. EPA placed the site on the 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 activities are ongoing across the site.

In 2000, 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, where construction of the Holland Arena was completed 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, where the Aberjona Nature Trail was constructed along the Aberjona River and opened to the public in 2017. The W.R. Grace property commercial/hotel reuse plan, where Madison Woburn Holdings LLC purchased the property in 2014, opened with its first restaurant 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 in 2019. Also, the UniFirst property completed installation of a rooftop solar array on their commercial building in 2021. At full capacity, the rooftop array 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, 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



Figure 90. New development at the Wells G&H site (Massachusetts).



Figure 91. The Bill Ashe Visitor Facility at the Fort Devens site (Massachusetts).

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 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 local community. In 2021, two major developments are underway including \$500 million 45-acre bio-manufacturing campus and \$300 million 47-acre fusion energy research and manufacturing facility.

“ Historically we have had many technologies that change the world start in Massachusetts, and when Commonwealth Fusion Systems does it by bringing fusion energy technology to life we will be able to say they did it at their first-of-its-kind campus in Devens.”

- Dan Rivera, President and CEO, MassDevelopment

Fort Devens-Sudbury Training Annex

The 2,750-acre Fort Devens Sudbury Training Annex Superfund site is a former U.S. Army military installation. The site covers about four square miles and includes portions 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. EPA identified contamination from use of pesticides and other chemicals on parts of the site.

EPA added the site to the National Priorities List (NPL) in 1990. The U.S. Army worked with EPA to remove contaminated soil, cover an on-site landfill with a cap, remove underground storage tanks, and monitor groundwater. EPA removed the site from the NPL in 2001; in 2017, Army began investigating a preliminary assessment for per- and polyfluoroalkyl substances (PFAS). Fieldwork for a follow-up PFAS investigations is planned for late 2022. 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. It 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 four acres to the U.S. Air Force. It uses the area for operation of 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 and has cleared 6 acres for use as a temporary antenna field.



Figure 92. The Assabet River National Wildlife Refuge at the Fort Devens Sudbury Training Annex site (Massachusetts).

Hanscom Field/Hanscom Air Force Base

The 1,120-acre Hanscom Field/Hanscom Air Force Base (AFB) Superfund site is located in an industrial area of eastern Massachusetts. The site 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. Site investigations identified 22 possible sources, including former fire training, disposal, underground storage tank and other spill sites.



Figure 93. 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 EPA, as documented in four Records of Decision issued between 2000 and 2007, 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 located in Watertown, Massachusetts. In 1816, the U.S. Army began operations at the site; 10,000 people worked on the site by the end of World War II. The Army used the site 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. Wastes generated by the facility contaminated soil and groundwater at several areas across the site.



Figure 94. The mixed-use complex at the Materials Technology Laboratory (USARMY) site (Massachusetts).

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. 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 since 1940. The U.S. Army restored wetlands along the Charles River. EPA deleted the site from the NPL in 2006; some cleanup activities are still ongoing.

Natick Laboratory Army Research, Development, and Engineering Center

The 78-acre former Natick Laboratory Army Research, Development, and Engineering Center Superfund site in Natick, Massachusetts, is now known as the U.S. Army Soldier Systems Center (SSC). 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. The U.S. Army conducted 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.



Figure 95. The Natick Laboratory Army Research, Development, and Engineering Center site (Massachusetts).

EPA added the site to the National Priorities List (NPL) in 1994. Cleanup activities included groundwater containment, treatment and monitoring, 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. The facility researches, develops and manages food, clothing, shelters, airdrop systems and soldier support items. The facility currently employs about 1,000 people.

Joint Base Cape Cod (Otis Air National Guard Base/Camp Edwards)

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. Historical chemical and fuel spills, fire training activities, and sewage treatment plant, landfill and drainage structure operations contaminated site 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.

EPA listed the site on the National Priorities List (NPL) in November 1989. EPA documented the site cleanup plan in over 15 Records of Decision. Cleanup activities include installation of water supply lines to affected residents, 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 currently operate on eight groundwater plumes. EPA has completed cleanups at 25 source areas. Cleanup of a few former plumes have been completed. Air Force has taken actions to address immediate risks from per- and polyfluoroalkyl substances (PFAS) in



Figure 96. One of three 1.5-megawatt turbines used to offset electrical costs for powering multiple groundwater cleanup systems at the JBCC site (Massachusetts).

groundwater by providing bottled water, in-house drinking water treatment units, wellhead treatment, and connection of homes to public water supply. Investigations of PFAS and former military munitions sites are ongoing as long-term cleanup of contamination groundwater plumes continue.

The Barnstable County Correctional Facility, a jail with capacity for about 580 inmates, began operating on site in 2004. The 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. The Air Force estimates that the wind energy saves about \$1.5 million a year in electricity costs. EPA's plans enabled continued site operations during cleanup. Today, five major organizations use the site: 1) the Massachusetts Air National Guard (ANG) operates Camp Edwards; 2) the ANG/Massachusetts ANG operates Otis ANG Base; 3) the U.S. Air Force operates the Cape Cod Air Force Station; 4) the U.S. Coast Guard operates Air Station Cape Cod; and 5) the U.S. Department of Veterans Affairs operates the Massachusetts National Cemetery.

South Weymouth Naval Air Station

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.

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, removals, groundwater treatment and land use restrictions. Additional cleanups and investigations, including for per- and polyfluoroalkyl substances (PFAS), are ongoing by the Navy with EPA oversight. The local reuse authority, the National Park Service, U.S. Coast Guard and the Federal Aviation Administration have received over 1,300 acres of the site. Redevelopment efforts are ongoing, with over 1,200 residences and a 25-acre athletic complex currently located on site. Current mixed-use zoning allows for up to 6 million square feet of commercial space and nearly 4,000 residences along with approximately 1,000 acres of open space.



Figure 97. The Union Point development at the South Weymouth Naval Air Station site (Massachusetts). Photo used with permission of LSTAR Ventures.

Other Cleanup Sites

31 Water Street

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. EPA's Superfund removal program committed \$1.2 million to remove contaminated soil from the site and stabilize the riverbanks. EPA dug up 1,400 tons of contaminated soil and disposed of it off site. EPA also stabilized the riverbanks with 400 feet of sheet pile wall. EPA completed



Figure 98. Plaza and fountain at Heritage Park on the 31 Water Street site (Massachusetts).

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 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 EPA for its assistance.

Flynntan Tannery Site

The Flynntan Tannery site is located in Salem, Massachusetts. A leather tannery operated on site. 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.

Former Bendix Property

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. 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 99. View of the former Bendix Property site (Massachusetts).

Former Lawrence Metals

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. 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. The hotel includes 2,200 square feet of flexible meeting space that can accommodate more than 200 guests for corporate functions and special events. The property also has an indoor heated saltwater pool and a state-of-the-art fitness center. In total, the developer invested over \$30 million to transform the site.



Figure 100. The hotel on the Former Lawrence Metals site (Massachusetts).

GE - Pittsfield/Housatonic River

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. This permit is currently under appeal. 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 are now complete. Cleanup of 2 miles of the Housatonic River is also already complete.



Figure 101. Berkshire Innovation Center opened in 2020 at the GE Pittsfield/Housatonic River site (Massachusetts).

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 including the construction of 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. Announced in 2022, the BIC will receive an additional \$1M from American Rescue Plan Act for establishing a manufacturing academy to spur economic growth and jobs. Two large employers continue to operate on the GE-owned portion of the 254-acre facility. Continued uses on the non-GE owned portion of the site (excluding the Rest of River) include an elementary school, about 86 residential properties, about 35 commercial properties and a city park.

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. 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 EPA's cleanup activities.



Figure 102. 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. EPA identified drums, containers and cylinders at the site. In November 2014, EPA completed a time-critical removal action to remove contaminated drums and containers as well as asbestos-containing material. 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.

Parsons Paper Mill

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, EPA 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, EPA removed hazardous materials and asbestos that posed a threat to public health. In 2016, Aegis, a combined heat and power systems manufacturer, partnered with the Holyoke Redevelopment Authority to expand its adjacent business operations onto the site. Aegis restored the remaining 40,000-square-foot building on site to accommodate the company's headquarters and expand production space. Aegis also constructed a new parking lot and a 4-megawatt, gridconnected solar array.

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. EPA excavated contaminated soil because of the urban setting and because the city and state did not have funds for the excavation. EPA recovered most expenses from the polluter. The city resumed construction of the park after 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.

Universal 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. EPA, the city of Salem, MassDevelopment and the MassDEP 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 103. View of the Parsons Paper Mill site (Massachusetts) prior to demolition.



Figure 104. The Peabody Street Park/Harborwalk at the Peabody Street Asbestos site (Massachusetts).



Figure 105. Parking and warehouse facilities at the Universal Steel & Trading Corporation site (Massachusetts).

NEW HAMPSHIRE REUSE SUMMARY PROFILES

National Priorities List Sites

Auburn Road Landfill

The 200-acre Auburn Road Landfill Superfund site is located in Londonderry, New Hampshire. The site includes three separate disposal areas that cover about 12 acres. A disposal area for chemical wastes, tires, demolition debris and solid waste operated 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.

EPA placed the site on the National Priorities List (NPL) in 1983. Cleanup activities included capping and fencing of contaminated areas as well as extension of the public water supply to nearby residents. Groundwater sampling is ongoing. Parts of the site are now in recreational and residential reuse. A model airplane flying field opened on site in 2008. This recreational reuse was the result of collaboration among EPA, the New Hampshire Flying Tigers Academy of Model Aeronautics club and the town of Londonderry. Part of the Whispering Pines Mobile Home Park is located on the northern part of the site.



Figure 106. Model airplane flying field at the Auburn Road Landfill site (New Hampshire).

Most recently, on May 11, 2021, the Town of Londonderry requested EPA's approval to start the construction of a radio transmission tower on the Site for the purpose of improving transmission of the radio signals used by the Town's Fire, Police, and Public Works Departments. EPA in consultation with NHDES approved the construction and it is anticipated to begin in summer 2021.

Beede Waste Oil

Based on community input, the Beede Waste Oil site, located in Plaistow, New Hampshire, will be put back into residential and recreational reuse. The 40-acre site is comprised of two parcels of land. The former commercial waste oil reclamation and asphalt batching operations were located on what is referred to as Parcel 1. Parcel 2 is primarily undeveloped land. In the fall of 1983, chemical contamination was discovered in a residential well near the site. About 100 aboveground storage tanks and 800 drums were located on the site. EPA added the site to the National Priorities List (NPL) in 1996. EPA completed a Non-Time Critical Removal Action (NTCRA) in 2005 to address the 4 acre mobile oil plume found under the former lagoon, tank storage and landfill area of the Site. On-site soil is contaminated primarily with polychlorinated biphenyls (PCBs) and lead from aboveground storage tanks and drums. Phases 1 and 2 were successfully implemented



Figure 107. 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).

which treated deeper soils to remove volatile organic compounds (VOCs) associated with the residual oils. VOCs and 1,4-dioxane and metals are in groundwater on site and were found in adjacent residential supply wells. Per- and polyfluoroalkyl substances (PFAS) have also been identified in site groundwater. In September 2002, the town received a Superfund Redevelopment Program pilot reuse grant from EPA to further evaluate future land use options. A cleanup remedy was selected in 2004. The remedy included excavation, off-site disposal and/or treatment of contaminated soils via thermal steam-enhanced extraction 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. The reuse planning process under the Superfund Redevelopment pilot outlined a reuse strategy for the site which could include senior housing, active and passive recreation, and a multi-purpose community center. No formal reuse plans have been made. In the meantime, a habitat area is maintained where tree removal took place to construct the on-site treatment plant providing habitat for local pollinators and wildlife.

Fletcher's Paint Works & Storage

The Fletcher's Paint Works & Storage Superfund site is located in Milford, New Hampshire. A paint manufacturing plant and retail outlet operated on site from 1949 to 1991. In 1982, the New Hampshire Department of Environmental Services (NHDES) inspected the facility. NHDES found leaking and open drums on site. NHDES also found site-related contamination in the Keyes Municipal Water Supply Well next to the site.

EPA placed the 2-acre area on the National Priorities List (NPL) in 1989. Past cleanup efforts include building demolition, drum removal, fencing, temporary cover installation, removal of contaminated soil from residential properties, and placement of a temporary liner and gravel cover over highly contaminated areas. In 1996, at the request of the town of Milford, the potentially responsible party removed soil with low levels of contamination from the Elm Street area of the site to allow for reuse. In 2017, construction activities were completed, which included the Mill Street area soil excavation, backfilling of the area with clean soil and a grass cover, and relocation of part of Mill Street for better local traffic management. Construction activities at the Elm Street area include soil excavation, an engineered soils and grass cover permitting recreational use, and an asphalt cover over select areas providing the town with additional parking for nearby Keyes Recreational Field. The Elm Street area is now used as a public park and includes a stone bandstand. Groundwater monitoring is ongoing.



Figure 108. Recreational trails and open space at Keyes Memorial Park on the Fletcher's Paint Works & Storage site (New Hampshire).

Kearsarge Metallurgical Corp.

The 9-acre Kearsarge Metallurgical Corporation (KMC) Superfund site is located 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 EPA found a waste pile, soils and groundwater contaminated with solvents.

EPA placed the site on the National Priorities List (NPL) in September 1984. Cleanup began in 1992, and 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.



Figure 109. The Kearsarge Metallurgical Corp. site's former groundwater treatment building is now home to an automobile workshop (New Hampshire).

In 2012, the town sold the site property at auction to help invigorate the surrounding industrial park. 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. Ecological reuse includes forested wetlands that provide ecological habitat along the northern bank of Pequawket Pond.

Ottati & Goss/Kingston Steel Drum

The 35-acre Ottati & Goss/Kingston Steel Drum Superfund site is located 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 on the Great Lakes Corporation area. 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 prohibited site operators from restarting operations. The Bureau ordered the removal of thousands of deteriorating and leaking drums from the site.

EPA placed the site on the National Priorities List (NPL) in 1983. Cleanup activities included removal of leaking drums and thousands of tons of soil and debris, excavation and on-site treatment of soil and sediment using thermal desorption, groundwater and soil treatment using in-place chemical oxidation, and wetland restoration for ecological reuse. Wetland restoration included the placement of over 20,000 cubic yards of manufactured wetland material and the planting of more than 1,000 trees and shrubs.

Savage Municipal Water Supply

The Savage Municipal Water Supply Superfund site is in Milford, New Hampshire. From the 1940s until the 1980s, four industrial facilities west 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. EPA added the site to the National Priorities List (NPL) in 1984. 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 monitoring is ongoing. Current site uses include residential, agricultural, industrial and commercial areas. There are also recreational uses, including a baseball diamond, and areas that people use for hiking and hunting.

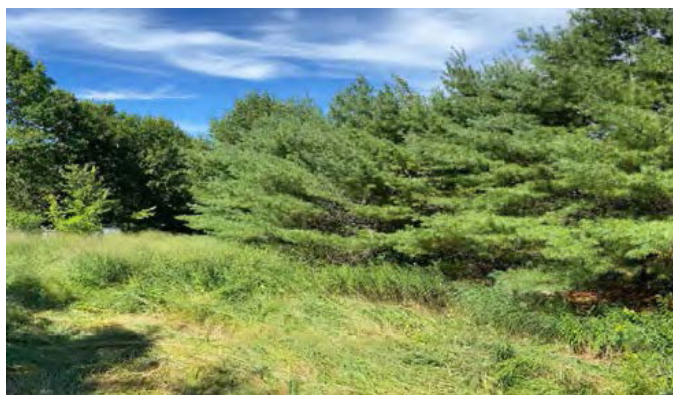


Figure 110. View of the Ottati & Goss/Kingston Steel Drum site (New Hampshire).



Figure 111. 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 located 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 site soil, sediment and groundwater.

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 now includes a basketball court and is still available for passive recreation, such as walking. Part of the site not developed as it contains the former landfill and wetlands downgradient from the former landfill. In 2013, EPA presented the city with an initial assessment of renewable energy opportunities for the site.



Figure 112. A 10-acre recreational area, including a basketball court, are located on the Somersworth Sanitary Landfill site (New Hampshire).

South Municipal Water Supply Well

The 250-acre South Municipal Water Supply Well Superfund site is located 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 revealed contaminants in the water, 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 manufactured precision ball bearings since 1956. Activities at the facility contaminated soil, groundwater, wetland sediments and surface water.



Figure 113. The groundwater treatment facility at the South Municipal Water Supply Well site (New Hampshire).

EPA placed the site on 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, EPA determined that restoration of some of the contaminated groundwater at the site was not possible. EPA updated the remedy to contain the groundwater instead of treating it. In 2008, EPA found that the site remedy was not functioning as intended. EPA updated the cleanup plan in 2010 to change source control and migration management activities. New Hampshire Ball Bearings completed a below-ground wall to clean up contaminated groundwater in 2014. In-place thermal treatment of an on-site source area finished in 2016. Current site uses include the 24-acre active New Hampshire Ball Bearings manufacturing plant, commercial and residential properties, part of U.S. Route 202, and wetlands.

Tinkham Garage

The 375-acre Tinkham Garage Superfund site is located in Londonderry, New Hampshire. On one end of the site, solvents and other hazardous substances were discharged behind a garage during the late 1970s. On another part of the site, petroleum, solvents and wash waters were discharged into the leach fields of the Woodland Village Condominium complex. In 1978, residents complained of foam and odors in a small unnamed stream that runs through the site and discharges through the nearby neighborhood. Investigators found impacted public and private water supply wells as well as soil and groundwater contamination.



Figure 114. Commercial reuse at the Tinkham Garage site (New Hampshire).

In 1983, EPA placed the site on 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 as well as sewer lines, and groundwater monitoring. Groundwater monitoring, construction of additional water line extensions to residents, and additional source area, residential water supply well and bedrock investigations are ongoing. During cleanup, EPA provided information to interested parties about reuse considerations for the site.

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 northern part of the site. The Nevins Retirement Cooperative Association completed construction of over 125 residences on the central part of the site. These residences are part of a senior housing development. 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 located 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 site contained a series of residential wells and one commercial well. A 1984 state inspection found groundwater contamination in many of the wells. In the late 1980s, owners of six residences affected by groundwater contamination in wells chose to connect to the local public water supply. As a precaution, several other residences have since connected to the public water supply.

EPA placed the site on 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 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 and the Saddlebrook development includes 20 new homes. In 2014, EPA took the site off the NPL.



Figure 115. Aerial view of the Town Garage/Radio Beacon site (Massachusetts). Sources: Imagery ©2022 Google, Imagery ©2022 MassGIS, Commonwealth of Massachusetts EOE, 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 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 on-site soil, groundwater, surface water and sediment contamination. Troy Mills filed for bankruptcy in 2001.

EPA placed the site on the National Priorities List (NPL) in 2003. Cleanup actions included installing a system to collect hazardous materials from the groundwater. Cleanup also included removal of drums containing flammable liquid waste, waste sludge and contaminated soil. After removing contaminated soil, EPA backfilled excavated areas and capped them. In 2005, EPA supported community efforts to identify reuse options for the site. The community



Figure 116. Plans are in development to reuse open space areas for recreational uses at the Troy Mills Landfill site (New Hampshire).

expressed interest in a recreation area. Today, a trail network forms part of the 42-mile Cheshire Branch Rail Trail system running adjacent to the site. Future recreation opportunities at the site could include hiking, horseback riding, mountain biking and cross-country skiing.

Reuse of the site, and an adjacent solid waste landfill managed by NHDES, as a potential solar co-generation facility is being explored by EPA and NHDES. Also, the Appalachian Mountain Club has expressed interest in re-routing an existing recreational rail trail through a portion of the 270-acre parcel.

Federal Facility Sites

Pease Air Force Base

The 4,000-acre former Pease Air Force Base is located in Rockingham County in the city of Portsmouth and the town of Newington, 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.

EPA added the site to the National Priorities List (NPL) in 1990. The Air Force continues to conduct investigations and is also operating two treatment systems for contaminated groundwater. 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.

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 U.S. Fish and Wildlife Service received another 1,300 acres from the Air Force. 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, EPA issued an Administrative Order to the U.S. 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. 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 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 (RI) 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 (FS).

The Pease International Tradeport is home to over 270 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.



Figure 117. Entrance to the airport at the Pease Air Force Base site (New Hampshire).

Other Cleanup Sites

Former Synergy Site

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 EPA's obligations under the Historical Preservation Act, 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 118. View across the Sugar River of the Former Synergy site (New Hampshire).

RHODE ISLAND REUSE SUMMARY PROFILES

National Priorities List Sites

Central Landfill

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. 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), operates 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 portion of the landfill also includes a pollinator garden. Broadrock Renewables, LLC also owns and operates a facility on site that turns gas collected from the landfill into electricity. The company expanded the energy-generating facility in stages. The facility currently includes 15 engine generator sets that produce up to 20 megawatts of electricity.



Figure 119. Vegetated landfill cap at the Central Landfill site (Rhode Island).

Centredale Manor Restoration Project

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 operated 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.



Figure 120. View of the Centredale Manor Restoration Project site (Rhode Island).

EPA placed the site on the National Priorities List (NPL) in 2000. 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. The long term cleanup of the site is underway. In 2018, the site's potentially responsible parties began long term cleanup of the site with oversight from EPA and the Rhode Island Department of Environmental Management. Since then, PRPs completed a hazardous waste cap in the Source Area on the peninsula, repaired Sluice gate on the Lyman Mill

Dam to make it operational and has been developing design plans for other areas of the Site. In 2019, EPA's Superfund Redevelopment Program began supporting a regional seed project at the site to help facilitate reuse discussions among EPA and local stakeholders and plan for future uses at the site. Today, the Brook Village and Centredale Manor apartment complexes remain on site. EPA's cleanup approach has been compatible with the site's continued residential use.

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 the local communities. EPA determined that the Peterson/Puritan, Inc. facility was the source of the groundwater contamination.

EPA placed the site on the National Priorities List (NPL) in 1983. In 1990, 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. Cooperation between EPA, the Rhode Island Department of Environmental Management and the community enabled on-site businesses to remain in operation during the 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 redevelopment in the area includes 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. EPA's Superfund Redevelopment Program provided support for a regional seed project at the site between 2018 and 2020 to help Region 1 make sure the site's cleanup supports the recreation and cultural heritage goals of area communities.

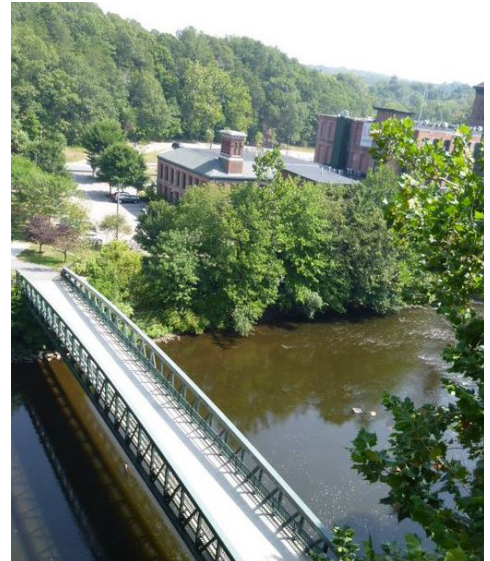


Figure 121. Blackstone River Bikeway river crossing at the Peterson/Puritan, Inc. site (Rhode Island).

Picillo Farm

The 8-acre Picillo Farm Superfund site is located in Coventry, Rhode Island. During the 1970s, a pig farm operated on site. In 1977, farm owners disposed 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 September 1977, regulatory agencies discovered the site after an on-site explosion and fire. EPA added the site to the National Priorities List (NPL) in 1983. Cleanup actions included removal of bulk wastes and buried drums, removal and off-site disposal of contaminated soils, treatment of some soils, groundwater extraction and treatment, surface drainage controls, fencing and institutional controls. Groundwater monitoring continues. In 2016, a wind energy developer installed three wind turbines next to the site. One of the turbines is located within the groundwater institutional control area. Power generated by the turbines is sold back to the grid.



Figure 122. One of three wind turbines located on the groundwater institutional control area of the Picillo Farm site (Rhode Island).

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 land 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. EPA discovered the contamination in 1981. In 1983, the facility stopped operations and the operator graded and seeded the disposal areas.

In 1989, EPA placed the site on the National Priorities List (NPL). Early investigations found landfill gases moving off site toward nearby homes. Cleanup activities included extending the municipal water supply to residences with contaminated wells, installing gas alarms for nearby residences 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. EPA will determine the need for additional cleanup activities based on monitoring. A South Kingstown transfer station for municipal wastes is located on part of the site. Surrounding land uses support a hunting preserve, a bird dog kennel and field training facilities, and a pet cemetery. The South Kingstown Town Council also authorized development of a solar photovoltaic energy farm on the property. The 4.7-megawatt solar farm was completed on the landfill caps in 2018.



Figure 123. 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

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. A gravel mine began operating on part of the site, the West Kingston Town Dump area, in the 1930s. From the late 1940s until 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 city water. A 1989 inspection found leaking drums next to the site. Drum contents contaminated subsurface soil and groundwater.

EPA placed the site on 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, 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 with capacities of 1.2 megawatts and 2.7 megawatts, respectively, were completed for the West Kingston Town Dump area and the URI Disposal Area and adjacent field in 2018. These facilities have a combined capacity of 3.9 megawatts.



Figure 124. 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 and Gravel Superfund site includes about 25 acres in a rural area on the boundary of Burrillville and North Smithfield, Rhode Island. From 1953 until 1975, a sand and gravel quarry operated on site. From 1975 to 1979, a waste disposal area operated on site. Operators disposed of wastes in unlined lagoons and pits. These waste handling practices resulted in contamination of soil and groundwater.



Figure 125. Truck body assembly plant on the Western Sand & Gravel site (Rhode Island).

EPA placed the site on 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. Cleanup also included waste removal, capping of a 2-acre area and fencing of the 6-acre contaminated soil area. In 2001, Supreme Mid-Atlantic purchased the site property. 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.

Federal Facility Sites

Davisville Naval Construction Battalion Center

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, 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, 1,127 of the 1,290 acres have been transferred or conveyed. 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), responsible for the development and management of the Quonset Business Park. In 2022, RICC plans to receive 75 acres under the ports PBC via the first of two conveyances. The remaining 88 acres will be conveyed at a later date.

Newport Naval Education & Training Center

The Newport Naval Education & Training Center (NETC) Superfund site (also known as Naval Station (NAVSTA) Newport) has been used by the Navy since the Civil War era. Activities increased during war time but decreased later as Navy 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

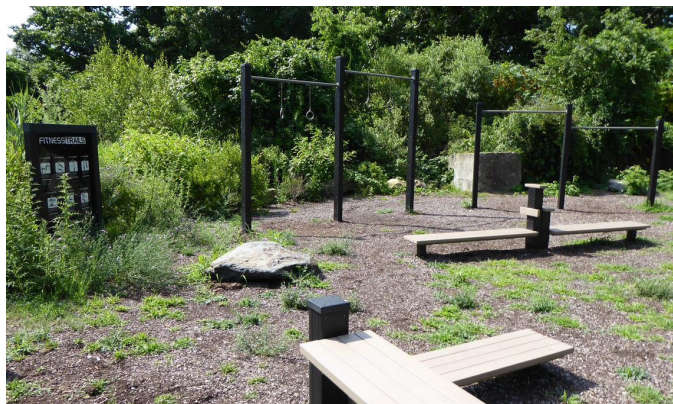


Figure 126. The town of North Kingston operates several recreational facilities at the Davisville Naval Construction Battalion Center site (Rhode Island).

Undersea Warfare Center (NUWC, formerly 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 approximately 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, Rhode Island. The facility also encompasses the northern third of Gould Island, which is part of the Town of Jamestown, Rhode Island.

EPA listed the site on the National Priorities List (NPL) in 1989.

The U.S. Navy continues to lead ongoing investigations and cleanup at 17 recognized sites 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 commercial and industrial uses. Parcels continue to be considered for transfer. Additionally, two Superfund sites on the base (a landfill and a former tank farm) are currently being developed with solar arrays through a Navy lease with a private party.



Figure 127. Shoreline restoration at the Newport Naval Education & Training Center site (Rhode Island).

VERMONT REUSE SUMMARY PROFILES

National Priorities List Sites

Commerce Street Plume

The 1-acre Commerce Street Plume Superfund site is located in Williston, Vermont. Starting in 1960, various manufacturing and electroplating operations were active on the property. Between 1979 and 1984, operators discharged rinse waters and sludge wastes containing heavy metals and industrial solvents into an unlined lagoon on site. 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. EPA placed the site on the National Priorities List (NPL) in 2005. Long-term cleanup planning is ongoing. Light industrial and commercial development along Commerce Street in the Ailing Industrial Park began in 1946. These uses continue today. There are residential areas within the site area along Kirby Lane, South Brownell Road and Shunpike Road.

Elizabeth Mine

The Elizabeth Mine Superfund site is located 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.

EPA placed the site on the National Priorities List (NPL) in June 2001. In 2005, 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. EPA built an active water treatment system in 2008, which operated until 2018. The active water treatment was replaced with a passive treatment system in 2019. EPA consolidated and covered the mining waste in 2012 with reuse in mind. During cleanup, EPA restored 10 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 1,300 homes. EPA completed the cleanup of the South Mine and South Open Cut areas in 2020. EPA completed construction of all remedial actions in 2021.



Figure 128. Solar array at the Elizabeth Mine site (Vermont). Image used with permission of Weston and Sampson, Conti Solar, and Elizabeth Mine Solar I, LLC.

Ely Copper Mine

The 350-acre Ely Copper Mine Superfund site is located 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. Mining operations stopped at the site in 1920; activities to remove dump-ore took place between 1949 and 1950.



Figure 129. Former entrance to main mining shaft at the Ely Copper Mine site (Vermont).

EPA placed the site on the National Priorities List (NPL) in 2001. EPA finalized cleanup plans for the site in 2016. The design for the cleanup was completed in 2019. Institutional controls for the site were completed in 2019. The institutional controls will prevent groundwater use and restrict site activities to protect the cleanup actions. Since 1950, activities at the site have included commercial timber management as well as hunting, snowmobile riding and horseback riding. The site also includes historic mining-related artifacts and provides habitat for several species of state and federal threatened and endangered bats.

Pine Street Canal

The 38-acre Pine Street Canal Superfund site is located in Burlington, Vermont. It consists of a canal and turning basin, wetlands, an area formerly known as Maltex Pond, and other land. From 1908 until 1966, a coal gasification plant operated on site. Plant operators disposed of wastewaters, residual oil, and wood chips saturated with organic compounds in the canal wetland. These actions contaminated site soils, surface water, sediments, groundwater, air and wetlands. While investigating the site for a then-proposed major highway development, the state of Vermont detected high levels of organic compounds associated with coal tar. EPA added the site to the National Priorities List (NPL) in 1983.



Figure 130. Aerial view of Pine Street Canal site (Vermont).

Cleanup has been implemented in phases. Cleanup activities including removing coal tars, capping the canal underwater sediments and Maltex Pond sediments, habitat restoration, construction of vertical barrier walls and monitoring groundwater. Cleanup efforts also established institutional controls that limit residential uses, daycare facilities and activities that would interfere with the remedy. Habitat restoration, in accordance with the Wetland Restoration Plan, allowed on-site wetlands to continue functioning. Wetland restoration took place between 2003 and 2004. These wetlands support a diversity of mammals, birds, reptiles, amphibians and fish. The Burlington Electrical Department headquarters has continued to operate on site since before NPL listing. Cleanup has also spurred commercial development east of the Maltex Pond, outside of the site's eastern boundary. While not located on site, businesses and construction within 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. EPA, the Vermont State Historic Preservation Officer, and the Performing Defendants agreed to a mitigation plan for damage to these historic resources that will occur when the remedy is implemented.

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 May 2022, \$6 million was provided for brownfield cleanup and redevelopment at a parcel adjacent to the Site. The proposed redevelopment projects consist of Silt Botanica Nordic-inspired bathhouse and wellness space; and Backside Bowl with twostory contemporary bowling alley, entertainment, and community gathering space. In addition, the developers and the city are exploring the potential creation of a green gateway to the city-owned parcel located on the site as public open space.

Pownal Tannery

The 28-acre Pownal Tannery Superfund site is located in North Pownal, Vermont. Beginning in the late 1880s, a woolen mill occupied the site and in 1935, a hide tanning and finishing facility began operations onsite. After the facility closed in 1988, EPA found contamination in groundwater, soil and sludge and performed multiple removal actions before and after placing the site on the National Priorities List (NPL) in 1999. Removal actions included removing contaminated materials and the tannery mill building, decontaminating a facility warehouse, and capping a facility landfill. EPA completed these activities in 2001. Further investigations resulted in a 2002 cleanup decision that included treating soil and sludge onsite and placing it beneath a protective cap. The final remedy also required land use restrictions and long-term monitoring of groundwater and river sediments. 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 on site. The treatment plant, completed in 2006, occupies a portion of the former lagoon area. The town of Pownal reused old forest beams from the former tannery building to build a recycling center and town equipment shed. Recreational facilities onsite include a small park, future playing fields, benches, a historic marker near the North Pownal Bridge, and walking paths in the former lagoon area. In 2017, Hoosic River Hydro LLC completed construction of a hydroelectric power plant at a dam located next to the site.



Figure 131. Aerial view of the Pownal Tannery site (Vermont).

Tansitor Electronics, Inc.

The 44-acre Tansitor Electronics, Inc. Superfund site is located in Bennington, Vermont. About 36 acres of the site are located north of Route 9; the remainder of the site is located south of Route 9. Since 1956, various owners have made electrical components on part of the site. In 1981, Vishay-Tansitor notified 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.

EPA placed the site on the National Priorities List (NPL) in 1989. The selected cleanup plan included a waiver of groundwater standards for a 10-acre area of the site. The cleanup plan also included steps to address monitoring results and place restrictions on groundwater use. Outside the 10-acre area, groundwater contaminant concentrations are all below cleanup goals. EPA took the site off the NPL in 1999. Groundwater monitoring is ongoing. Vishay-Tansitor continues to operate its manufacturing facility on site. Forested wetlands cover most of the site south of Route 9.



Figure 132. Facilities at the Tansitor Electronics, Inc. site (Vermont).

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*Back Cover page photos:
Eastland Woolen Mill (Maine), Wells G&H (Massachusetts), Peterson Puritan, Inc. (Rhode Island),
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United States Environmental Protection Agency

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**December 2022
www.epa.gov/aboutepa/epa-region-1-new-england**



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minimum 30% post-consumer fiber.