



REGION 5 ECONOMIC PROFILE



PUTTING SITES TO WORK

*How Superfund Redevelopment
in Region 5 Is Making a
Difference in Communities*

2023 DATA

Cover page photos:

*Allied Paper, Inc./Portage Creek/Kalamazoo River (Michigan), Reilly Tar & Chemical Corp. (Indianapolis Plant)(Indiana), South Point Plant (Ohio)
(Image used with permission by the Lawrence Economic Development Corporation.)*



Figure 1. Portage Creek at the Allied Paper, Inc./ Portage Creek/Kalamazoo River site (Michigan).

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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

EPA's Region 5 office serves Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin and 35 Tribes. Since the 1950s, the states in EPA Region 5 – the Great Lakes Region – 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 5 is proud to play a role in these efforts.

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

Region 5 Sites in Reuse and Continued Use: Business and Job Highlights

In 2023...

537



**businesses
operating**

\$6.8B



**annual
sales**

18,940



**people
employed**

\$1.5B



**annual employee
income**



Figure 2. Cartridge Brewing and a former factory building at the Peters Cartridge Factory site (Ohio).

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 5. There are 104 Superfund sites in reuse or continued use in Region 5 for which the EPA does not have business data, including 13 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 140 sites in reuse or continued use in Region 5 for which the EPA does not have property value or tax data, including 13 NPL federal facilities.

Through efforts such as the Superfund Redevelopment Program, EPA Region 5 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 5 works closely with state and local officials to remove barriers that have kept many Superfund sites vacant or underused. EPA Region 5 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 5 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 5 Superfund sites provide an estimated 18,940 jobs and contribute an estimated \$1.5 billion in annual employment income. Sites in reuse and continued use in Region 5 generate \$30 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 5. 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 5.



Figure 3. Former General Mills research laboratory facility that now operates as office space on the General Mills/Henkel Corp. site (Minnesota).



Figure 4. American Electric Power (AEP Ohio) is one of many industrial and commercial businesses operating at the South Point Plant site (Ohio).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 5 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 5 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 5 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 5 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 5 communities and the EPA find the right tools to move site redevelopment forward.
- Making efforts to help address communities' and developers' liability, safety and reuse concerns through development of educational materials, comfort letters, developer agreements and environmental status reports – known as Ready for Reuse Determinations – that provide information about the appropriate use of sites.
- Supporting partnerships with groups committed to putting Superfund sites back into 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.

These efforts have helped build expertise across Region 5, making it easier to both consider future use of Superfund sites prior to cleanup and to identify opportunities for removing reuse barriers. These efforts also help Tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and other partners and stakeholders to better understand potential future uses for Superfund sites. This helps stakeholders engage early in the cleanup process, ensuring that Superfund sites are restored as productive assets for communities. Most importantly, these efforts lead to significant returns for communities, including jobs, annual income and tax revenues.


REUSE ASSESSMENT

St. Louis River/Interlake/Duluth Tar Site
Duluth, Minnesota



FINAL

OCTOBER 2017



Introduction

The St. Louis River in Duluth, Minnesota is an ecologically significant estuary and the backbone of Duluth's industrial and transportation economies. Due to a legacy of industrial activity and historical contamination impacts, EPA and Minnesota Pollution Control Agency (MPCA) are overseeing cleanup efforts for parts of the St. Louis River and certain industrial areas known as the St. Louis River Superfund site. With the area recognized as one of EPA's "Making a Visible Difference" communities, EPA is working with the City of Duluth and community partners to align a range of program investments across West Duluth's riverfront and adjacent neighborhoods of Fairmount and Irving.

EPA Superfund Redevelopment Initiative (SRI) and EPA Region 5 sponsored a reuse assessment in 2016 for the St. Louis River/Interlake/Duluth Tar site (SLRIDT site), a sub-area of the St. Louis River Superfund site.

The SLRIDT site offers strategic opportunities to connect nearby neighborhoods to the river, leveraging reuse and redevelopment opportunities across Duluth's 54th and 59th Avenue Peninsulas and Waseca Business Park.

Building on recommendations from the September 2016 reuse assessment working session hosted by EPA and the City of Duluth, this document summarizes the SLRIDT site's status, reuse opportunities, and development process considerations.

Report Contents

p. 2-3 Site Background and Cleanup
p. 4-5 Land Use and Ownership
p. 6-7 Reuse and Redevelopment Opportunities
p. 8 Redevelopment Process

West Duluth Revitalization Initiatives

Through EPA's Making a Visible Difference initiative City of Duluth, community partners and EPA are coordinating multiple planning efforts and agency investments including:

- St. Louis River/Interlake/Duluth Tar site Reuse Assessment
- Irving & Fairmount Brownfield Revitalization Plan
- Smart Growth Implementation Assistance
- Kingsbury Bay Health Impact Assessment




Figure 1. SLRIDT Study Area Context

Figure 5. Reuse Assessments, like this one from the St. Louis River/Interlake/Duluth Tar Site (Minnesota), are important regional tools for the Superfund Redevelopment Program.

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

The EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.² The EPA refers sites warranting long-term cleanup to its remedial program or to state programs. The EPA's National Priorities List (NPL) is a list of sites the Agency is targeting for further investigation and possible remediation through the Superfund program. Once the EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. The EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. The EPA has placed 343 sites in Region 5 on the NPL.

Whenever possible, the EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 5, 175 NPL sites and 46 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 5.

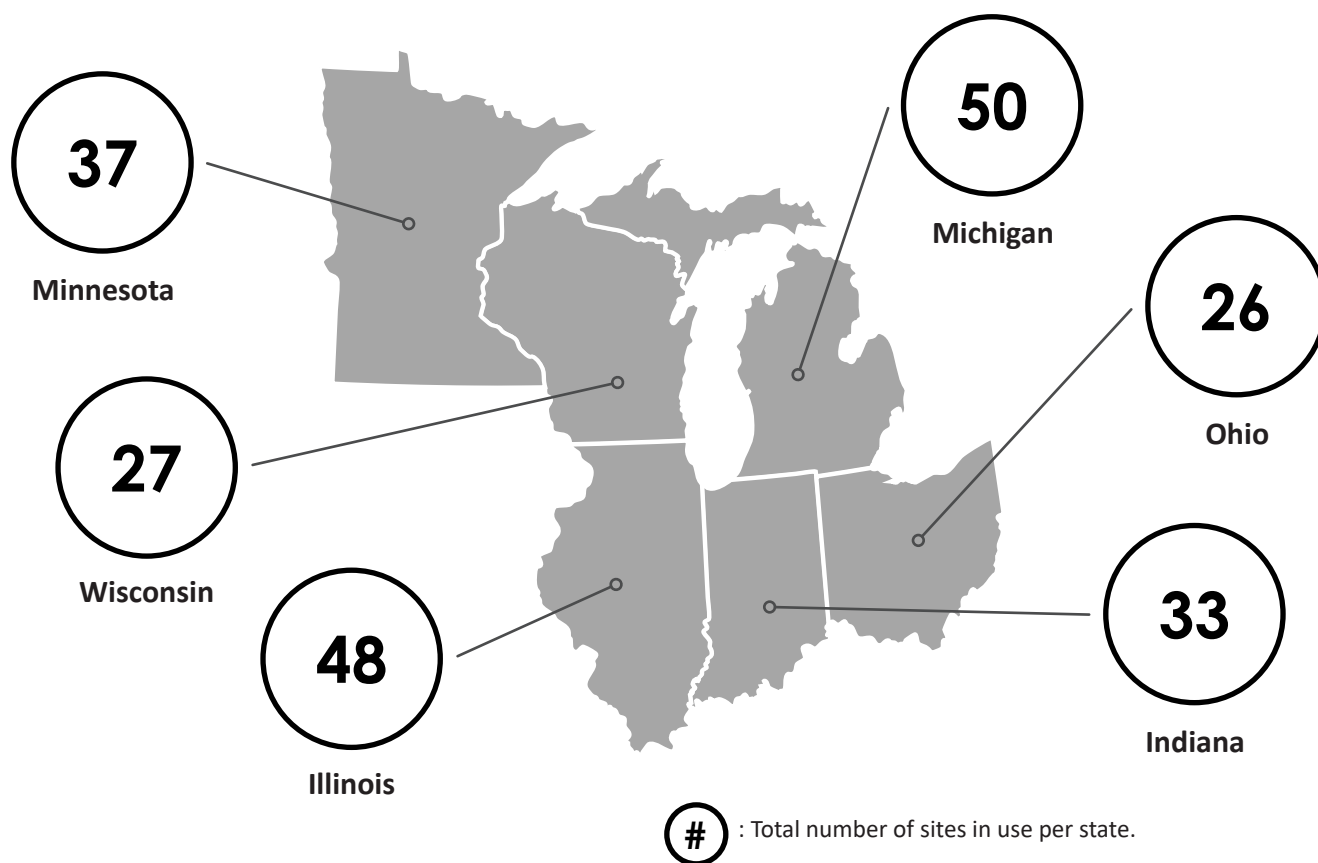


Figure 6. Sites in reuse and continued use in Region 5.

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



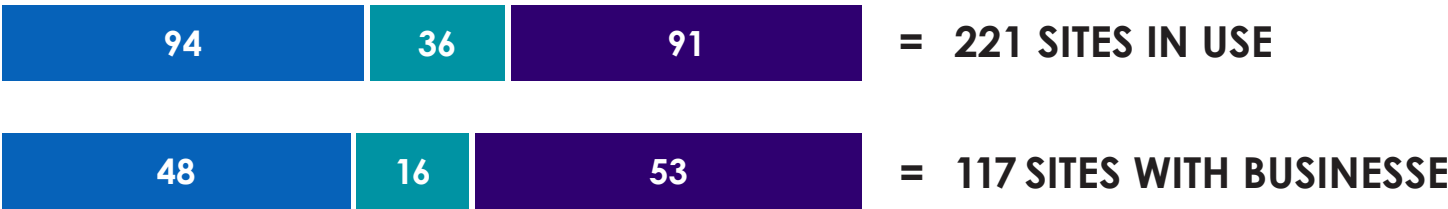
Figure 7. Larsen Marine Service, Inc. in Waukegan Harbor is in continued use at the Outboard Marine Corp. site (Illinois).



Figure 8. Children's Grove play area at the Petersen Sand & Gravel site (Illinois).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 5 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.	Petersen Sand & Gravel (Illinois) – A former waste disposal area now supports a wide range of new recreational amenities. In 2001, Independence Grove Forest Preserve created a 115-acre lake and established an education center, amphitheater and gift shop on-site. Visitors can enjoy walking, biking and skiing on over 7 miles of trails, and boating and catch-and-release fishing on the lake. The preserve also includes a play area and a sand volleyball court.
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.	Kaydon Corp. (Michigan) - Kaydon Corporation continued manufacturing operations during cleanup and remains active today. The company makes bearings, ball bearings and bearing assemblies at the site.
In Reuse and Continued Use	Part of a site is in continued use and part of the site is in reuse.	Woodstock Municipal Landfill (Illinois) - After cleanup, the community pursued recreational reuse plans for the site. A sports complex, which includes six soccer fields and a parking lot, opened in 2007. The site also supports continued ecological use.



BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 5

Businesses and Jobs

The EPA has collected economic data for 537 businesses, government agencies and civic organizations operating on 106 NPL sites and 11 non-NPL sites in reuse and continued use in Region 5. (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 5 Superfund sites include hotels, schools, grocery stores, restaurants, civic and social organizations, freight transportation facilities, health care centers and manufacturing facilities.



Figure 9. A Medtronic facility at the Boise Cascade/Onan Corp./Medtronics, Inc. site (Minnesota).

The businesses and organizations at these sites generate about \$6.8 billion in estimated annual sales and employ about 18,940 people, earning an estimated \$1.5 billion 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 5 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>	94	48	199	\$2.6 billion	8,174	\$680 million
<i>In Continued Use</i>	36	16	16	\$2.1 billion	2,978	\$340 million
<i>In Reuse and in Continued Use</i>	91	53	322	\$2.1 billion	7,788	\$539 million
Totals	221	117	537	\$6.8 billion	18,940	\$1.6 billion

^a 13 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 South Point Plant site in Ohio are now valued at over \$55 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 81 Superfund sites in reuse and continued use in Region 5.⁴ These sites span 4,432 property parcels and 14,815 acres. They have a total property value of \$967 million. The average total property value per acre is \$65,261.

Land and improvement property value information is available for 66 sites. These properties have a total land value of \$315 million and a total improvement value of \$583 million.⁵

Property tax information is available for 81 sites. The properties generate a combined \$30 million in local property taxes annually.

Table 2. Property Value and Tax Information for Sites in Reuse and Continued Use in Region 5^a

 Total Land Value (66 sites)^b	 Total Improvement Value (66 sites)	 Total Property Value (81 sites)	 Total Property Value per Acre (81 sites)^c	 Total Annual Property Taxes (81 sites)
\$315 million	\$583 million	\$967 million	\$65,261	\$30 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 2021 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

^b Land and improvement value for two of the sites is listed as \$0.

^c Based on total property value amount of \$967 million divided by total acreage of 14,815.

Region 5 Sites in Reuse and Continued Use: Property Value and Tax Highlights

\$967M



total property value

\$30M



total annual property taxes



Figure 10. New housing for homeless and disabled veterans built by the local non-profit ECHO Housing Corporation on the Jacobsville Neighborhood Soil Contamination site (Indiana).

⁴ There are 140 additional sites in reuse or continued use in Region 5 for which the EPA does not have property value or tax data, including 13 NPL federal facilities.

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

BENEFICIAL EFFECTS FROM ENHANCED RECREATIONAL AND ECOLOGICAL AMENITIES

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 5 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 5 provide recreational and ecological benefits.



Figure 11. La Villita Park at the Celotex Corporation site (Illinois).

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

H.O.D. LANDFILL

Former Skeet Shooting Range Re-Opened as Public Park

The H.O.D. Landfill Superfund site in Antioch, Illinois, includes a 50-acre landfill and a 70-acre undeveloped area that served as a landfill buffer. The site is surrounded by an industrial park, residential areas, wetlands and Antioch Community High School. From 1963 to 1984, the landfill accepted municipal, commercial and industrial wastes. Landfill operations contaminated groundwater with volatile organic compounds (VOCs) and metals. In 1989, the state of Illinois required the capping of the landfill with clay. In 1990, the EPA added the site to the National Priorities List (NPL).

After the landfill cap degraded over the next decade, Waste Management of Illinois (WMI) began remedy construction in 2000. Cleanup included repairing the landfill cap, relocating waste that was found off-site, putting up a fence around the site perimeter and putting in gas and leachate extraction systems. WMI also began monitoring groundwater and put land use restrictions in place that prohibit interference with the remedy and groundwater use. WMI completed remedy construction in 2001.

The Antioch community worked closely with WMI, the EPA and local stakeholders on a reuse plan. Community interests focused on recreational reuse opportunities, including sports fields. The EPA selected the site as a Superfund Redevelopment Initiative pilot in 2002 and issued a recreational Ready for Reuse Determination for the site in 2003. The school district also expressed interest in using methane gas produced by the landfill. After construction of a methane co-generation plant, methane gas from the landfill supplied heat and electricity to Antioch Community High School from 2003 to 2013. Today, recreational resources at the site include a playground, a concession stand and restroom building, and athletic fields for soccer, baseball, softball and field hockey. The school district also uses on-site wetlands for environmental education.



Figure 12. A playground, one of many recreational uses at the H.O.D. Landfill site (Illinois).

LAYER PARK

Lead Contamination Cleanup Allows for Public Park Reopening

From the 1930s to the 1950s, the Miami Valley Hunt & Polo Club ran a skeet shooting range at the 7.5-acre Layer Park Superfund site in Miami Township, Ohio. Part of the shooting range later became Layer Park, a public park with recreational amenities. Lead from skeet shooting contaminated site soil. Soil testing at the park showed lead concentrations up to 60 times above safe levels. Investigations also found elevated levels of arsenic in the soil. Miami Township closed the park in 2016 after learning of the contamination.



Figure 13. Restored playground equipment at the Layer Park site (Ohio).

The EPA led a short-term removal action to clean up the site from 2016 to 2017. Cleanup included the removal of contaminated soil from the park and a residential property next to the park. The EPA backfilled and reseeded the area and planted over 50 trees. The EPA also restored park amenities such as playground equipment, basketball courts and picnic areas. Layer Park reopened to the public in June 2018.



Figure 14. Some of the 50 trees EPA planted at the Layer Park site (Ohio).

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 5. At the H.O.D. Landfill site in Antioch, Illinois, area schools use on-site wetlands as an environmental education resource. Cleanup of the Fox River NRDA/PCB Releases site has restored wild rice areas and wetlands, and improved fisheries, increasing populations of native fish. The Himco Dump site in Elkhart, Indiana includes areas of rich ecological diversity and wildlife habitat within high quality woodland areas, wetlands, lakes and prairies. At the Bowers Landfill site in Circleville, Ohio, wetlands along the Scioto River floodplain help protect the landfill cap and provide valuable habitat for plants, birds, fish and other animals.

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

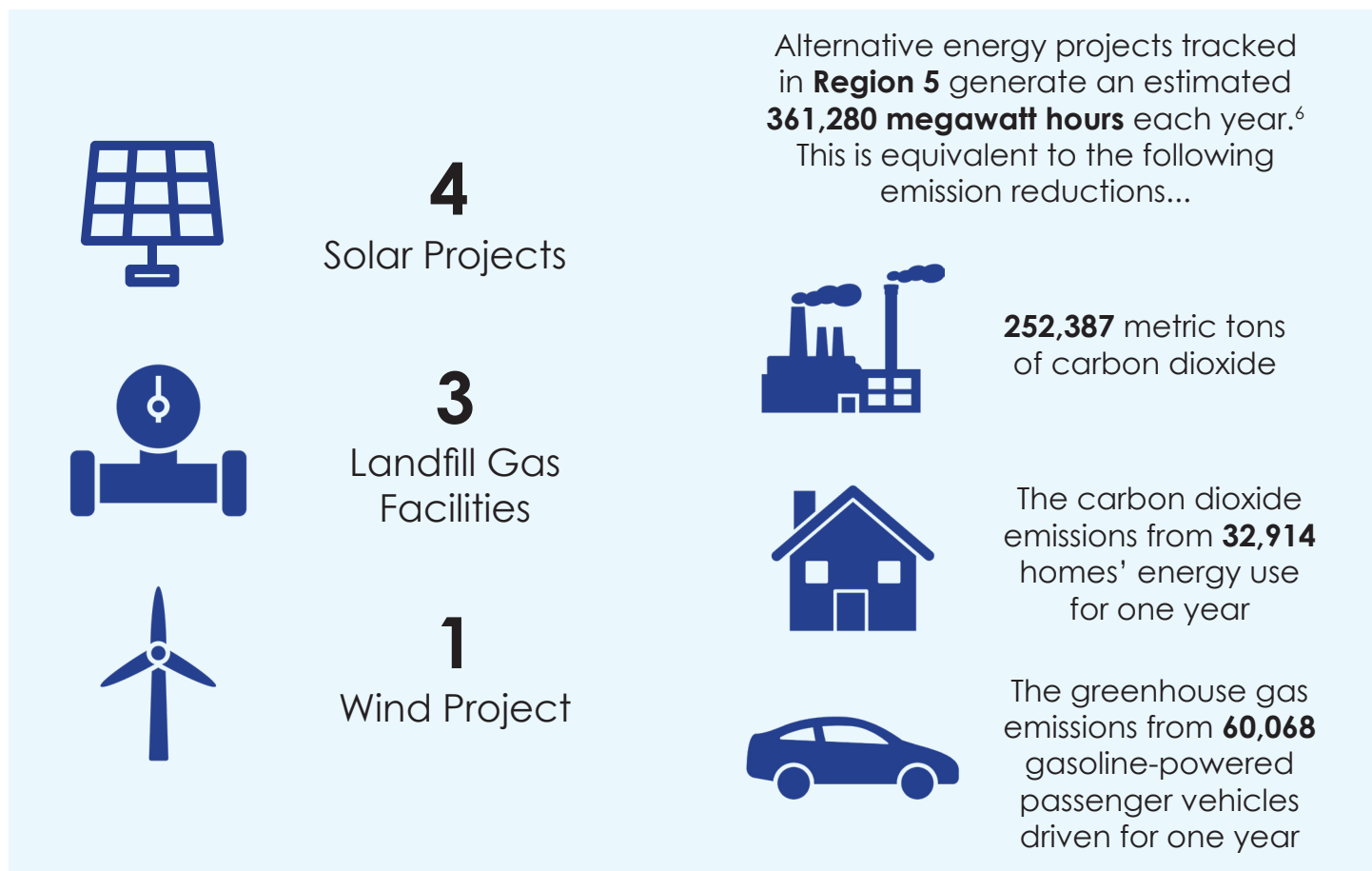


Figure 15. Restored wetlands at the Bowers Landfill site (Ohio).

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 eight alternative energy projects at seven Superfund sites in Region 5. These projects have an installed capacity of about 35 megawatts. Three of these projects offset on-site energy demands of cleanup efforts or directly power site-related cleanup activities.



⁶ Equivalencies were calculated using power production. Production values were not available for one project in Region 5. Estimated power production for solar projects was calculated using facility capacity (megawatts) with the National Renewable Energy Laboratory's PVWatts Calculator pvwatts.nrel.gov. To learn more about equivalencies, visit www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

ENVIRONMENTAL JUSTICE AND ECONOMIC REVITALIZATION

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

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

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 16 sites in Region 5.

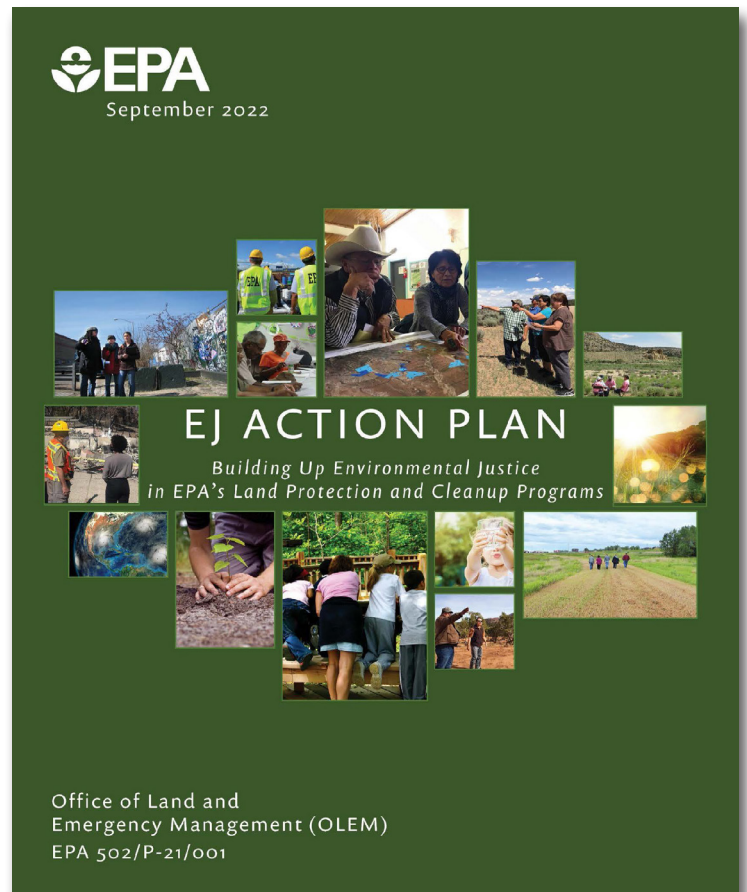


Figure 16. The EPA's EJ Action Plan aims to address cleanup issues in overburdened communities across the country.

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 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.

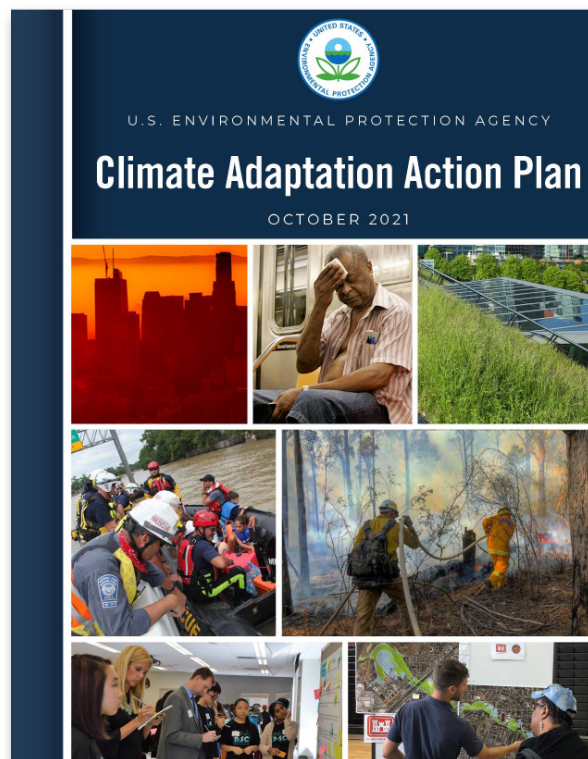



Figure 17. In January 2021, President Biden signed Executive Order 14008, requiring federal agencies to develop climate action plans that describe their climate vulnerabilities and steps to increase resilience to the impacts of climate change. In October 2021, the EPA released its updated Climate Adaptation 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

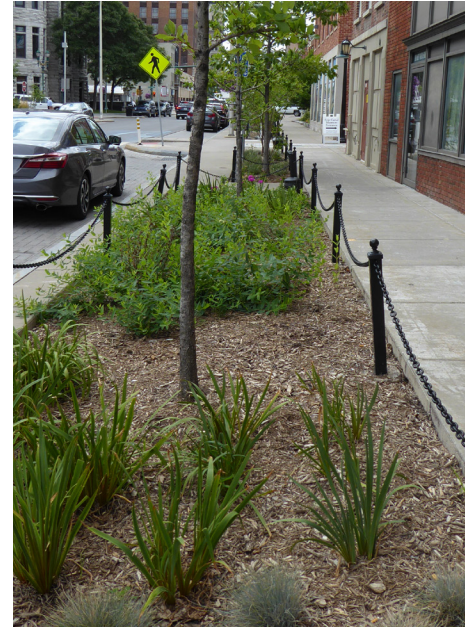
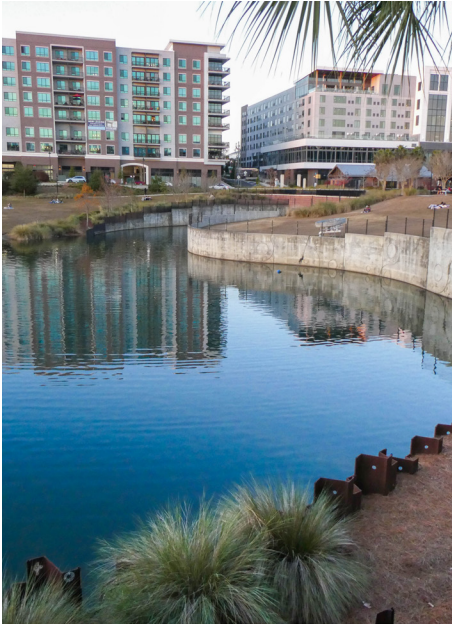
Cleaning up Superfund sites and planning for their future use offers communities opportunities to explore exciting and innovative ways to approach infrastructure, landscape and building design. Collaboration among the EPA and communities has led to award-winning examples of green infrastructure and sustainable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

KOPPERS COKE

Site Incorporated into High-Tech Industrial Park

From 1917 to 1979, Koppers Industries, Inc. ran a coking facility at the 38-acre Koppers Coke Superfund site in Saint Paul, Minnesota. The business made foundry coke and various byproducts, including coal tars, creosote, oils and greases, and other wastes. Improper storage and disposal practices as well as leaks and spills contaminated soil and groundwater. After a 1978 site investigation identified primary source areas, Koppers Industries, Inc. and the Minnesota Pollution Control Agency (MPCA) demolished the facility and removed 20 tanks and over 20,000 cubic yards of contaminated soil. The EPA added the site to the National Priorities List (NPL) in 1983.

At the beginning of cleanup, the Saint Paul Port Authority was developing nearby properties as part of a mixed-use industrial development. The Port Authority saw reuse potential at the site property and acquired it in 1982. With funding from local and state agencies, and oversight from MPCA, the Port Authority cleaned up the site by removing contaminated soil, capping contaminant sources and treating groundwater through bioremediation. Cleanup finished in 1998. Groundwater monitoring is ongoing.

The Saint Paul Port Authority redeveloped the site in phases, building five facilities to support commercial uses as part of the 218-acre high-tech Energy Park development. Energy Park includes energy-efficient features, light industrial manufacturing facilities, office and educational space, and a residential area providing more than 780 affordable housing options. Some site businesses include a solar energy system service, an automation solutions provider, a dairy products manufacturer and a charter school. In total, site businesses support about 375 jobs and generate nearly \$260 million in annual sales revenue.



Figure 18. Commercial space in the Energy Park development at the Koppers Coke site (Minnesota).

MIAMI COUNTY INCINERATOR

Former Waste Disposal Area Redeveloped for Public Services

The 65-acre Miami County Incinerator Superfund site is in Miami County, Ohio. Starting in 1968, an incinerator and several landfills at the site accepted municipal and industrial wastes, including combustible and non-combustible wastes, oils and solvents. The wastes contaminated soil, sediment and groundwater that flowed into the nearby Great Miami River. Groundwater contamination also threatened the area's sole source aquifer used by residential wells. The EPA added the site to the National Priorities List (NPL) in 1984.

The site's stakeholders worked with the EPA, the state and the county on a cleanup plan. They initially connected affected homes to the public water supply in 1989 and 1990. They then installed an impermeable cap, a soil vapor extraction (SVE) system, and a groundwater extraction and treatment system. The SVE system ran until 2000. Groundwater treatment is ongoing.

Miami County owns the site property and runs several facilities on-site, including a waste transfer station and recycling facility as well as offices for sanitary engineering and the highway department. The county sheriff's office, a minimum-security prison and a juvenile detention center are just south of the site and associated with county-run site reuses. On-site businesses support over 90 jobs and generate an estimated \$5 million in annual employment income.



Figure 19. The county-run waste transfer station and recycling center at the Miami County Incinerator site (Ohio).



Figure 20. A trailer for the county's recycling facility at the Miami County Incinerator site (Ohio).

REILLY TAR & CHEMICAL CORP. (INDIANAPOLIS PLANT) Complex Cleanup Leads to Award-Winning Solar Facility

The 120-acre Reilly Tar & Chemical Corp. (Indianapolis Plant) Superfund site is in a residential, industrial and commercial area in Indianapolis, Indiana. From 1921 to 1972, a coal tar refining and wood-treating facility was active on the southern part of the site. Starting in the 1940s, several companies began making chemicals on the northern part of the site. They used a lime pond, a trench, a landfill and several pits to dispose of wastes and construction debris. Site operations and waste handling practices contaminated groundwater and soil with volatile organic compounds (VOCs), nonaqueous phase liquid (NAPL) and polynuclear aromatic hydrocarbons (PAHs). The EPA added the site to the National Priorities List (NPL) in 1984.

Cleanup involved a variety of approaches to address five areas across the site. Cleanup activities included solidification and covering of sludge, excavation and off-site thermal treatment of soil, placement of a permeable soil cover on the southern part of the site, installation of a concrete cover and soil vapor extraction system in the northern part of the site, and groundwater extraction and monitoring. In 2021, the EPA changed the groundwater remedy to biosparging, an in-place treatment method that stimulates contamination degradation through oxygen injection. Construction of the sparging system will begin in 2025 and will eventually replace the existing groundwater extraction system once it is shown as effective. Groundwater monitoring is ongoing. Land use restrictions limit the use of parts of the site to industrial uses and restrict access to prevent exposure to contamination.

Aurorium, a chemical production business that acquired Vertellus Specialties, Inc., has recently completed a RCRA closure of the northern part of the site. Vertellus Specialties, Inc. had worked with the EPA, developers and the state of Indiana to enable redevelopment on the vacant southern part of the site. In February 2014, developer Hanwha Q Cells opened the Maywood Solar Farm, a 10.86-megawatt solar energy facility, on-site. It is one of the largest utility-scale solar farms on a Superfund site, and the first one to be built in Region 5. It includes over 36,000 solar panels that are designed to have a minimal impact on the integrity of the landfill cover. Hanwha Q Cells, which subleases the site property from Aurorium, sells electricity and environmental credits to a local utility. Power generated at the solar farm offsets annual carbon dioxide emissions equivalent to that of about 1,300 homes. In April 2014, the EPA honored Hanwha Q Cells with Region 5's first RENEW Award in recognition of the developer's commitment to the site's safe and beneficial reuse. Construction of the solar project employed about 75 to 100 people.



Figures 21 & 22. Solar panels at the Reilly Tar & Chemical Corp (Indianapolis Plant) site (Indiana) (left). Representatives from Vertellus Specialties, Inc., EPA Region 5, Hanwha Q CELLS USA, the Indiana Department of Environmental Management and Indiana's 97th District at the ribbon-cutting ceremony for Maywood Solar Farm (right).

SOUTH ANDOVER

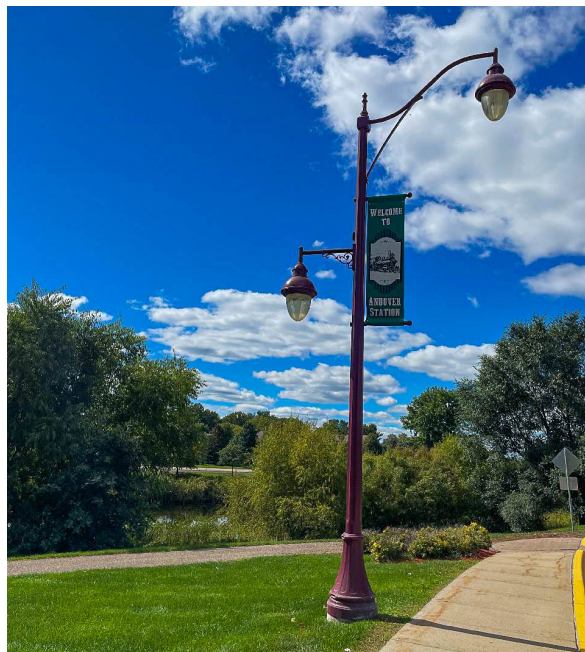
Site Revitalized as Community Shopping Center

The 50-acre South Andover Superfund site is in Andover, Minnesota. It includes several areas used for auto salvaging and waste handling during the mid-1950s. In the 1960s and 1970s, solid and liquid chemical wastes were dumped at the site and burned in open pits. At one point before cleanup, the site stored more than 1,000 drums of waste and 3 million scrap tires. Most auto salvage and waste disposal activities at the site ended by 1981. However, scrap waste remained a considerable public health threat throughout the 1980s. Pollutants from the storage and burning of waste contaminated soil and groundwater with metals, polycyclic aromatic hydrocarbons, polychlorinated biphenyls and volatile organic compounds (VOCs). The EPA added the site to the National Priorities List (NPL) in 1983.

Cleanup included excavation and off-site disposal or treatment of contaminated soil, removal and off-site disposal of drums, institutional controls and groundwater monitoring. In 1998, the EPA took the soil part of the site off the NPL. Groundwater monitoring is ongoing.

In 1996 and 1997, the city of Andover acquired the site and nearby properties for the 90-acre Andover Station redevelopment area. Initial activities included building streets and infrastructure, relocating wetlands and putting in storm drainage ponds. Businesses first opened at Andover Station in 2000, spurring construction of more commercial and housing developments north and south of the area. In 2000, the City Engineers' Association of Minnesota awarded the city of Andover its Project of the Year award for its work that benefited the public and the environment. In 2003, the Minnesota Shopping Center Association awarded Andover Station the STARR award for its development process.

Today, Andover Station offices, shops and service centers on-site support nearly 400 jobs and generate about \$14 million in estimated annual employment income. Businesses include a department store, a restaurant, pharmacies, coffee shops and banks. Andover Station also provides the community with walking trails and green space, supporting opportunities for active lifestyles for nearby residents and shoppers.



Figures 23 & 24. The Target department store at the South Andover site (Minnesota) (left). A walking trail and green space by a storm drainage pond at the South Andover site (Minnesota) (right).

REDEVELOPMENT ON THE HORIZON IN REGION 5

LAKE SANDY JO (M&M LANDFILL) E-Commerce Center and Green Space Planned at Former Landfill

The 50-acre Lake Sandy Jo (M&M Landfill) Superfund site is in Gary, Indiana. An unpermitted landfill was on-site from 1971 to 1980. Various wastes, including construction and demolition debris, garbage and industrial wastes, and drums were buried at the site. These activities led to the contamination of soil and sediment with polynuclear aromatic hydrocarbons and metals as well as groundwater with volatile organic compounds. The EPA added the site to the National Priorities List (NPL) in 1983.

The EPA's cleanup included adding a clean soil cover and perimeter fencing as well as drinking water line extensions for nearby homes. A groundwater ordinance required that remaining well owners in the area connect to municipal water. Institutional controls prohibit residential use and installation of groundwater wells. The Indiana Department of Environmental Management monitors groundwater and maintains the soil cover. The EPA provides oversight. In 2021, the EPA took part of the site off the NPL, paving the way for redevelopment.

The site is currently an open field under lease by a developer. The EPA began a collaborative relationship with the city, IDEM and the developer to identify community values and priorities. In 2022, the Gary Planning and Development Committee voted to rezone the property, allowing for future commercial use. In 2023, stakeholders announced plans for the Gary Commercial Center, an e-commerce center, on-site. The EPA is exploring the inclusion of ecosystem service models in the developer's plans to provide additional benefits to the community. Ecosystem service concepts under consideration include educational experiences through field trips, stormwater management, erosion control and habitat for threatened and endangered species.



Figure 25. Plans call for the development of an e-commerce center on this vacant land at the Lake Sandy Jo (M&M Landfill) site (Indiana).

UNIVERSITY OF MINNESOTA (ROSEMOUNT RESEARCH CENTER)

Sprawling Development Planned For Former Disposal Areas

The University of Minnesota (Rosemount Research Center) (UMRRC) Superfund site is in Rosemount, Minnesota. UMRRC is an agricultural research station on-site. The 5-square-mile area is part of the University of Minnesota Outreach, Research and Education (UMore) Park. A former UMRRC burn pit contaminated groundwater with volatile organic compounds, primarily chloroform. Three university tenants – George’s Used Equipment, Porter Electric and Machine Company, and U.S. Transformed – disposed of wastes in three areas on-site, contaminating soil with polychlorinated biphenyls, lead and copper. The EPA added the site to the National Priorities List (NPL) in 1986.

The Cleanup at the site was addressed by the University of Minnesota under oversight from the Minnesota Pollution Control Agency (MPCA). It included groundwater treatment, soil treatment, disposal and capping, institutional controls and extension of a public water supply line to 27 homes. Remedy construction finished in 1996, and operation and maintenance are ongoing. After cleanup, the EPA took the site off the NPL in 2001. In 2015, the EPA verified that the site met the requirements for a Site-Wide Ready for Anticipated Use determination.

Current land uses on-site include agricultural fields, unused parcels with ruins of a former gunpowder production plant and university operations. UMore Park is the subject of an area-wide land use planning process coordinated by the University of Minnesota in cooperation with the city of Rosemount, Dakota County, and various state agencies including MPCA. An on-site part of UMore Park is currently undergoing development for single-family homes, townhomes and city utilities. Residences will have access to municipal services, such as a public drinking water supply. Planned development, expected to occur over several decades, will include a variety of residential, commercial, light industrial and recreational uses. UMore Park’s plans also include measures to mitigate potential environmental and ecological impacts associated with redevelopment.



Figures 26 & 27. Active construction at a mixed-housing development at the University of Minnesota (Rosemount Research Center) site (Minnesota) (left). A sign for UMore Park at the University of Minnesota (Rosemount Research Center) site (Minnesota) (right).

CONCLUSION

The EPA works closely with its partners at Superfund sites across Region 5 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 175 NPL sites and 46 non-NPL Superfund sites in Region 5 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 5. The EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 5.



Figure 28. The Chicago Yachting Center at the North Shore Gas South Plant site (Illinois).

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

Across Region 5, 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 5 Superfund Redevelopment Coordinator
Tom Bloom | (312) 886-1967 | bloom.thomas@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





ILLINOIS REDEVELOPMENT PROFILE

The EPA partners with Illinois Environmental Protection Agency to oversee the investigation and cleanup of Superfund sites in Illinois. Illinois has 48 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 Illinois.

Businesses and Jobs

The EPA has collected economic data for 86 businesses and organizations operating on 19 sites in reuse or continued use in Illinois.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	16	7	32	\$145 million	386	\$30 million
<i>In Continued Use</i>	5	1	1	\$1 million	10	\$1 million
<i>In Reuse and in Continued Use</i>	27	11	53	\$386 million	934	\$67 million
Totals	48	19	86	\$532 million	1,330	\$98 million

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

^b While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This could be attributed to a number of business conditions and/or data reporting. In addition, annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

The EPA has collected property value data for 10 Superfund sites in reuse or continued use in Illinois. These sites span 2,637 property parcels and 1,869 acres.

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

Total Land Value (10 sites)	Total Improvement Value (10 sites)	Total Property Value (10 sites)	Total Annual Property Taxes (10 sites)
\$52 million	\$129 million	\$181 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 2022 to 2023.



Figure 29. Sauget Area 2 site (Illinois).

Did You Know?

From the 1950s to 1980s, waste treatment and disposal activities at the Sauget Area 2 Superfund site in Sauget, Illinois, contaminated soil and groundwater with polychlorinated biphenyls (PCBs), pesticides and metals. Site stakeholders are leading ongoing cleanup. On-site industrial and commercial uses include a ship builder, a storage facility and a cabaret club.



INDIANA REDEVELOPMENT PROFILE

The EPA partners with Indiana Department of Environmental Management to oversee the investigation and cleanup of Superfund sites in Indiana. Indiana has 33 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 Indiana.

Businesses and Jobs

The EPA has collected economic data for 77 businesses and organizations operating on 18 sites in reuse or continued use in Indiana.

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

	Sites	Sites with Businesses	Businesses	Total Annual Sales ^a	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	14	8	25	\$80 million	490	\$21 million
<i>In Continued Use</i>	6	2	2	\$413 million	625	\$56 million
<i>In Reuse and in Continued Use</i>	13	8	50	\$105 million	717	\$44 million
Totals	33	18	77	\$598 million	1,832	\$121 million

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

Property Values and Property Tax Revenues

The EPA has collected property value data for 10 Superfund sites in reuse or continued use in Indiana. These sites span 60 property parcels and 436 acres.

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

Total Land Value (10 sites)	Total Improvement Value (10 sites)	Total Property Value (10 sites)	Total Annual Property Taxes (10 sites)
\$7 million	\$17 million	\$24 million	\$713,407

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2021 to 2023.



Figure 30. Southside Sanitary Landfill site (Indiana).

Did You Know?

Starting in 1971, solid waste disposal at the 324-acre Southside Sanitary Landfill Superfund site in Indianapolis, Indiana, contaminated groundwater. Cleanup activities included landfill liquid collection and treatment and groundwater monitoring. After cleanup, the EPA took the site off the National Priorities List (NPL) in 1997. Methane gas from the landfill is used for heat and energy at several nearby businesses. Part of the site is used for environmental education.



MICHIGAN REDEVELOPMENT PROFILE

The EPA partners with Michigan Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Michigan. Michigan has 50 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 Michigan.

Businesses and Jobs

The EPA has collected economic data for 130 businesses and organizations operating on 32 sites in reuse or continued use in Michigan.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
In Reuse	19	14	30	\$433 million	1,413	\$91 million
In Continued Use	13	7	7	\$204 million	615	\$62 million
In Reuse and in Continued Use	18	11	93	\$121 million	761	\$44 million
Totals	50	32	130	\$758 million	2,789	\$197 million

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

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

Property Values and Property Tax Revenues

The EPA has collected property value data for 18 Superfund sites in reuse or continued use in Michigan. These sites span 339 property parcels and 888 acres.

Table 8. Property Value and Tax Information for Sites in Reuse and Continued Use in Michigan^a

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (18 sites)	Total Annual Property Taxes (18 sites)
\$402,500	\$184,700	\$41 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 2022 to 2023.

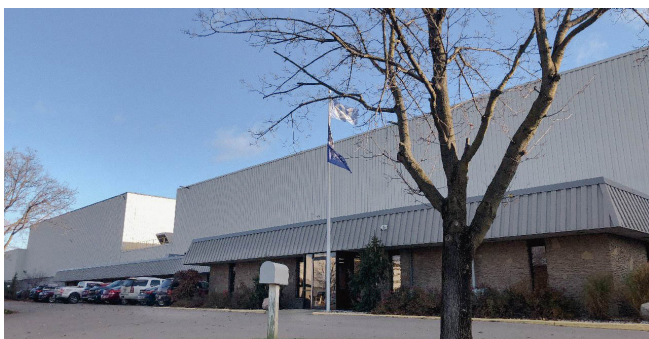


Figure 31. American Anodco, Inc. site (Michigan).

Did You Know?

Starting in the 1960s, operations at the American Anodco, Inc. Superfund site in Ionia, Michigan, contaminated groundwater, sediment, soil and surface water. After an initial cleanup, the EPA, state and local agencies are now working to address polyfluoroalkyl substances (PFAS) contamination. An automotive parts business remains in continued use on-site.



MINNESOTA REDEVELOPMENT PROFILE

The EPA partners with the Minnesota Pollution Control Agency to oversee the investigation and cleanup of Superfund sites in Minnesota. Minnesota has 37 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 Minnesota.

Businesses and Jobs

The EPA has collected economic data for 162 businesses and organizations operating on 26 sites in reuse or continued use in Minnesota.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
In Reuse	18	12	68	\$1.6 billion	4,556	\$441 million
In Continued Use	5	2	2	\$1.3 billion	1,375	\$197 million
In Reuse and in Continued Use	14	12	92	\$639 million	2,377	\$180 million
Total	37	26	162	\$3.5 billion	8,308	\$818 million

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

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

Property Values and Property Tax Revenues

The EPA has collected property value data for 24 Superfund sites in reuse or continued use in Minnesota. These sites span 1,167 property parcels and 9,652 acres.

Table 10. Property Value and Tax Information for Sites in Reuse and Continued Use in Minnesota^a

Total Land Value (23 sites)	Total Improvement Value (23 sites)	Total Property Value (24 sites)	Total Annual Property Taxes (24 sites)
\$234 million	\$358 million	\$622 million	\$11 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 32. General Mills/Henkel Corp. site (Minnesota).

Did You Know?

From 1947 to 1962, waste disposal from chemical research contaminated soil and groundwater at the General Mills/Henkel Corp. Superfund site in Minneapolis, Minnesota. Cleanup included groundwater treatment and soil removal. Groundwater monitoring and soil vapor mitigation are ongoing. Today, commercial and industrial businesses on-site support about 115 jobs and generate an estimated \$7.3 million in annual employment income.



OHIO REDEVELOPMENT PROFILE

The EPA partners with Ohio Environmental Protection Agency to oversee the investigation and cleanup of Superfund sites in Ohio. Ohio has 26 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 Ohio.

Businesses and Jobs

The EPA has collected economic data for 62 businesses and organizations operating on 12 sites in reuse or continued use in Ohio.

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

	Sites ^a	Sites with Businesses	Businesses	Total Annual Sales ^b	Total Employees	Total Annual Employee Income
In Reuse	13	4	39	\$174 million	829	\$59 million
In Continued Use	2	1	1	\$204 million	214	\$16 million
In Reuse and in Continued Use	11	7	22	\$690 million	2,167	\$147 million
Total	26	12	62	\$1 billion	3,210	\$222 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 11 Superfund sites in reuse or continued use in Ohio. These sites span 196 property parcels and 1,420 acres.

Table 12. Property Value and Tax Information for Sites in Reuse and Continued Use in Ohio^a

Total Land Value (11 sites)	Total Improvement Value (11 sites)	Total Property Value (11 sites)	Total Annual Property Taxes (11 sites)
\$17 million	\$66 million	\$83 million	\$1.3 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 33. Valley Pike VOCs site (Ohio).

Did You Know?

Starting in 1942, metal parts degreasing at the Mullings Tire and Rubber Company (MRP) contaminated soil, groundwater and indoor air with volatile organic compounds (VOCs) at the Valley Pike VOCs Superfund site in Riverside, Ohio. MRP has removed about 1,200 pounds of VOCs from beneath its facility and put vapor mitigation systems in several affected homes. The EPA provided oversight. Investigations and cleanup are ongoing. MRP continues to operate on-site. It employs about 50 people who earn an estimated \$4 million in annual employment income.



WISCONSIN REDEVELOPMENT PROFILE

The EPA partners with Wisconsin Department of Natural Resources to oversee the investigation and cleanup of Superfund sites in Wisconsin. Wisconsin has 27 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 Wisconsin.

Businesses and Jobs

The EPA has collected economic data for 20 businesses and organizations operating on 10 sites in reuse or continued use in Wisconsin.

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

	Sites	Sites with Businesses	Businesses	Total Annual Sales ^a	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	14	3	5	\$110 million	500	\$37 million
<i>In Continued Use</i>	5	3	3	\$32 million	139	\$8 million
<i>In Reuse and in Continued Use</i>	8	4	12	\$190 million	832	\$56 million
Total	27	10	20	\$332 million	1,471	\$101 million

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

Property Values and Property Tax Revenues

The EPA has collected property value data for eight Superfund sites in reuse or continued use in Wisconsin. These sites span 33 property parcels and 548 acres.

Table 14. Property Value and Tax Information for Sites in Reuse and Continued Use in Wisconsin^a

Total Land Value (8 sites)	Total Improvement Value (8 sites)	Total Property Value (8 sites)	Total Annual Property Taxes (8 sites)
\$4 million	\$12 million	\$16 million	\$272,456

^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 34. Scrap Processing Co., Inc. site (Wisconsin).

Did You Know?

From 1955 to 1981, disposal practices from lead reclamation contaminated soil, groundwater and a nearby river at the Scrap Processing Co., Inc. Superfund site in Medford, Wisconsin. In 2002, the EPA finished cleanup activities that included disposal of liquid wastes, stabilization and removal of contaminated soil, groundwater monitoring, and institutional controls to restrict land and groundwater use. A scrap metal processing and recycling company remains in continued use on-site.

REUSE INFORMATION SOURCES

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

EPA Resources

American Anodco, Inc. EPA Site Profile. www.epa.gov/superfund/american-anodco

General Mills/Henkel Corp. EPA Site Profile. www.epa.gov/superfund/general-mills-henkel

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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 2021 to 2024. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

Back cover photos:

Kentwood Land (Michigan), PMC Groundwater (Michigan), Southside Sanitary Landfill (Indiana).

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Region 5
77 West Jackson Boulevard
Chicago, IL 60604

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