



Superfund Sites Work for Communities:

How Superfund Redevelopment in EPA Region 3 Is Making a Difference in Communities



What's Inside?

Figure 1. Former building at the Avtex Fibers, Inc. site refurbished for businesses (Virginia) *Source: Front Royal-Warren County Economic Development Authority*

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Cover page photos, clockwise from top left: Abex Corp. site (Virginia), Fike Chemical, Inc. site (West Virginia), E.I. Du Pont De Nemours & Co., Inc. site (Delaware), Palmerton Zinc Pile site (Pennsylvania)

Preface

Every day, EPA's Superfund program makes a visible difference in communities nationwide. The revitalization of communities affected by contaminated lands is a key part of Superfund's mission, delivering significant benefits one community at a time, all across the country. Through EPA's Superfund Redevelopment Initiative (SRI), the Agency contributes to the economic vitality of these communities by supporting the return of sites to productive use. These regional profiles highlight these community-led efforts in action, as EPA launches a new era of partnerships and works toward a sustainable future.

Introduction

EPA Region 3 covers the Mid-Atlantic – Delaware, Maryland, Pennsylvania, Virginia, West Virginia and the District of Columbia – which is one of the nation’s most diverse, developed and populated regions. Residents and visitors benefit from the region’s diverse landscapes, which provide opportunities to enjoy wildlife and remarkable natural resources such as the Appalachian Mountains and the Chesapeake Bay.

Looking to the future, the priorities of many Mid-Atlantic communities include sustainable economic growth and a healthy environment. A key part of this work centers on finding new uses for old industrial and federal facility sites, including Superfund sites. The Superfund program in EPA Region 3 is proud to play a role in these efforts.

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

Through programs like the Superfund Redevelopment Initiative (SRI), EPA Region 3 helps communities reclaim cleaned-up Superfund sites. Factoring in future use of Superfund sites into the cleanup process promotes their safe reuse. In addition, Region 3 works closely with state and local officials to remove barriers that have kept many Superfund sites underused. EPA Region 3 works to ensure that businesses operating on properties being cleaned up under Superfund can continue operating in a manner that protects both human health and the environment while site investigations and cleanup work continue. This continuity enables these businesses to remain as a source of jobs for communities.

Superfund sites across Region 3 are now the location of business parks, retail shops and public service facilities. Many sites continue to host industrial operations such as large-scale manufacturing facilities and warehouses. Others are now nature preserves, recreational trails and athletic fields. On-site businesses and organizations at current and former Region 3 Superfund sites provide nearly 11,000 jobs and contribute an estimated \$785 million in annual employment income for residents. Cleaned-up sites in use generate over \$1 million in annual property tax revenues for local governments.¹

This profile looks at how reuse activities at Superfund sites make a difference in communities in Region 3. It updates the information presented in the 2014 profile. In particular, it describes some of the beneficial effects of reuse 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 following cleanup and sites that have remained in use throughout the cleanup process. EPA updates these profiles every two years. The beneficial effects may increase or decrease from previous profiles due to changes in the number of sites in reuse or continued use, changes in the number of on-site businesses, changes in data availability, and changes in individual-level business or property value data. Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 3.

¹ Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 3. There are 69 Superfund sites in reuse or continued use in Region 3 for which EPA does not have business data, including 29 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 (parks, wetlands, ecological habitat, open space, etc.). There are 110 sites in reuse or continued use in Region 3 for which EPA does not have property value or tax data, including 29 NPL federal facilities.

Region 3 Sites in Reuse and in Continued Use: Business and Job Highlights

<u>Businesses Identified</u>
392
<u>Estimated Annual Sales</u>
\$2.9 billion
<u>Number of People Employed</u>
10,806
<u>Total Annual Employee Income</u>
\$785 million



Figure 2. Crater Resources, Inc./Keystone Coke Co./Alan Wood Steel Co. site (Pennsylvania)

Support for Superfund Reuse

EPA Region 3 is committed to making a visible difference in communities through the cleanup and reuse of Superfund sites. In addition to protecting human health and the environment through the Superfund program, Region 3 partners with stakeholders to encourage reuse opportunities at Superfund sites. Region 3 helps communities and cleanup managers consider reuse during cleanup planning and evaluate remedies already in place to ensure appropriate reuse at cleaned-up sites. In addition, EPA participates in partnerships with communities and encourages opportunities to support Superfund redevelopment projects that emphasize environmental and economic sustainability.

Specific reuse support efforts in EPA Region 3 include:

- Identifying and evaluating local land use priorities to align with site cleanup plans through the reuse planning process.
- Facilitating cleanup and reuse discussions to help resolve key issues between parties interested in site redevelopment.
- Supporting targeted projects intended to help Region 3 communities and EPA find the right tools to move site reuse 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 that provide information about the appropriate use of sites.
- Supporting partnerships with groups committed to putting Superfund sites back into use, such as the Rails-to-Trails Conservancy, the U.S. Soccer Foundation, the U.S. Fish and Wildlife Service and local economic development organizations.
- Developing reuse fact sheets, videos, websites and reuse case studies to share opportunities and lessons associated with Superfund redevelopment.



Figure 3. Avtex Fibers, Inc. site (Virginia)



Figure 4. Palmerton Zinc Pile site (Pennsylvania)

All of these efforts have helped build expertise across Region 3, making it easier to consider future use of Superfund sites prior to cleanup and easier to identify opportunities for removing reuse barriers. These efforts also help other communities, state agencies, potentially responsible parties and developers 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 Reuse: The Big Picture

EPA takes immediate action at contaminated sites when warranted through short-term cleanup actions, also called removal actions. Then EPA refers sites warranting long-term cleanup to its remedial program or to state programs. The National Priorities List (NPL) is a list of the most serious sites EPA targets for further investigation and possible remediation through the Superfund program. Once EPA places a site on the NPL, the Agency studies the type and amount of contamination at the site, identifies technologies that could address the contamination, and evaluates the alternative cleanup approaches. EPA then proposes a cleanup plan, and after collecting public input, it issues a final cleanup plan. EPA then cleans up the site or oversees the cleanup activities.² EPA has placed 216 sites in Region 3 on the NPL. It oversees investigation and cleanup at two Superfund Alternative Approach sites in the region, and performs or oversees short-term cleanup actions as well.



Figure 5. U.S. Titanium site (Virginia)

Whenever possible, EPA seeks to integrate reuse priorities into site cleanup plans. In Region 3, 138 NPL sites and two 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 public service purposes. Others have been redeveloped for residential, recreational, ecological or agricultural purposes. In addition, redevelopment of some Superfund sites in Region 3 has helped spark revitalization of nearby underutilized industrial land. The following sections take a closer look at the beneficial effects of businesses operating on current and former Superfund sites.

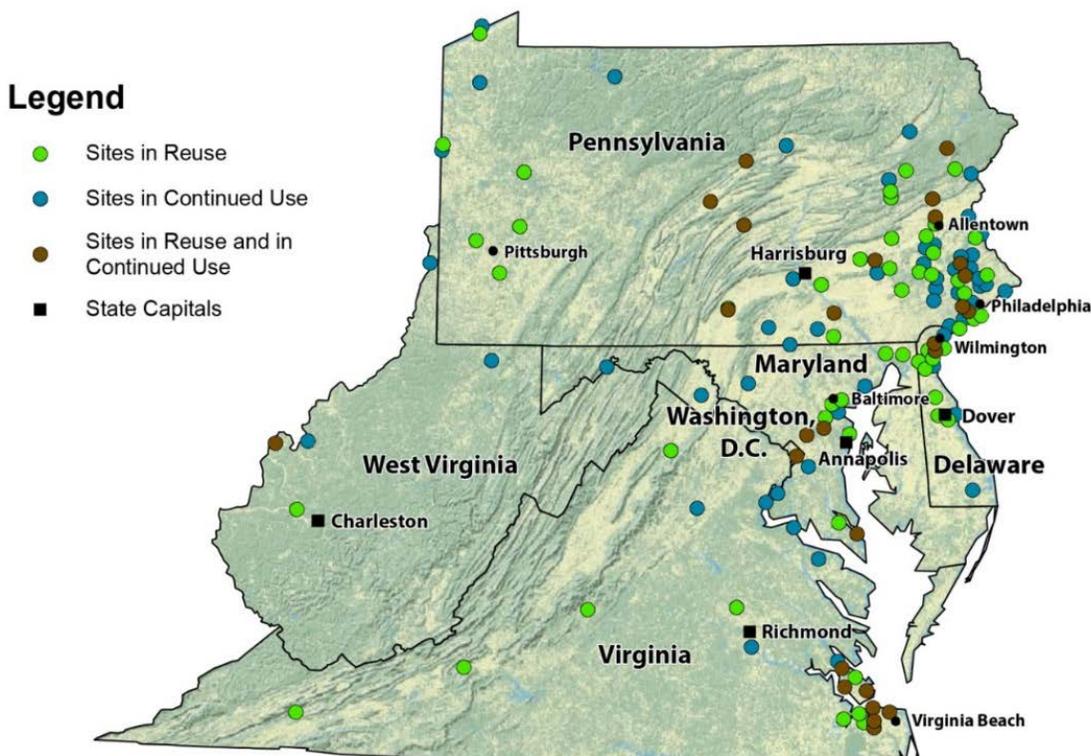


Figure 6. Sites in Reuse and Continued Use in Region 3

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

Beneficial Effects of Superfund Site Reuse in Region 3

Businesses and Jobs

EPA has collected economic data for nearly 400 commercial businesses, manufacturers and civic organizations operating on 69 NPL sites and two non-NPL Superfund sites in reuse and continued use in Region 3.³ See the State Reuse Profiles (pages 12-16) for each Region 3 state’s reuse details. Businesses and organizations located on these sites fall within several different sectors, including wholesale and retail trade, construction, manufacturing, transportation and warehousing, professional, scientific and technical services, health care and social services, and educational institutions.

Businesses, facilities and organizations at these sites include international chemical company BASF Corporation, restaurants, national drug store and pharmacy chain Walgreens, fire and police stations, the YMCA, the U.S. Geological Survey, and campus facilities for Pennsylvania State University.



Figure 7. Crater Resources, Inc./Keystone Coke Co./Alan Wood Steel Co. site (Pennsylvania)

In total, businesses and organizations on these sites earn about \$2.9 billion in estimated annual sales, and employ nearly 11,000 people, earning an estimated \$785 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. In addition, most businesses operating on sites in Region 3 generate tax revenues through payment of state corporate income or related taxes. Table 1 provides more detailed information.⁴

Table 1. Site and business information for Region 3 sites in reuse and continued use (2015)

	Sites	Sites with Businesses ^a	Businesses ^b	Total Annual Sales ^c	Total Employees	Total Annual Employee Income
In Reuse	55	30	233	\$1.1 billion	5,443	\$374 million
In Continued Use	56	31	120	\$1.5 billion	4,124	\$295 million
In Reuse and in Continued Use	29	10	39	\$281 million	1,239	\$116 million
Total	140	71^d	392	\$2.9 billion	10,806	\$785 million

^a Also includes other organizations such as government agencies, nonprofit organizations and civic institutions.
^b Business information is not available for all businesses on all Superfund sites in reuse or continued use.
^c For information on the collection of businesses, jobs and sales data, see the “Sources” section of this profile.
^d See footnote 1, page 3.

³ See footnote 1, page 3.

⁴ For additional information on the collection of businesses, jobs and sales data, see the “Sources” section of this profile.

Sites in Reuse and Continued Use: A Closer Look

In Reuse: There is a new land use or uses on all or part of a site. This is because either the land use has changed (e.g., from industrial use to commercial use) or the site is now in use after being vacant.

In Continued Use: Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.

In Reuse and Continued Use: Part of a site is in continued use and part of the site is in reuse.

Region 3 Site Examples

- **In Reuse:** Abex Corporation (Virginia) – a former metal foundry and naval shipyard, the area now supports commercial and industrial businesses, a park and several public services facilities.
- **In Continued Use:** Crossley Farm (Pennsylvania) – a farm, which remains in use today, has been located on site since 1927.
- **In Reuse and Continued Use:** Fort George G. Meade (Maryland) – an aviation facility remains in place. Following cleanup, a large part of the site is now a wildlife refuge.

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use may increase in value. This increased value can boost property tax revenues, which help pay for local government operations, public schools, transit systems and other public services.

Identifying increases in property values and property taxes following cleanup and reuse is challenging due to insufficient data on historical property values and the difference in timing of events at sites and frequency and timing of property value assessments by local agencies. Likewise, many factors affect property values, including external economic and neighborhood factors not related to a site's contamination or Superfund site status. It is also difficult to isolate the effects of Superfund cleanup and reuse using current property values. However, these values give insight into the current value of Superfund properties and the potential loss in economic value if these properties were not cleaned up and available for reuse or continued use.

EPA has collected property value tax data for 30 Superfund sites in reuse in Region 3.⁵ These sites span 274 property parcels and nearly 1,700 acres and have a total property value of \$59 million. In total, 28 of the 30 sites have both land and improvement property value details; the properties at these sites have a total land value of \$19 million and a total improvement value of

Region 3 Sites in Reuse: Property Value and Tax Highlights

Total Property Value
\$59 million

Total Annual Property Taxes
\$1.1 million



Figure 8. North Penn – Area 12 site
(Pennsylvania)

⁵ There are 110 additional sites in reuse or continued use in Region 3 for which EPA does not have property value or tax data, including 29 NPL federal facilities.

\$35 million. Property tax information is available for 29 sites of the 30 Superfund sites with property value data.⁶ The properties generate a combined \$1.1 million in local annual property taxes.⁷

Table 2. Property value and tax information for sites in reuse and continued use in Region 3^a

Total Land Value (28 sites) ^b	Total Improvement Value (28 sites) ^c	Total Property Value (30 sites)	Total Annual Property Taxes (29 sites)
\$19 million	\$35 million	\$59 million	\$1.1 million

^a Results are based on an EPA SRI effort in 2015 - 2016 to collect on-site property value 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 2014 to 2016. However, the year was not specified in all instances. For additional information, see the “Sources” section of this profile.
^b Detailed (land and improvement) property value data as well as tax data was not available for every site in Region 3.
^c Improvement value for seven of the sites is listed as \$0.00.

Recreational Amenities: Golf Courses and Soccer Fields on Superfund Sites

In addition to hosting commercial developments, retail centers and industrial facilities with businesses and jobs, many Region 3 sites in reuse and continued use provide remarkable recreational amenities, including sports fields and golf courses. These recreation areas support the productive reuse of remediated sites and help sustain healthy communities. The economic benefits are significant as well. Homebuyers seeking long-term investments are drawn to areas with valued amenities and services, including recreation areas, parks and athletic facilities. Increased property values lead to additional property taxes that strengthen public services provided by local governments and state agencies. Many Mid-Atlantic communities are redeveloping vacant Superfund sites into recreational assets.

Golf Courses

Ohio River Park (Neville Island, Pennsylvania): The site, once a dumping ground for municipal and metal foundry waste materials, is now home to the 32-acre Robert Morris University Island Sports Center. The facility generates an estimated \$500,000 in annual business sales. The facility’s features include the Golf Dome – an indoor driving range – an 18-hole mini golf course, ice skating and ice hockey on an indoor skating rink, a large outdoor running track, and sports fields for football and soccer.

Soccer Fields

Whitmoyer Laboratories (Jackson Township, Pennsylvania): This former pharmaceutical manufacturing facility is now a regional recreation resource. EPA signed a prospective purchaser agreement with Jackson Township and the site’s potentially responsible party to address liability concerns. The potentially responsible party incorporated the community’s recreational reuse priorities into the site’s cleanup plan. The U.S. Soccer Foundation was consulted during the construction of the soccer fields. Jackson Recreation Park opened in 2005. It offers baseball and soccer fields as well as tree-lined walking trails. Used heavily by local schools and the community, the site is located in a rapidly growing part of Lebanon County.



Figure 9. Chisman Creek site (Virginia)



Figure 10. Miniature golf course at the Robert Morris University Island Sports Center (Pennsylvania)



Figure 11. Soccer game at Jackson Recreation Park (Pennsylvania)

⁶ Property values consist of land value and the value of any improvements (buildings and infrastructure) placed on a property. When sites are reused, some or all of these improvements may be new or already in place. In some cases, the breakdown showing both the land value and improvement value is not always available; instead, only the total property value may be available.

⁷ Property tax data were not available for one of the 30 Superfund sites with property value data.

Reuse in Action

Abex Corporation – Valued Community Services in a Growing Urban Area

Located in Portsmouth, Virginia, the Abex Corporation Superfund site was once a metals foundry. From 1928 to 1978, disposal of foundry waste sands and emissions from the smelting furnaces contaminated on-site soil and several nearby properties with lead, heavy metals and other contaminants. EPA added the area to the NPL in 1990. Cleanup included the removal of contaminated structures and soils.

With the surrounding area growing rapidly, reuse of the Superfund site was a top priority for the City of Portsmouth. Today, the site is home to several public service facilities, including a fire station, a community health center and a police training academy. The fire station employs 20 firefighters and paramedics. The Hampton Roads Community Health Center provides primary care, pharmaceutical, dental and family planning health services to the local community. The center generates an estimated \$7.7 million in annual sales. Other reuses include a commercial distribution facility, industrial businesses and a park. The site businesses and organizations contribute nearly \$12 million in annual employment income to the local economy. The total value of the site property in 2015 was over \$13 million.



Figure 12. Abex Corporation site (Virginia)

Havertown PCP – Recreational Facilities Benefit Community Health and the Economy

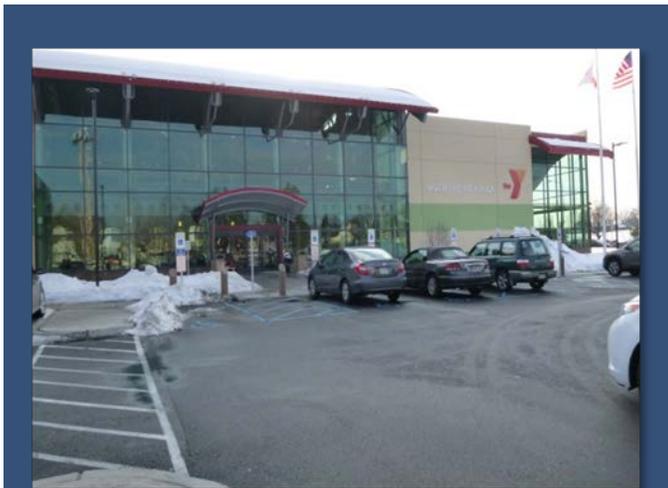


Figure 13. Havertown PCP site (Pennsylvania)

“Right now the property is an eyesore, and the [YMCA] redevelopment will completely transform it. Haverford residents are clamoring for this and all it will bring to the community.”

– Lori Hanlon-Widdop, Assistant Haverford Township Manager, from the Campaign for the Haverford Township Area YMCA Case Statement

The 12-acre Havertown PCP Superfund site is located in Havertown Township, Pennsylvania. From 1947 to 1991, National Wood Preservers operated a wood treatment facility on site. The company disposed of liquid waste materials in an on-site well. Over time, these materials contaminated surrounding groundwater. Spills on the surface also created contaminated areas of soil and surface water. EPA added the site to the NPL in 1983. To date, EPA has removed contaminated materials and capped areas to protect public health. Groundwater treatment is ongoing.

Today, parts of the site remain in continued use. EPA is also working with interested parties to support the redevelopment of other parts of the site. For example, after demolishing an old factory, the YMCA approached Havertown about using the property for a new gymnasium.

The YMCA worked with EPA and the community to develop reuse plans that would be compatible with ongoing groundwater treatment. Crews began construction in May 2012, and the 75,000-square-foot facility opened in October 2013. The Haverford Area YMCA features three swimming pools, a wellness center, an indoor running track, a workout gym, locker rooms and an education center. In October 2015, the YMCA facility received EPA Region 3’s 2015 Excellence in Site Reuse Award. The site’s reuse provides valued recreational amenities and wellness services that benefit the entire community.

Palmerton Zinc Pile – Ecological Restoration Creating Recreational and Educational Opportunities

The Palmerton Zinc Pile Superfund site is located in Palmerton, Pennsylvania. For nearly 80 years, the New Jersey Zinc Company disposed smelting waste at the site. Former smelting operations released heavy metals into the valley, causing the wide-spread loss of trees on about 4,000 acres of Blue Mountain. Former primary zinc smelting operations from two plants in Palmerton (east and west plants) resulted in area-wide contamination.

Blue Mountain has been transformed from a barren landscape into the Lehigh Gap Nature Center, restoring valuable habitat for resident species, and providing a stopover site for migratory species, especially raptors and Neotropical songbirds. This habitat was created by the revegetation and reforestation of the site with native warm season grasses and 13,000 trees, including 4,000 of the nearly extinct American Chestnut tree. The wildlife habitat is a place for research carried out by staff and volunteers in partnership with local colleges and universities. The center is an outdoor classroom for many local education programs. In addition, people use the area for recreation, including hiking, wildlife watching and photography.

Collaboration between the Lehigh Gap Nature Center, EPA, Pennsylvania’s Department of Environmental Protection, potentially responsible parties, and other partners has created a valuable reuse with ecological and community benefits. In September 2014, EPA Region 3 awarded Lehigh Gap Nature Center its Excellence in Site Reuse award. The award highlights the organization’s efforts to reuse a large portion of the site as a wildlife preserve that promotes ecological conservation and education. In addition, the Lehigh Gap Nature Center provides \$184,000 in annual employee income.



Figure 14. Blue Mountain before restoration (Pennsylvania)



Figure 15. Blue Mountain after restoration (Pennsylvania)

E.I. Du Pont De Nemours & Co., Inc. (Newport Pigment Plant Landfill) – Large-Scale Manufacturing and Renewable Energy Development

The 22-acre E.I. Du Pont De Nemours & Co., Inc. (Newport Pigment Plant Landfill) Superfund site is located in Newport, Delaware. The site includes industrial landfills and a manufacturing facility. Beginning in 1902, the facility made zinc and barium-based pigments and dyes. After DuPont purchased the facility in 1929, the company continued to make pigments and other chemical products. Operators disposed of industrial wastes in a landfill on site. Over time, these wastes flowed into surrounding wetlands and contaminated sediments, surface water and groundwater with a variety of contaminants, including heavy metals. EPA added the site to the NPL in 1990. Cleanup included wetland restoration, extension of public water supplies, landfill capping and groundwater treatment.

“Generating solar energy benefits the residents of Newport and positively impacts our state – increasing our competitiveness, reducing air pollution, improving public health and creating jobs.”

– Jack Markell,
Governor of Delaware

Today, active manufacturing facilities remain on site. In 1984, Ciba-Geigy (now BASF Corporation) purchased the pigment plant. The company contributes an estimated \$38 million in annual employment income to the local economy. DuPont continues to operate the facility but also seized an opportunity to optimize renewable energy opportunities at the site. Tangent Energy, Greenwood Energy and DuPont redeveloped the former landfill into a solar farm. DuPont Apollo, a

subsidiary of DuPont, created solar modules for the project. A ceremony in December 2013 celebrated the solar farm's completion. The 548-kilowatt facility generates about 729,000 kilowatt hours of energy each year, enough to power about 60 homes. The solar farm provides a consistent renewable energy option for Newport and reduces the community's greenhouse gas emissions by 350 tons per year. DuPont also developed pollinator habitat on site, planting native plants attractive to pollinator species. In 2003, DuPont also donated the site's former ballpark property to the Town of Newport for development of a new park. Ella Johnson Memorial Park provides green space and recreation areas.



Figure 16. Pollinator habitat at the E.I. Du Pont De Nemours & Co., Inc. site (Delaware)



Figure 17. Exercise stations at Ella Johnson Memorial Park at the E.I. Du Pont De Nemours & Co., Inc. site (Delaware)



Figure 18. Solar panels on the E.I. Du Pont De Nemours & Co., Inc. site (Delaware)

State Reuse Profile: Delaware

EPA partners with the Delaware Department of Natural Resources and Environmental Control to oversee the investigation and cleanup of Superfund sites in Delaware. Delaware has 14 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 25 businesses and organizations operating on nine sites in reuse and continued use in Delaware. The businesses and organizations employ 740 people and contribute an estimated \$59 million in annual employment income.

Table 3. Detailed site and business information for Superfund sites in reuse and continued use in Delaware (2015)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	8	5	8	\$12 million	144	\$8 million
In Continued Use	4	3	14	\$63 million	187	\$13 million
In Reuse and in Continued Use	2	1	3	\$100 million	409	\$38 million
Total	14	9	25	\$175 million	740	\$59 million

^a One site is a federal facility. Data for federal facilities are not included in calculations of total sites with businesses, businesses, sales, employees or income.

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

Property Values and Property Tax Revenues

EPA has collected property value data for seven Superfund sites in reuse and continued use in Delaware. These sites span 171 property parcels and over 566 acres and have a total property value of more than \$27 million. All seven sites have property value details. Together, the site properties have a total land value of \$7 million and a total improvement value of \$20 million. The site properties generate a combined \$611,000 in property taxes.

Table 4. Property value and tax information for sites in reuse and continued use in Delaware^a

Total Land Value (7 sites)	Total Improvement Value (7 sites)	Total Property Value (7 sites)	Total Annual Property Taxes (7 sites)
\$7 million	\$20 million	\$27 million	\$611,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. However, the year was not specified in all instances.

Did You Know?

The Army Creek Landfill site in New Castle, Delaware, a former municipal and industrial waste landfill, now provides vibrant habitat for birds and other animals.



Figure 19. Army Creek Landfill site (Delaware)

State Reuse Profile: Maryland

EPA partners with the Maryland Department of the Environment to oversee the investigation and cleanup of Superfund sites in Maryland. Maryland has 15 Superfund sites with new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 11 businesses and organizations operating on four sites in reuse in Maryland. The businesses and organizations employ 142 people and contribute an estimated \$6 million in annual employment income.

Table 5. Detailed site and business information for Superfund sites in reuse and continued use in Maryland (2015)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	7	4	11	\$19 million	142	\$6 million
In Continued Use	5	0	0	\$0	0	\$0
In Reuse and in Continued Use	3	0	0	\$0	0	\$0
Total	15	4	11	\$19 million	142	\$6 million

^a Eight sites are federal facilities. Data for federal facilities are not included in calculations of total sites with businesses, businesses, sales, employees or income.

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

Property Values and Property Tax Revenues

EPA has collected property value data for two Superfund sites in reuse in Maryland. These sites span four property parcels and nearly 25 acres and have a total property value of \$1 million. Properties at these sites generate about \$23,000 in annual local property taxes.

Table 6. Property value and tax information for sites in reuse in Maryland^{ab}

Total Land Value (0 sites)	Total Improvement Value (0 sites)	Total Property Value (2 sites)	Total Annual Property Taxes (2 sites)
\$0	\$0	\$988,000	\$23,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. However, the year was not specified in all instances.

^b The breakdown of land and improvement values is no longer available from the City of Baltimore and only totals are provided.

Did You Know?

The Mid-Atlantic Wood Preservers, Inc. site in Baltimore, Maryland, was once a wood-treatment facility. It is now home to an indoor soccer facility, a trucking service and a limousine rental parking area.



Figure 20. Limousine rental service

State Reuse Profile: Pennsylvania

EPA partners with the Pennsylvania Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in Pennsylvania. Pennsylvania has 79 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 295 businesses and organizations operating on 47 sites in reuse and continued use in Pennsylvania. The businesses and organizations employ over 8,350 people and contribute an estimated \$614 million in annual employment income.

Table 7. Detailed site and business information for Superfund sites in reuse and continued use in Pennsylvania (2015)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	31	15	171	\$825 million	3,987	\$274 million
In Continued Use	35	24	89	\$1.4 billion	3,654	\$264 million
In Reuse and in Continued Use	13	8	35	\$171 million	803	\$76 million
Total	79	47	295	\$2.4 billion	8,354	\$614 million

^a Six sites are federal facilities. Data for federal facilities are not included in calculations of total sites with businesses, businesses, sales, employees or income.

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

Property Values and Property Tax Revenues

EPA has collected property value data for 18 Superfund sites in reuse and continued use in Pennsylvania. These sites span 71 property parcels and over 1,024 acres and have a total property value of nearly \$17 million. Seventeen of the 18 sites have property value details. Together, properties at these sites have a total land value of more than \$7 million and a total improvement value of \$5.6 million. Seventeen of the 18 sites have property tax details. Properties at these sites generate a combined \$261,000 in property taxes.

Table 8. Property value and tax information for sites in reuse and continued use in Pennsylvania^a

Total Land Value (17 sites)	Total Improvement Value (17 sites)	Total Property Value (18 sites)	Total Annual Property Taxes (17 sites)
\$7 million	\$5.6 million	\$16.8 million	\$261,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. However, the year was not specified in all instances.

Did You Know?

Sharon Coating, LLC on Westinghouse Electric Corp. (Sharon Plant) site contributes nearly \$13 million in local employee income annually.



Figure 21. Westinghouse Electric Corp. (Sharon Plant) site (Pennsylvania)

State Reuse Profile: Virginia

EPA partners with the Virginia Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Virginia. Virginia has 23 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 46 businesses and organizations operating on eight sites in reuse and continued use in Virginia. The businesses and organizations employ 1,299 people and contribute an estimated \$87 million in annual employment income.

Table 9. Detailed site and business information for Superfund sites in reuse and continued use in Virginia (2015)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	8	5	42	\$238 million	1,160	\$82 million
In Continued Use	6	2	3	\$79,000	112	\$4 million ^c
In Reuse and in Continued Use	9	1	1	\$10 million	27	\$1 million
Total	23	8	46	\$248 million	1,299	\$87 million

^a Eleven sites are federal facilities. Data for federal facilities are not included in calculations of total sites with businesses, businesses, sales, employees or income.

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

^c 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

EPA has collected property value data for two Superfund sites in reuse in Virginia. These sites span 26 property parcels and over 71 acres and have a total property value of nearly \$14 million. Both sites have property value and tax details. Together, the site properties have a total land value of \$4.3 million and a total improvement value of \$9.6 million. These site properties generate over \$177,000 in property taxes.

Table 10. Property value and tax information for sites in reuse in Virginia^a

Total Land Value (2 sites)	Total Improvement Value (2 sites)	Total Property Value (2 sites)	Total Annual Property Taxes (2 sites)
\$4.3 million	\$9.6 million	\$13.9 million	\$177,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. However, the year was not specified in all instances.

Did You Know?

Titanium dioxide manufacturing operations on the U.S. Titanium Superfund site in Nelson County, Virginia, led to contamination. Today, part of the site hosts a walking and biking path for public recreational use.



Figure 22. U.S. Titanium site (Virginia)

State Reuse Profile: West Virginia

EPA partners with the West Virginia Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in West Virginia. West Virginia has eight Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 15 businesses and organizations operating on three sites in reuse and continued use in West Virginia. The businesses and organizations employ 271 people and contribute an estimated \$18 million in annual employment income.

Table 11. Detailed site and business information for Superfund sites in reuse and continued use in West Virginia (2015)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	1	1	1	\$10 million	100	\$4 million
In Continued Use	6	2	14	\$3 million	171	\$14 million ^c
In Reuse and in Continued Use	1	0	0	\$0	0	\$0
Total	8	3	15	\$13 million	271	\$18 million^c

^a Two sites are federal facilities. Data for federal facilities are not included in calculations of total sites with businesses, businesses, sales, employees or income.

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

^c 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

EPA has collected property value data for one Superfund site in reuse in West Virginia. This site spans two property parcels and nearly 6 acres. It has a total land value of \$43,000, a total improvement value of \$90,000, and a total property value of \$132,000. Site properties generate about \$5,000 in annual local property taxes.

Table 12. Property value and tax information for sites in reuse in West Virginia^a

Total Land Value (1 site)	Total Improvement Value (1 site)	Total Property Value (1 site)	Total Annual Property Taxes (1 site)
\$43,000	\$90,000	\$132,000	\$5,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. However, the year was not specified in all instances.

Did You Know?

The Ravenswood PCE site in Ravenswood, West Virginia, continues to support residential, commercial and public service uses. Businesses on site employ 56 people and contribute an estimated \$1.8 million in annual employment income.



Figure 23. Residential and commercial development in West Virginia

Reuse on the Horizon in Region 3

Economic Redevelopment and Ecological Enhancement in Virginia

Located in Front Royal, Virginia, the 440-acre Avtex Fibers, Inc. Superfund site was the long-time heart of local industry. At one time, the Avtex Fibers plant was the world's largest producer of rayon – a key product for NASA's space shuttle program as well as for parachutes and jump suits during World War II.

Facility operators disposed of waste materials and byproducts from the manufacturing process in on-site impoundments. Over time, these materials contaminated groundwater, nearby residential wells and the South Fork of the Shenandoah River.

EPA added the site to the NPL in 1986. Cleanup activities, led by FMC Corporation under EPA oversight, included removal of contaminated soils, wastes, deteriorated buildings and sewer lines. EPA then collected and treated contaminated stormwater. Groundwater treatment is ongoing; affected residents are connected to the public water supply. The site's remedy is compatible with commercial and industrial uses.



Figure 24. FMC Corporation staff at the Excellence in Site Reuse Award ceremony for the Avtex Fibers, Inc. site (Virginia)

Early on, EPA, the Virginia Department of Environmental Quality, FMC Corporation, and local government and community stakeholders recognized the area's potential. Led by the local Economic Development Authority (EDA), the community developed plans for sports facilities, a 240-acre conservancy park, and a 165-acre business development. In 2006, the Skyline Soccer Plex, a 30-acre recreation facility featuring four soccer fields and a skate park, opened on site. This was the result of hard work by the community and partnerships with the U.S. Soccer Foundation and other stakeholders. Local youth soccer clubs now use the Skyline Soccer Plex for practices and tournaments. Other parts of the park include reconstructed wetlands and restored habitat areas that attract a variety of native wildlife.

Redevelopment efforts are ongoing. The EDA developed plans for the Royal Phoenix Business Park, which features commercial and industrial businesses focused on technology and hospitality services. The EDA hosted a celebration and public site tours on September 20, 2014. The facility is partially redeveloped, generating jobs and tax revenues for Front Royal and surrounding Warren County. The adjacent conservancy park provides recreation opportunities, including hiking and biking trails, for area residents and visitors. Early planning and collaborative partnerships have made the site's reuse possible. In September 2014, EPA Region 3 awarded FMC Corporation its Excellence in Site Reuse award for facilitating the safe and productive reuse of the site.

Conclusion

EPA works closely with its partners at Superfund sites across Region 3 to make sure that sites can safely be reused or remain in continued use during and following cleanup. The businesses and organizations operating on these sites provide jobs and income for communities. They help generate local and state taxes. Cleanup and redevelopment also helps stabilize and boost property values. Region 3 has 138 NPL sites and two non-NPL Superfund sites 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 3, including renewable energy projects, transportation infrastructure, business parks, recreation areas and public facilities. EPA is committed to working with all stakeholders to support Superfund redevelopment opportunities in the Mid-Atlantic region.



Figure 25. The Bay View Golf Driving Range on the Kane & Lombard Street Drums site (Maryland)

The reuse of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among EPA, state agencies, local governments, potentially responsible parties, site owners, developers, and nearby residents and business owners is essential. EPA tools, including reuse assessments or plans, Ready for Reuse Determinations, comfort letters or 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 the Mid-Atlantic region, Superfund sites are now home to large commercial and industrial business campuses, retail stores and restaurants, recreational and ecological lands, public service offices, and small businesses. EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Site Reuse Resources

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

EPA Region 3 Superfund Redevelopment Initiative Coordinator
Christopher Thomas | 215-814-5555 | thomas.christopher@epa.gov

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

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

Sources

Business, Job and Sales Information

Information on the number of employees and sales volume for on-site businesses comes from the Hoovers/Dun & Bradstreet ([D&B](#)) database. EPA also gathers information on businesses and corporations from D&B. D&B maintains a database of more than 225 million active and inactive businesses worldwide. Database data include public records, financials, private company insights, extensive global information, telephone numbers and physical addresses. When Hoovers/D&B database research cannot identify employment and sales volume for on-site businesses, EPA uses the [Manta](#) database. Both databases include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. In some instances, business and employment information also comes 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. Data included are obtained directly from the aforementioned sources, and reported as presented by those sources.

EPA obtains wage and income information from the U.S. Bureau of Labor Statistics (BLS). EPA uses the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for the identified businesses. Average weekly wage data are identified by matching the North American Industry Classification System (NAICS) codes corresponding with each type of business with weekly wage data for corresponding businesses. If weekly wage data are not available at the county level, EPA uses wage data by state or national level, respectively. In cases where wage data are not available for the six-digit NAICS code, EPA uses higher-level (less-detailed) NAICS codes to obtain the wage data. To determine the annual wages (mean annual) earned from jobs generated by each of the identified businesses, EPA multiplies 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 2015. Annual employment income is based on job data estimated in 2015 using BLS average weekly wage data for those jobs from 2014 (the latest available wage data at the time of this profile). All income and sales figures presented have been rounded for the convenience of the reader. Federal facility sites are not included in calculations of total sites with businesses, businesses, jobs, income or annual sales.

Property Value and Tax Information

EPA collected on-site property values and property taxes included in this profile for a subset of Superfund sites by comparing available site boundary information with available parcel boundary information and gathering information for selected parcels from county assessor datasets. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2014 to 2016. All figures presented have been rounded for the convenience of the reader.

Reuse in Action

Write-ups of sites in reuse or continued use included in this study are based on available EPA resources, including SRI case studies. Links to EPA's SRI case studies are included below.

Abex Corporation. 2011. [Reuse and the Benefit to the Community, Abex Corporation Site.](#)

E.I. du Pont de Nemours & Co., Inc. (Newport Pigment Plant Landfill). 2014. [Reuse and the Benefit to the Community, E.I. du Pont de Nemours & Co., Inc. \(Newport Pigment Plant Landfill\) Superfund Site.](#)

North Penn Area 12. 2014. [Reuse and the Benefit to Community North Penn Area 12 Superfund Site.](#)

Other EPA Resources

Abex Corporation. 2011. [Demonstration Project.](#)

Chisman Creek. 2003. [Redevelopment of the Chisman Creek Superfund Site, York County, Virginia.](#)

Crater Resources, Inc./Keystone Coke Co./Alan Wood Steel Co. 2014. [Demonstration Project.](#)

Kane & Lombard Street Drums. 2003. [Fact Sheet: Redevelopment of the Kane and Lombard Street Drums Site, Baltimore, Maryland.](#)

Mill Creek Dump. 2013. [Demonstration Project.](#)

Palmerton Zinc Pile. 2013. [Demonstration Project.](#)

Publicker Industries. 2003. [Fact Sheet: Redevelopment of the Publicker Industries Site, Philadelphia, Pennsylvania.](#)

Southern Maryland Wood Treating. 2013. [Demonstration Project.](#)

U.S. Titanium. 2014. [Demonstration Project.](#)

Whitmoyer Laboratories. 2012. [Demonstration Project.](#)

Other Resources

Aaron Nathans. "[DuPont's new solar array presented unique challenges.](#)" *The News Journal*. December 8, 2013.

Avtex Fibers Superfund Site Community [web page.](#)

City of New Castle Public Works Department [web page.](#)

Press Release. "[DuPont Celebrates Solar Power Project in Newport.](#)" *Digital Journal*. December 6, 2013.

Joe Zlomek. "[Lower Pottsgrove Commerce Park Grows With New Tenants.](#)" *The Main Street Post*. August 2, 2010.

Katie Demeria. "[Avtex Superfund Site Ready for Redevelopment.](#)" *Northern Virginia Daily*. July 2, 2014.

Lois Puglionesi. "[Havertown YMCA Breaks Ground.](#)" *Main Line Times*. May 10, 2012.



United States Environmental Protection Agency
Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

August 2016 | www.epa.gov/aboutepa/epa-region-3-mid-atlantic

 Printed on 100% recycled/recyclable paper
with minimum 25% post-consumer fiber.