



REGION 2 ECONOMIC PROFILE



PUTTING SITES TO WORK

*How Superfund Redevelopment
in Region 2 Is Making a
Difference in Communities*

2023 DATA

Cover page photos:

Li Tungsten Corp (New York), North Sea Municipal Landfill (New York), PJP Landfill (New Jersey).



Figure 1: A solar farm at the Brick Township Landfill site (New Jersey).

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PREFACE

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

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

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

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INTRODUCTION

The EPA's Region 2 office serves New Jersey, New York, Puerto Rico, the U.S. Virgin Islands and eight Indian Nations. Since the 1950s, the states in EPA Region 2 have faced major changes in the manufacturing sector. Spurred by globalization, advances in technology and a transition to a service-based economy, these changes have contributed to significant job losses and substantial neighborhood and downtown declines in communities across the region. While continuing to emphasize manufacturing as an economic cornerstone and a source of jobs, state and local leaders are helping communities adjust to these large-scale economic changes. Much of this work centers on investing in workforce development, retaining existing businesses, encouraging new business development and repurposing old industrial land, including Superfund sites. The Superfund program in EPA Region 2 is proud to play a role in these efforts.

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

Region 2 Sites in Reuse and Continued Use: Business and Job Highlights

In 2023...

820



businesses
operating

\$3.6B



annual
sales

16,254



people
employed

\$999M



annual employee
income



Figure 2: Imperial Bag and Paper Company at the PIP Landfill site (New Jersey).

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 2. There are 112 Superfund sites in reuse or continued use in Region 2 for which the EPA does not have business data, including 11 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 127 sites in reuse or continued use in Region 2 for which the EPA does not have property value or tax data, including 10 NPL federal facilities.

Through efforts such as the Superfund Redevelopment Program, EPA Region 2 helps communities reclaim cleaned-up Superfund sites. Factoring the reasonably anticipated future use of Superfund sites into the cleanup process promotes their safe redevelopment. In addition, EPA Region 2 works closely with state and local officials to remove barriers that have kept many Superfund sites vacant or underused. EPA Region 2 works to ensure that businesses on properties being cleaned up under Superfund can continue operating in a way that protects human health and the environment during site investigations and cleanup work. This continuity enables these businesses to remain open and serve as a source of jobs and income for local communities.

Superfund sites across Region 2 are home to commercial and industrial parks, retail centers, condominiums and single family homes. Many sites continue to host industrial operations, including large-scale manufacturing facilities. Some sites now support alternative energy projects. Others have been transformed into ecological preserves, parks and recreation complexes. On-site businesses and organizations at current and former Region 2 Superfund sites provide an estimated 16,254 jobs and contribute an estimated \$999 million in annual employment income. Sites in reuse and continued use in Region 2 generate \$36 million in annual property tax revenues for local governments.¹

This profile looks at how redevelopment activities at Superfund sites make a difference in communities across Region 2. In particular, it describes some of the beneficial effects of redevelopment and continued use of current and former Superfund sites. The profile also describes the land values and property taxes associated with Superfund sites returned to use and sites that have remained in use throughout the cleanup process. The EPA updates these profiles periodically. The beneficial effects may increase or decrease over time due to changes in:

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

Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 2.



Figure 3: An Amazon distribution center at the Goldisc Recordings, Inc. site (New York).



Figure 4: A Costco warehouse at the American Cyanamid Co. site (New Jersey).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 2 is committed to improving the health and livelihood of Americans by cleaning up and returning land to productive use. In addition to protecting human health and the environment through the Superfund program, Region 2 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 2 helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment. In addition, the EPA participates in partnerships with communities and encourages opportunities to support Superfund redevelopment projects that emphasize environmental and economic sustainability.

Specific redevelopment support efforts in EPA Region 2 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 2 communities and the EPA find the right tools to move site redevelopment forward.
- Making efforts to help address communities' and developers' liability, safety and reuse concerns through development of educational materials, 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, such as the Academy of Model Aeronautics, the U.S. Soccer Foundation, The Trust for Public Land and the Rails-to-Trails Conservancy.
- Developing reuse fact sheets, websites, webinars and reuse case studies to share opportunities and lessons associated with Superfund Redevelopment.



Figure 5: Storefronts at the retail plaza at the Universal Oil Products site (New Jersey).

These efforts have helped build expertise across Region 2, 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 Indian Nations, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and other partners and stakeholders to better understand potential future uses for Superfund sites. This helps stakeholders engage early in the cleanup process, ensuring that Superfund sites are restored as productive assets for communities. Most importantly, these efforts lead to significant returns for communities, including jobs, annual income and tax revenues.

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

The EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.² The EPA refers sites warranting long-term cleanup to its remedial program or to state programs. The EPA's National Priorities List (NPL) is a list of sites the Agency is targeting for further investigation and possible remediation through the Superfund program. Once the EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. The EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. Over the history of the Superfund program, the EPA has placed 302 sites in Region 2 on the NPL.

Whenever possible, the EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 2, 189 NPL sites and six non-NPL Superfund sites are in use. These sites have either new uses in place or uses that remain in place from before cleanup. Many of these sites have been redeveloped for commercial, industrial and residential purposes. Others have been redeveloped for recreational, ecological and agricultural uses. Businesses and other organizations also use some site areas for memorials and parking areas. Many redeveloped sites support multiple uses and have the capacity to support additional uses and further redevelopment. The following sections take a closer look at the beneficial effects of businesses operating on current and former Superfund sites in Region 2.

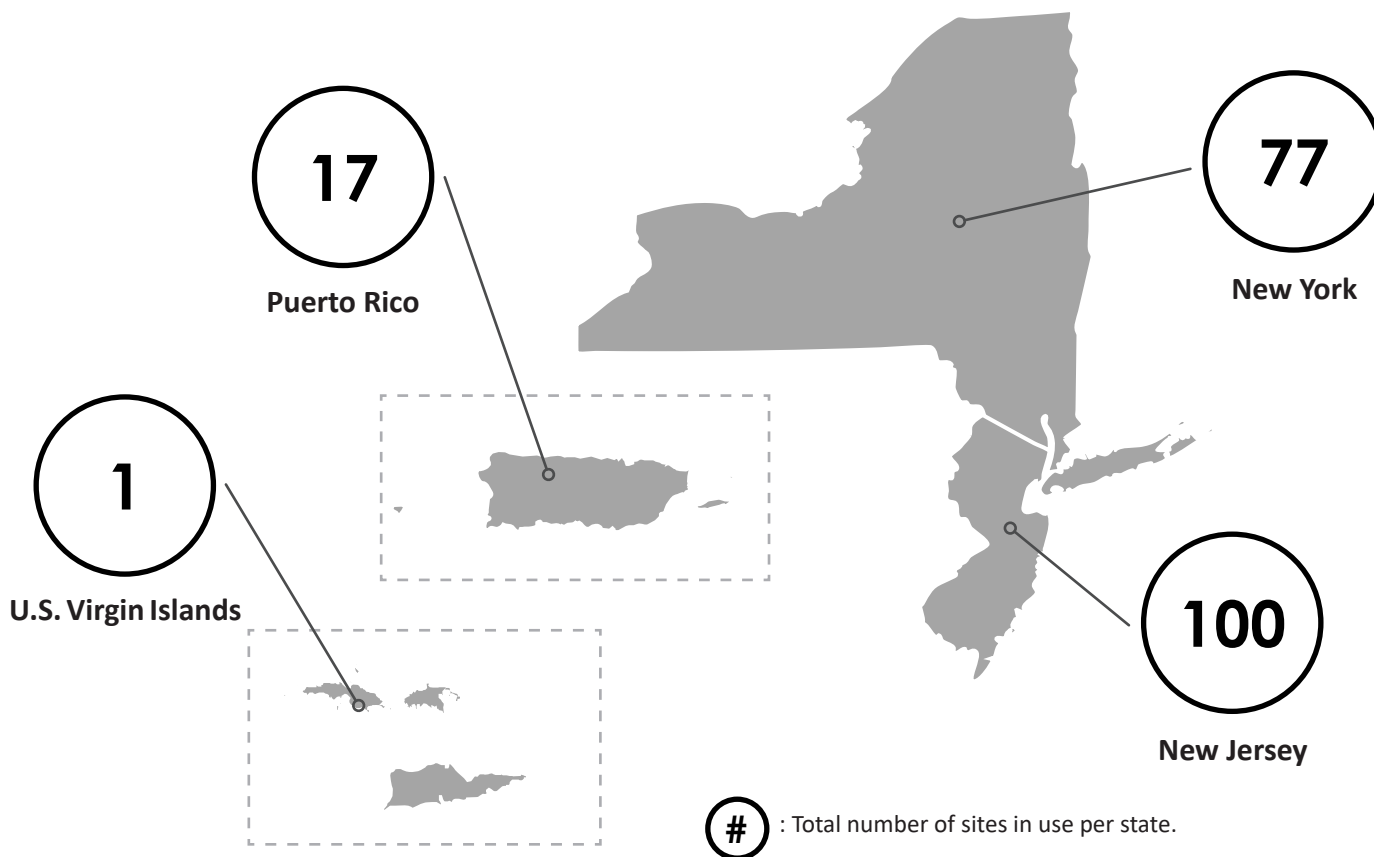


Figure 6. Sites in reuse and continued use in Region 2.

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



Figure 7. North Sea Municipal Landfill (New York).



Figure 8. Smithtown Ground Water Contamination (New York).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 2 Example
In Reuse	Part or all of a site is being used in a new, different manner than before Superfund involvement. Or, the property was vacant and cleanup was designed to support a new, specific land use.	North Sea Municipal Landfill (New York) – Today, the Site supports a recreation center, commercial and recreation-related businesses and a recycling facility. Future use proposals call for installation of solar arrays on three closed landfill cells.
In Continued Use	Historical uses at a site remain active, and/or the site is still used in the same general manner as when the Superfund process started at the site.	Janssen Inc. (Puerto Rico) – Cleanup activities enabled the continued operation of pharmaceutical manufacturing on-site.
In Reuse and Continued Use	Part of a site is in continued use and part of the site is in reuse.	Smithtown Ground Water Contamination (New York) – Following groundwater cleanup, the EPA took this site off the NPL in 2023. Today the site supports a horse farm, and the Nature Conservancy owns a property in the center of the site. People use its trails for hiking, bird watching and related activities. Residential use continues on part of the site.



= 195 SITES IN USE



= 83 SITES WITH BUSINESSES

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 2

Businesses and Jobs

The EPA has collected economic data for 820 businesses, government agencies and civic organizations operating on 80 NPL sites and three non-NPL sites in reuse and continued use in Region 2. (See the State Redevelopment Profiles for each state’s reuse details.) Businesses and organizations at these sites are part of several different sectors, including lodging, professional trade, industrial trade and health care services.







Businesses and organizations at Region 2 Superfund sites include hotels, schools, grocery stores, restaurants, civic and social organizations, freight transportation facilities, health care centers and manufacturing facilities.



Figure 9. American Cyanamid Co. (New Jersey).

The businesses and organizations at these sites generate about \$3.6 billion in estimated annual sales and employ about 16,254 people, earning an estimated \$999 million in annual employment income. This income injects money into local economies and generates revenue through personal state income taxes. These businesses also help local economies through direct purchases of local supplies and services. On-site businesses that produce retail sales and services also generate tax revenues through the collection of sales taxes, which support state and local governments. Table 1 provides more detailed information.

Table 1. Site and Business Information for Region 2 Sites in Reuse and Continued Use (2023)

	 Sites ^a	 Sites with Businesses	 Businesses ^b	 Total Annual Sales	 Total Employees	 Total Annual Employee Income
<i>In Reuse</i>	80	35	92	\$281 million	1,453	\$118 million
<i>In Continued Use</i>	25	7	10	\$299 million	455	\$49 million
<i>In Reuse and in Continued Use</i>	90	41	718	\$3 billion	14,346	\$832 million
Totals	195	83	820	\$3.6 billion	16,254	\$999 million

^a 11 sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

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

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use have the potential to increase in value significantly. This increased value can boost property tax revenues, which help pay for local government operations, schools, transit systems and other public services. Site properties at the PJP Landfill site in New Jersey are now valued at nearly \$120 million.




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

The EPA has collected property value and tax data for 68 Superfund sites in reuse and continued use in Region 2.⁴ These sites span 5,829 property parcels and 9,191 acres. They have a total property value of \$1.9 billion. The average total property value per acre is \$217,239.

Land and improvement property value information is available for 63 sites. These properties have a total land value of \$668 million and a total improvement value of \$1.1 billion.⁵

Property tax information is available for 68 sites. The properties generate a combined \$36 million in local property taxes annually.

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

 Total Land Value (63 sites)	 Total Improvement Value (63 sites)	 Total Property Value (68 sites)	 Total Property Value per Acre (68 sites) ^b	 Total Annual Property Taxes (68 sites)
\$668 million	\$1.1 billion	\$1.9 billion	\$217,239	\$36 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 2022 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

^b Based on total property value amount of \$1.9 billion divided by total acreage of 9,191. Result may not sum exactly to the totals presented due to rounding.

Region 2 Sites in Reuse and Continued Use: Property Value and Tax Highlights

\$1.9B



total property value

\$36M



total annual property taxes



Figure 10. An on-site house at the Smithtown Ground Water Contamination site (New York).

⁴ There are 127 additional sites in reuse or continued use in Region 2 for which the EPA does not have property value or tax data, including 10 NPL federal facilities.

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

BENEFICIAL EFFECTS FROM ENHANCED RECREATIONAL AND ECOLOGICAL AMENITIES

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 2 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 can also mitigate stormwater runoff problems by slowly absorbing and naturally filtering stormwater, resulting in improved water quality due to decreased runoff and erosion.

Parks, natural areas and scenic landscapes also have great economic value – supporting regional economies through tourism, agriculture and other activities. Economic impacts of recreation activities can include outdoor recreation spending and reduced public costs related to healthcare and infrastructure. In 2021, outdoor recreation contributed \$862 billion to the U.S. economy, supporting 4.5 million jobs and 1.9% of the total gross domestic product (GDP). Outdoor recreation's contribution to the GDP grew 18.9% compared to the overall economy that grew 5.9% in 2021.⁵ Protected green space can also increase the property values of nearby homes by providing amenities that draw people to live and work in the community. Many sites in Region 2 provide recreational and ecological benefits.



Figure 11. A marsh at Stony Brook Harbor at the Smithtown Ground Water Contamination site (New York).



Figure 12. Kayaks for recreation at the Smithtown Ground Water Contamination site (New York).

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

APPLIED ENVIRONMENTAL SERVICES

Wetland Restoration in Long Island Sound

The 3.2-acre Applied Environmental Services Superfund site is in Glenwood Landing, New York, along the Long Island Sound. Prior to 1980, a petrochemical company operated on site. Facility activities included fuel storage, and storage and distribution of solvents. From 1980 until 1983, Applied Environmental Services leased the property to recover fuel from hazardous waste on-site. Spills, leaks and other activities contaminated soil and groundwater. The contamination also impacted saltwater marshes next to the property. The EPA added the site to the NPL in 1986.

The EPA worked closely with site stakeholders to remove drums and tanks, put in fencing and collect liquid waste. The potentially responsible parties began soil and groundwater treatment efforts in June 1995. Cleanup activities included putting in groundwater recovery wells, soil vapor extraction wells, air sparging wells and a new steel bulkhead, as well as limited soil excavations to address remaining hot spots of contamination. Remedy optimization efforts are currently being monitored. In 2023, the EPA modified the site's long term cleanup plan to call for groundwater use restrictions.

From 2003 to 2009, the National Oceanic and Atmospheric Administration worked with partner agencies to restore local salt marsh and coastal shoreline. Efforts included the removal of solid waste and invasive plant species. About 3,000 cubic yards of soil were dug up and replaced with clean soil provided by the town of North Hempstead. The community got involved, volunteering to plant more than 8,000 native wetland plants and coastal trees, shrubs and grasses. Diverse plant and animal species now thrive in the area. This collaborative endeavor was the first in the country to be funded by a Superfund natural resource damage settlement, which allocated funds for performance monitoring.



Figure 13. Shoreline view at the Applied Environmental Services site (New York).

NORTH SEA MUNICIPAL LANDFILL

From Landfill to Outdoor Recreation

The 131-acre North Sea Municipal Landfill Superfund site is in Southampton, New York. From 1963 to 1995, a municipal landfill accepted solid waste, refuse, debris and septic system wastes. Disposal practices contaminated groundwater, surface water and soil with heavy metals. Monitoring found leachate coming from the landfill. In 1986, the EPA added the site to the Superfund program's NPL.

Initial cleanup included extending public water supplies to affected homes in nearby areas, removing 100,000 cubic yards of contaminated material, backfilling sludge lagoons and putting in a stormwater diversion system. The long-term remedy included capping and venting the landfill, restricting site access, institutional controls, and ongoing monitoring of air and water quality. After cleanup, the EPA took the site off the NPL in 2005. The town of Southampton continues to monitor the landfill, groundwater and leachate.



Figure 14. Bocce courts at the recreation center at the North Sea Municipal Landfill site (New York).

The successful cleanup has made beneficial reuse of the site possible, providing valuable public amenities and services to the community. In 2003, the town of Southampton built a 55,000-square-foot recreation center on-site. It hosts indoor and outdoor sports, youth camps, a skatepark and a playground. A recycling center is also active on part of the site. Future use proposals call for installation of solar arrays on the three closed landfill cells and construction of a cell tower near the landfill maintenance building.

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 2. Cleanup of the PJP Landfill site in Jersey City, New Jersey included restoration of wetland areas where water flows into and out of the site from the Hackensack River. The site's wetlands cleanup has led to creation of habitat for a wide variety of wildlife, including deer and waterfowl. At the Onondaga Lake Superfund site in Syracuse, New York, about 1.1 million native plants have been planted as part of the restoration of 90 acres of wetlands. More than 250 wildlife species are now found on site, including more than 120 bird species. At the Ellenville Scrap Iron and Metal Superfund site in Ellenville, New York, restoration and expansion of an on-site wetland included installation of clay matting and a number of wetlands plantings to replace wetlands affected by the installation of the landfill cap. Today, the wetlands are flourishing and provide habitat for plants and animals at the site.

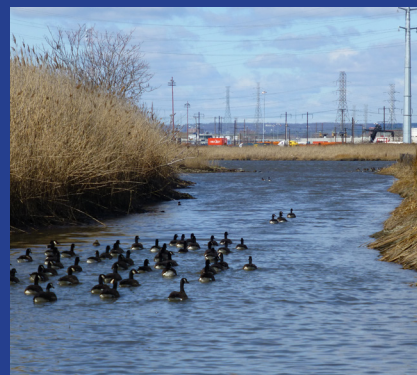


Figure 15. Restored wetlands and wildlife at the PJP Landfill site (New Jersey).

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

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

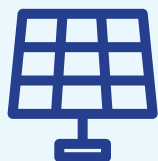
- EPA's *Economic Benefits of Wetlands*: www.epa.gov/sites/default/files/2021-01/documents/economic_benefits_of_wetlands.pdf
- EPA's *Ecosystem Services at Superfund Sites: Reuse and the Benefit to Community*: <https://semspub.epa.gov/src/document/HQ/100003500>
- EPA's *Why Are Wetlands Important?*: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

BENEFICIAL EFFECTS FROM ALTERNATIVE ENERGY PROJECTS

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

As of September 2023, the EPA is tracking 23 alternative energy projects at 23 Superfund sites in Region 2. These projects have an installed capacity of about 248 megawatts. One of these projects directly powers site-related cleanup activities.

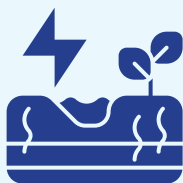
Alternative energy projects tracked in **Region 2** generate an estimated **319,036 megawatt hours** each year.⁶ This is equivalent to the following emission reductions...



22
Solar Projects



222,875 metric tons of carbon dioxide



1
Geothermal Facility



The carbon dioxide emissions from **29,065** homes' energy use for one year



The greenhouse gas emissions from **53,045** gasoline-powered passenger vehicles driven for one year

⁶ Equivalencies were calculated using power production. Production values were not available for one project in Region 2. Estimated power production for solar projects was calculated using facility capacity (megawatts) with the National Renewable Energy Laboratory's PVWatts Calculator pvwatts.nrel.gov. To learn more about equivalencies, visit www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

ENVIRONMENTAL JUSTICE AND ECONOMIC REVITALIZATION

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

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

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

In addition, the EPA is using investment from the Bipartisan Infrastructure Law to fund new cleanup projects and expedite ongoing cleanup at over 100 Superfund sites across the country. As of early 2024, nearly 80% of the funding from the Bipartisan Infrastructure Law has gone to sites in communities with potential environmental justice concerns. This historic investment will finance cleanup at 35 sites in Region 2.

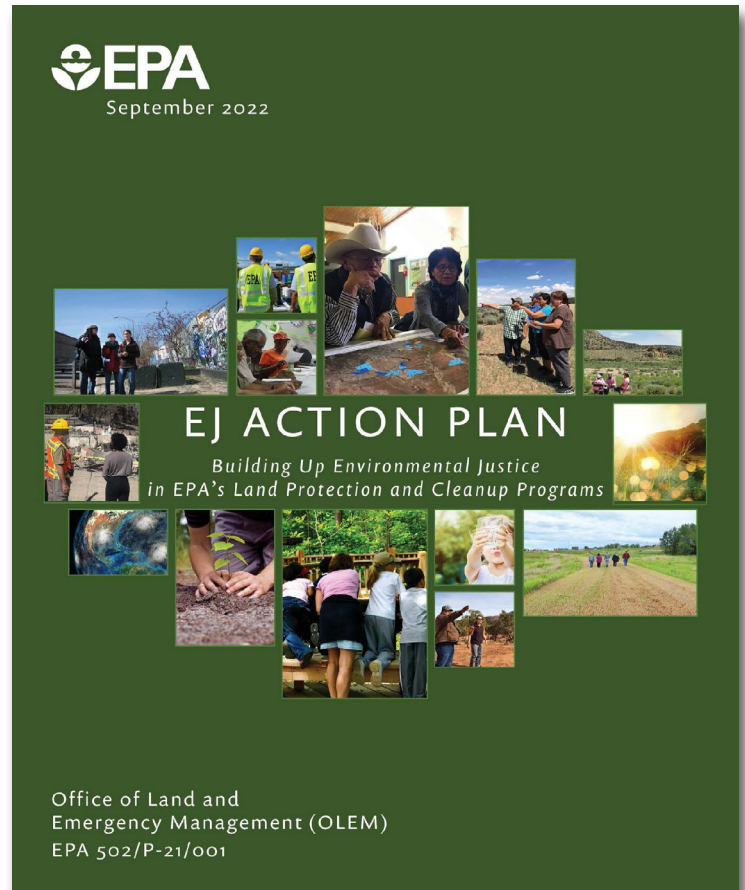


Figure 16. The EPA's EJ Action Plan aims to address cleanup issues in overburdened communities across the country.

CLIMATE ADAPTATION AT SUPERFUND SITES

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

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

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

Examples of climate adaptation measures that increase resiliency include:

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

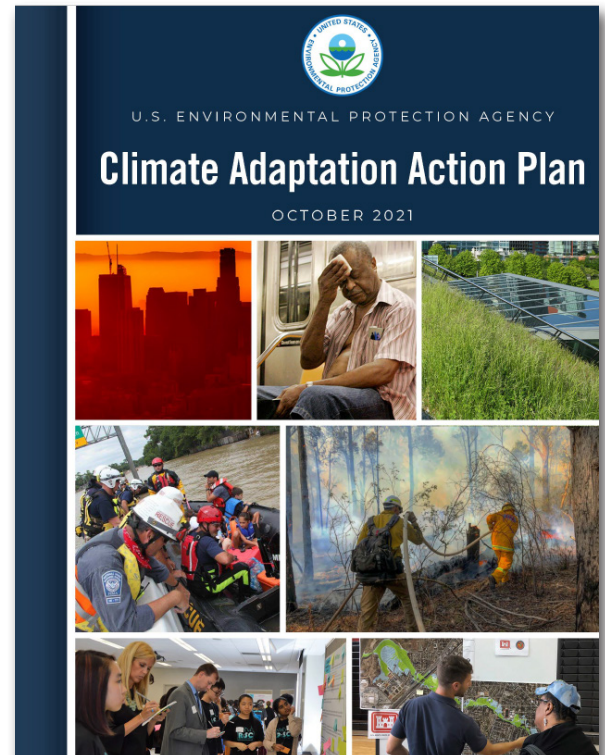



Figure 17. In January 2021, President Biden signed Executive Order 14008, requiring federal agencies to develop climate action plans that describe their climate vulnerabilities and steps to increase resilience to the impacts of climate change. In October 2021, the EPA released its updated Climate Adaptation Action Plan, which includes five climate adaptation priority actions that the Agency is taking to increase human and ecosystem resilience as disruptive impacts associated with climate change increase.



GREEN INFRASTRUCTURE AND SUSTAINABLE LANDSCAPE AND BUILDING PRACTICES AT SUPERFUND SITES

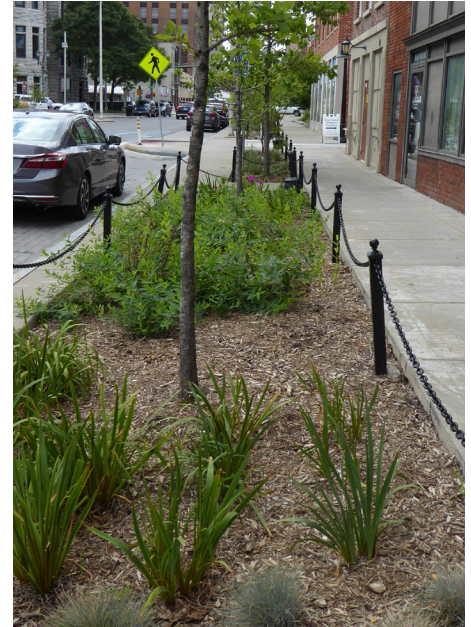
Cleaning up Superfund sites and planning for their future use offers communities opportunities to explore exciting and innovative ways to approach infrastructure, landscape and building design. Collaboration among the EPA and communities has led to award-winning examples of green infrastructure and sustainable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

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

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

Key Considerations

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



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

REDEVELOPMENT IN ACTION

BUCKBEE-MEARS CO. SITE Former Manufacturing Facility Now Supports Innovative Soil Production

The 74-acre Buckbee-Mears Co. site is in Cortland, New York. From 1974 to 2004, the Buckbee-Mears Company made electronics for televisions and computers on-site. Operators used acids, ammonia, chlorine and metals for manufacturing and stored hazardous materials on-site. In 2004, International Electron Devices (IED) acquired the property and continued similar operations. The next year, IED abandoned the site. Chemicals and hazardous waste left behind contaminated soil, groundwater and structures.

From 2007 to 2009, the EPA removed materials in storage tanks, chemical feed lines, potential radiation sources, mercury switches, metal waste, and structurally damaged and contaminated buildings. After cleanup, the EPA negotiated settlement agreements with site stakeholders and local governments. In 2012, the EPA's Superfund Redevelopment Program (SRP) provided resources for a regional support project. It brought the EPA and local government representatives together to discuss reuse goals and options for the site. A reuse assessment documented the site's cleanup and readiness for reuse and helped facilitate the sale of the property. In 2014, a local developer acquired the area and invested nearly \$800,000 overhauling buildings and addressing remaining contamination. The developer completed an environmental audit to document proper contamination removal.

Today, the site hosts two businesses that help bolster the local economy and generate tax revenue. In 2019, soil production business Bio365 leased part of the site and built an adjacent warehouse. The company makes biologically active and nutrient-dense biochar soil for commercial, organic agriculture in greenhouses. The patented process mimics the natural decay of organic matter in an accelerated timetable, resulting in nutrient-rich compost. The site property owner, Empire Kellogg Holdings LLC, made upgrades to the former factory building and now operates Empire Archives, Inc. on site. Empire Archives, Inc. is an information management company that stores and manages hard copy records for over 200 businesses in New York State. Additional space at the site is available for future tenants.



Figures 18 & 19. Truck access point for the Bio365 facility at the Buckbee-Mears Co. site (New York). Totes containing materials for mixing and packaging of Bio365's agricultural products at the Buckbee-Mears Co. site (New York).

COMBE FILL NORTH LANDFILL

North America's Largest Landfill-to-Solar Project

The Combe Fill North Landfill Superfund site is in the township of Mount Olive, New Jersey. A 65-acre municipal landfill was active on-site from 1966 to 1978. The site accepted domestic and industrial waste and dry sewage sludge. Combe Fill Corporation purchased the landfill in 1978 but went bankrupt in 1981 and did not close the landfill properly. The landfill contaminated groundwater, downslope creeks and nearby private wells with volatile organic compounds. The EPA added the site to the NPL in 1983.

The EPA and the New Jersey Department of Environmental Protection (NJDEP) selected a cleanup plan in 1986. Cleanup included grading and compacting the waste disposal area, capping the landfill with clay to prevent surface water infiltration, putting in a drainage system, installing a ventilation system for methane gas, and restricting access to the site. The EPA and NJDEP completed cleanup activities in 1991. In 2014, sampling activities detected 1,4 dioxane contamination in private drinking water wells near the site. NJDEP connected affected homes to a public water supply system. In 2023, the EPA updated the site's long term cleanup plan to include institutional controls. Groundwater monitoring will continue after construction activities are complete.

In 2019, CEP Renewables purchased the property and worked with site stakeholders and the township of Mount Olive to develop a large solar farm. The project's goals were to create jobs, generate tax revenue and contribute to the state's clean energy goals. In 2021, the township received the Innovation in Governance Award from the National League of Cities, the New Jersey Department of Community Affairs and the New Jersey League of Municipalities for its efforts to ensure the area's return to beneficial use. Construction of the solar facility was completed in 2022. It now generates about \$50,000 per year in tax revenue. The project's 56,000 solar panels have a capacity of about 25.6 megawatts, enough to provide power to over 4,000 homes in New Jersey.



Figure 20. Power generated at the Combe Fill North Landfill Superfund site contributes to New Jersey's clean energy goals.

GLOBAL SANITARY LANDFILL

Landfill Cleanup Supports Community Solar Project and Job Training Program

The Global Sanitary Landfill site is a 57.5-acre area in Old Bridge Township, New Jersey. From 1968 to 1984, Global Landfill Reclaiming Corporation (GLRC) used the area for solid waste disposal. Drums containing paint, paint thinner and various solvents were buried in the landfill. Landfill waste contaminated area groundwater. In early 1984, a failure in the landfill's structure exposed hazardous wastes to nearby wetlands. GLRC shut down all disposal operations. The EPA added the site to the NPL in 1989.

In 1991, the EPA and the New Jersey Department of Environmental Protection chose a cleanup plan to stabilize and cap the landfill. In 1997, the EPA selected an additional cleanup plan that included groundwater monitoring, excavation and disposal of contaminated sediment, and annual ecological monitoring. The EPA approved the design for the cleanup in 2009. The site's potentially responsible parties completed cleanup construction activities in 2012. After the cleanup finished, the EPA found that the cleanup was protective of human health and the environment. All human and ecological exposure routes have been addressed. Groundwater and wetland monitoring are ongoing.

Solar developer AC Power LLC identified the area's reuse potential in 2017. It proposed building a 2.8-megawatt solar array on 16 acres of the landfill cap. In 2022, Old Bridge Township approved the project. In April 2023, AC Power LLC sold the solar project and its 25-year lease to NJR Clean Energy Ventures (CEV). The facility opened in October 2023. It provides 400 homes with reduced-cost electricity, 51% of which supports low- and moderate-income residents. Over the next 30 years, the facility will generate more than \$1.2 million in revenue for Old Bridge Township.

The solar project also provides opportunities for workforce growth in the community. AC Power LLC partnered with Solar One, an environmental education organization, on a career readiness program focused on renewable energy. The high-school internship program provides nonprofit and corporate renewable energy experience. The college program includes North American Board of Certified Energy Practitioners certification training at the nearby County College of Morris. AC Power LLC provides funding that sponsors coursework and exams for students. Thanks to these strategic partnerships, the Global Sanitary Landfill solar project and its innovative programs will provide benefits for the community for years to come.



Figures 21 & 22. A solar array at the Global Sanitary Landfill Superfund site (New Jersey). Members of the solar project team at the project's ribbon-cutting event at the Global Sanitary Landfill site (New Jersey).

SYOSSET LANDFILL

Capped Landfill Hosts Innovative Fueling Facility

The 38-acre Syosset Landfill Superfund site is in Oyster Bay, New York. From 1933 to 1975, a landfill accepted commercial, industrial, residential, demolition and agricultural wastes on site. Landfill activities contaminated soil and groundwater with heavy metals and volatile organic compounds. The EPA added the site to the NPL in 1983.

Cleanup activities included putting in a ventilation trench that prevents the migration of gas vapor to neighboring homes and a nearby elementary school. The remedy also included capping and fencing the landfill. Institutional controls restrict the use of the area to protect the cap and prevent exposure to groundwater contamination. The EPA took the site off the NPL in 2005. The remedy remains protective of human health and the environment. The Town of Oyster Bay monitors landfill gas and groundwater.

The town of Oyster Bay's Highway Division now uses the site for salt storage, equipment storage, vehicle parking and sanitation vehicle storage. The EPA reviewed and approved a design plan submitted by the locality for a state-of-the-art compressed natural gas (CNG) fueling facility, ensuring that construction activities would not impact the remedy. In 2009, the town received federal funds, including over \$5.5 million from the U.S. Department of Energy Clean-Cities Alternative Fuel and Advanced Technology Vehicles Pilot Program, to put in the fueling station and convert 44 of the town's heavy-duty sanitation trucks from diesel fuel to CNG. The station opened in 2011.

The town estimates that the CNG trucks reduce their petroleum usage by about 264,000 gallons per year. The vehicles produce about 27% fewer greenhouse gas emissions than similar gasoline or diesel models, preventing the release of an estimated 67,130 pounds of pollutants into the atmosphere annually. The project has provided green job opportunities in station construction, equipment manufacturing, and ongoing vehicle and station operations. When Superstorm Sandy caused widespread damage in the area in 2012, the CNG trucks were instrumental in clearing debris while fuel shortages delayed vehicle operations in nearby communities.

Other local public services on-site include the Oyster Bay Animal Shelter and the Oyster Bay Civil Service Employees Association. In total, on-site facilities provide an estimated \$5 million in annual employment income. Looking forward, the site's location and size mean that it will be able to provide more opportunities for mixed-use development.



Figure 23. CNG trucks parked at the Syosset Landfill site (New York).

REDEVELOPMENT ON THE HORIZON IN REGION 2

CIBA-GEIGY CORP. Solar Project Expansion while Preserving Natural Resources

The 1250-acre Ciba-Geigy Corp. Superfund site is in Toms River, New Jersey. Starting in 1952, Ciba-Geigy Corporation and other entities ran a manufacturing facility on site that made dyes, pigments, resins and epoxy additives. Facility operations and improper waste disposal contaminated soil and groundwater. The EPA added the site to the NPL in 1983. Cleanup included excavation and off-site disposal of some contaminated soil, removal and off-site disposal of more than 47,000 drums, treatment of some contaminated soil, installation of caps and slurry walls to prevent contaminant migration, and institutional controls. Cleanup also includes ongoing operation of a groundwater extraction, treatment and recharge system.

In 2008, BASF Corporation (BASF) purchased the property. In coordination with BASF, local high school students now learn in an open-air classroom on-site. Tours provided by BASF teach students about the area's history, contamination and cleanup as well as local wildlife species. Forested areas of the site provide habitats for coyotes, red and gray foxes, turkeys, raccoons, deer and birds.

In 2019, BASF leased 120 acres of the site to EDF Renewables and Goldman Sachs Renewable Power for development of a 27.4-megawatt direct current (MW DC) grid-tied solar array system and a 1.5-MW DC net-metered system. The net-metered system provides nearly 100% of the electricity needed to power groundwater cleanup. These systems came online in 2021. The EPA worked with BASF to make sure all solar arrays on-site are ground-mounted and do not penetrate the caps, ensuring the remedy remains protective of human health and the environment. A third system, consisting of a 5-MW DC solar array that will provide energy to low- and moderate-income homes in the community, is now in operation.

As part of a 2023 settlement with the New Jersey Department of Environmental Protection, BASF agreed to permanently preserve about 1,000 acres of the site. Within this area, 375 acres will host several natural resource restoration projects. Project plans include restoring forest and grasslands, enhancing wetlands and aquatic habitats, and building a LEED-certified environmental education center. These efforts will significantly enhance the local natural environment and expand public access to it.



Figure 24. Aerial view of the solar array at the Ciba-Geigy site (New Jersey).

HOOKER CHEMICAL & PLASTICS CORP./ RUCO POLYMER CORP. Innovative Cleanup Leads to Industrial Project

The Hooker Chemical & Plastics Corp./Ruco Polymer Corp. Superfund site is located in Hicksville, New York. A chemical manufacturing facility was on-site from 1945 to 2002 and produced latex and other polymers. Industrial wastewater discharges, chemical spills and soil displacement contaminated soil and groundwater. The EPA added the area to the NPL in 1986.

The EPA has worked with site stakeholders on several cleanup efforts to address the contamination. Cleanup included digging up polychlorinated biphenyl (PCB)-contaminated soil and materials, putting in a soil flushing system to minimize contamination reaching groundwater, and using biosparging, an innovative groundwater treatment method. Biosparging introduces air and oxygen into groundwater to help the natural breakdown of vinyl chloride. Construction of the system finished in 2012. In 2021, the EPA approved a work plan for a partial shutdown trial of the biosparge system and an evaluation of bioremediation performance. In 2023, the trial shutdown commenced, and results are being monitored on a quarterly basis. A treatment plant treats contaminated groundwater downgradient from the site. The EPA found there is no potential for the migration of contamination to nearby ecological resources.

The site's proximity to the Long Island Expressway and a rail spur makes it well suited for commercial and industrial redevelopment. In October 2021, the EPA Region 2 provided a prospective purchaser, an asset company, with a comfort letter supporting redevelopment. Since that time, redevelopment of the site into a warehouse distribution center has progressed significantly. The site owner is expecting to complete construction of a 200,000-square-foot warehouse and office space by the end of 2024. The project is also in the queue for community solar; the structure's roof was designed to maintain the weight of solar panels. The \$99.4 million investment is expected to create 50 full-time-equivalent jobs and 75 construction jobs. Over the next 20 years, it is anticipated that the facility will generate an estimated \$27 million in tax revenue for Nassau County. This revenue reflects a roughly 250% increase over the tax revenue the property would have generated otherwise.



Figures 25 & 26.
Construction underway of a warehouse distribution center (left) and a rendering of a planned warehouse distribution center at the Hooker Chemical & Plastics Corp./Ruco Polymer Corp. site (New York). Images used with permission of Brookfield Properties.

CONCLUSION

The EPA works closely with its partners at Superfund sites across Region 2 to make sure sites can safely be reused or remain in continued use during and following cleanup. The EPA also works with businesses and organizations at Superfund sites throughout the cleanup process to make sure they can remain open.

The businesses and organizations at these sites provide jobs and income for communities and generate local and state taxes. Cleanup and redevelopment also helps stabilize and boost property values. There are 189 NPL sites and six non-NPL Superfund sites in Region 2 that have either new uses in place or uses that have remained in place since before cleanup. Future uses are planned for many more Superfund sites in Region 2. The EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 2.



Figure 27. Cold Spring Pier Pavilion at the Marathon Battery Corp. site (New York).

The redevelopment of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among the EPA, Indian Nations, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and nearby residents and business owners is essential. The 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 2, Superfund sites are now home to major commercial and industrial facilities, mid-size developments and small businesses providing services to surrounding communities. The EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Redevelopment Resources

EPA Region 2 Superfund Redevelopment Coordinators

Claudia Shuman | (212) 637-4279 | shuman.claudia@epa.gov

Marla Wieder | (212) 637-3184 | wieder.marla@epa.gov

Superfund Sites in Reuse: find more information about Superfund sites in reuse

www.epa.gov/superfund-redevelopment/find-sites-reuse

EPA Superfund Redevelopment Program Website: tools, resources and more information about Superfund site reuse

www.epa.gov/superfund-redevelopment

EPA Office of Site Remediation Enforcement Website: tools that address landowner liability concerns

www.epa.gov/enforcement/landowner-liability-protections

STATE REDEVELOPMENT PROFILES





NEW JERSEY REDEVELOPMENT PROFILE

The EPA partners with the New Jersey Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in New Jersey. New Jersey has 100 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in New Jersey.

Businesses and Jobs

The EPA has collected economic data for 348 businesses and organizations operating on 38 sites in reuse or continued use in New Jersey.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	37	11	25	\$156 million	596	\$56 million
<i>In Continued Use</i>	13	4	6	\$258 million	310	\$34 million
<i>In Reuse and in Continued Use</i>	50	23	317	\$1.6 billion	7,271	\$446 million
Totals	100	38	348	\$2 billion	8,177	\$536 million

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

^b Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for 38 Superfund sites in reuse or continued use in New Jersey. These sites span 4,925 property parcels and 3,997 acres.

Table 4. Property Value and Tax Information for Sites in Reuse and Continued Use in New Jersey^a

Total Land Value (038 sites)	Total Improvement Value (38 sites)	Total Property Value (38 sites)	Total Annual Property Taxes (38 sites)
\$610 million	\$849 million	\$1.5 billion	\$32 million

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



Figure 28. Universal Oil Products (Chemical Division) site (New Jersey).

Did You Know?

Chemical production and waste-handling practices led to soil and groundwater contamination at the Universal Oil Products (Chemical Division) Superfund site in East Rutherford, New Jersey. Today, after cleanup, on-site restaurants and retail businesses support over 300 jobs and \$111 million in annual sales. Cleanup also enabled the construction of an elevated rail line across the site that leads to the Meadowlands Sports Complex.



NEW YORK REDEVELOPMENT PROFILE

The EPA partners with the New York State Department of Environment Conservation to oversee the investigation and cleanup of Superfund sites in New York. New York has 77 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in New York.

Businesses and Jobs

The EPA has collected economic data for 460 businesses and organizations operating on 41 sites in reuse or continued use in New York.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
In Reuse	36	23	66	\$124 million	845	\$62 million
In Continued Use	10	3	4	\$41 million	145	\$15 million
In Reuse and in Continued Use	31	15	390	\$1.45 billion	6,932	\$381 million
Totals	77	41	460	\$1.6 billion	7,922	\$458 million

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

^b Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for 30 Superfund sites in reuse or continued use in New York. These sites span 904 property parcels and 5,193 acres.

Table 6. Property Value and Tax Information for Sites in Reuse and Continued Use in New York^a

Total Land Value (25 sites)	Total Improvement Value (25 sites)	Total Property Value (30 sites)	Total Annual Property Taxes (30 sites)
\$58 million	\$301 million	\$537 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 2022 to 2024.



Figure 29. SMS Instruments Inc. site (New York).

Did You Know?

Improper handling and disposal practices contaminated groundwater and soil at the SMS Instruments, Inc. Superfund site in Deer Park, New York. Following cleanup, groundwater meets drinking water standards and an interior design service and cable wholesaler are active on-site.

PUERTO RICO REDEVELOPMENT PROFILE

The EPA partners with the Puerto Rico Department of Natural and Environmental Resources to oversee the investigation and cleanup of Superfund sites in Puerto Rico. Puerto Rico has 17 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Puerto Rico.

Businesses and Jobs

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

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	7	1	1	\$780,000	12	\$343,200
<i>In Continued Use</i>	2	0	-	-	-	-
<i>In Reuse and in Continued Use</i>	8	2	6	\$9 million	124	\$4 million
Totals	17	3	7	\$10 million	136	\$4 million

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

^b Annual sales figures are not available (or applicable) for every organization that makes jobs data available.

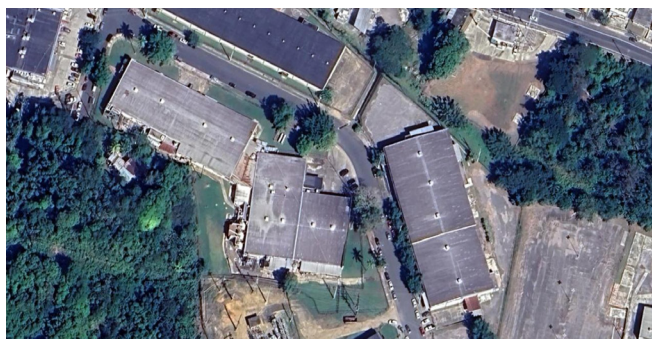


Figure 30. San German Ground Water Contamination site (Puerto Rico).

Did You Know?

The San German Ground Water Contamination Superfund site in San German, Puerto Rico includes a large part of the city and the Gaunajibo River. EPA found soil and groundwater contamination that came from an industrial park. Investigations and cleanup are ongoing. Retiro Industrial Park remains open. Its tenants include a jewelry and silverware manufacturing business that supports about 40 jobs.

THE U.S. VIRGIN ISLANDS REDEVELOPMENT PROFILE

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

Businesses and Jobs

The EPA has collected economic data for five businesses and organizations operating on one site in reuse or continued use in the U.S. Virgin Islands.

Table 9. Detailed Site and Business Information for Sites in Reuse and Continued Use in the U.S. Virgin Islands (2023)

	Sites	Sites with Businesses	Businesses	Total Annual Sales ^a	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	0	-	-	-	-	-
<i>In Continued Use</i>	0	-	-	-	-	-
<i>In Reuse and in Continued Use</i>	1	1	5	\$2 million	19	\$536,484
Total	1	1	5	\$2 million	19	\$536,484

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



Figure 31. Tutu Wellfield site (U.S. Virgin Islands).

Did You Know?

Industrial operations at the Tutu Wellfield Superfund site on the island of St. Thomas in the U.S. Virgin Islands resulted in a 108-acre groundwater contamination plume. During cleanup and monitoring activities, many businesses, schools, churches and homes on-site remain safely in continued use.

REUSE INFORMATION SOURCES

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

EPA Resources

Applied Environmental Services. EPA Site Profile. www.epa.gov/superfund/applied-environmental-services

Applied Environmental Services. 2020. Fifth-Year Review Report. semspub.epa.gov/src/document/02/609865

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Universal Oil Products (Chemical Division). EPA Site Profile. www.epa.gov/superfund/universal-oil

Universal Oil Products (Chemical Division). 2022. Ecosystem Services at Superfund Sites. semspub.epa.gov/work/HQ/100003256.pdf

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Ciba-Geigy Corp. AECOM: Proposed Projects. dep.nj.gov/wp-content/uploads/basf/basf-ciba-9-proposed-projects.pdf

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BUSINESS, JOBS, SALES AND INCOME INFORMATION

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

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

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

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

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

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

PROPERTY VALUE AND TAX INFORMATION

The EPA collected on-site property values and property taxes included in this profile for a subset of Superfund sites by comparing available site boundary information with available parcel boundary information and gathering information for selected parcels from county assessor datasets. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which typically varied from 2022 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

Back cover photos: Universal Oil Products (Chemical Division) (New Jersey), Marathon Battery Corp. (New York), Roebling Steel Co. (New Jersey).

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October 2024
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