EPA

PUTTING SITES TO WORK

How Superfund Redevelopment in the Southeast Region Is Making a Difference in Communities

2018

Cover page photos:
Munisport Landfill (Florida), Calhoun Park Area (South Carolina), Landia Chemical Company (Florida), Davie Landfill (Florida), Davis Timber Company (Mississippi), Marzone Inc./Chevron Chemical Co. (Georgia)

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Figure 1. The Fountain Walk at the Calhoun Park Area site (South Carolina).

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PREFACE

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 EPA's Superfund Redevelopment Initiative, the Agency contributes to these communities' economic vitality by supporting the return of sites to productive use.

EPA has established a renewed focus on accelerating work and progress at all Superfund sites across the country and has created the Superfund Task Force whose work includes promoting redevelopment and community revitalization. Working closely with communities, developers and property owners, EPA is leading the way to return these once-contaminated sites back to productive use.

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

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INTRODUCTION

EPA's Region 4 office serves the southeastern United States – Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee – one of the most populous and fastest-growing regions in the country. Today, building on a range of innovative initiatives, state and local leaders are fostering economic growth, emphasizing workforce development and revitalizing contaminated lands, including Superfund sites. The Superfund program in EPA Region 4 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 redevelopment can revitalize a local economy with jobs, new businesses, tax revenues and local spending.

Through programs like the Superfund Redevelopment Initiative, EPA Region 4 helps communities reclaim cleaned-up Superfund sites. Factoring in future use of Superfund sites into the cleanup process promotes their safe redevelopment. In addition, EPA Region 4 works closely with state and local officials to remove barriers that have kept many Superfund sites underused. EPA Region 4 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 for communities.

Region 4 Sites in Reuse and Continued Use: Business and Job Highlights

Businesses:	*542*
Total Annual Sales:	*$5.7 billion*
Number of People Employed:	*14,566*
Total Annual Employee Income:	*$853 million*

Figure 2. Miami-Dade County public works office at the Northwest 58th Street Landfill site (Florida).

Superfund sites across Region 4 are home to industrial and commercial parks, retail centers, government offices, and neighborhoods. Many sites continue to host industrial operations such as large-scale manufacturing facilities. Other sites support natural areas, parks and recreation facilities. On-site businesses and organizations at current and former Region 4 Superfund sites provide an estimated 14,566 jobs and contribute an estimated $853 million in annual employment income. Cleaned-up sites in use in Region 4 generate $9.9 million in annual property tax revenues for local governments.[1]

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 4. There are 50 Superfund sites in reuse or continued use in Region 4 for which EPA does not have business data, including 19 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 79 sites in reuse or continued use in Region 4 for which EPA does not have property value or tax data, including 19 NPL federal facilities.

This 2018 profile looks at how redevelopment activities at Superfund sites make a difference in communities across Region 4. 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 following cleanup and sites that have remained in use throughout the cleanup process. EPA updates these profiles periodically. The beneficial effects may increase or decrease over time due to changes in:

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

Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 4.

Figure 3. Left: The 25 Calhoun office building at the Calhoun Park Area site (South Carolina); Right: Vista View Park at the Davie Landfill site (Florida).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 4 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 4 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 4 helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment 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 redevelopment support efforts in EPA Region 4 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 4 communities and EPA find the right tools to move site redevelopment forward.
- Making efforts to help address communities' and developers' liability, safety and reuse concerns through development of educational materials, comfort letters, developer agreements and environmental status reports – known as Ready for Reuse Determinations – that provide information about the appropriate use of sites.
- Supporting partnerships with groups committed to returning Superfund sites to productive use, such as the Academy of Model Aeronautics.
- 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 4, making it easier to both consider future use of Superfund sites prior to cleanup and to identify opportunities for removing reuse barriers. These efforts also help tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and other partners and stakeholders to better understand potential future uses for Superfund sites. This helps stakeholders engage early in the cleanup process, ensuring that Superfund sites are restored as productive assets for communities. Most importantly, these efforts lead to significant returns for communities, including jobs, annual income and tax revenues.

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.[2] EPA then refers sites warranting long-term cleanup to its remedial program or to state programs. 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 EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. EPA has placed 244 sites in Region 4 on the NPL.

Whenever possible, EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 4, 128 NPL sites and 18 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. 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 4.

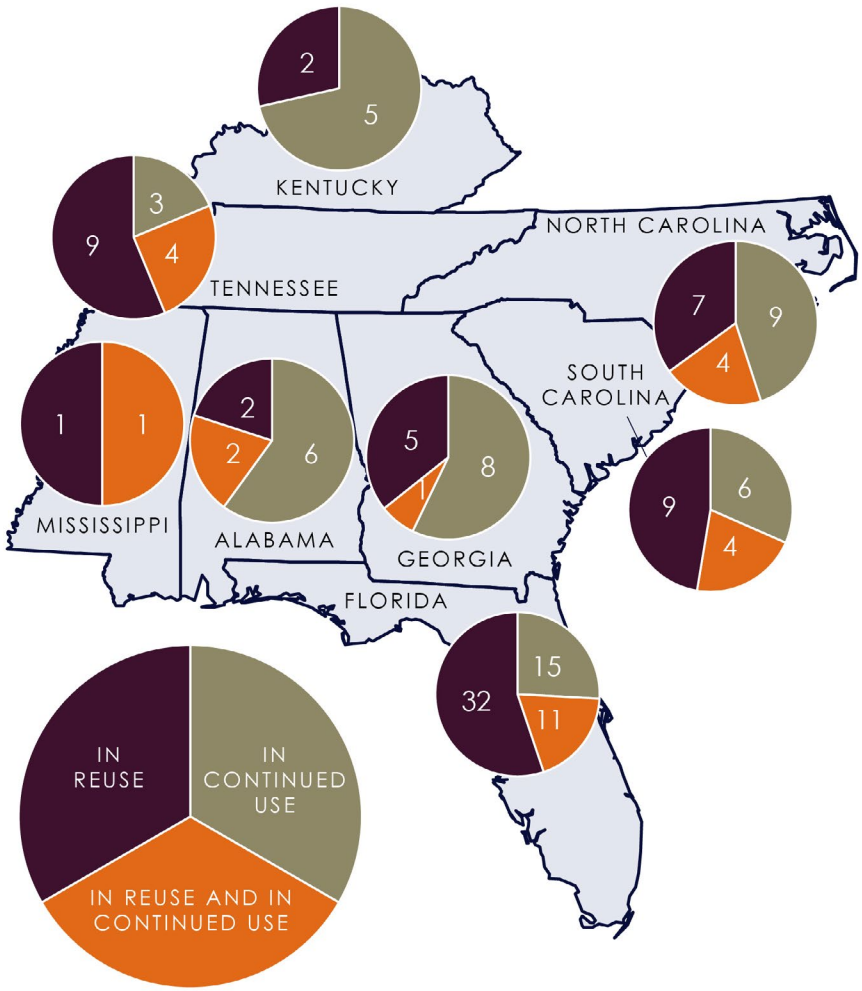

Figure 4. Sites in Reuse and Continued Use in Region 4

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

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 4

Businesses and Jobs

EPA has collected economic data for 542 businesses, government agencies and civic organizations operating on 87 NPL sites and nine non-NPL sites in reuse and continued use in Region 4.[3] (See the State Redevelopment Profiles for each state's reuse details.) Businesses and organizations at these sites are part of several different sectors, including manufacturing, government, wholesale trade and retail trade.

Businesses, facilities and organizations at these sites include chemical manufacturing plants Olin Corporation and Akzo Nobel Functional Chemical, the Miami-Dade County Public Works Department, medical equipment manufacturer Covidien, aircraft manufacturer Piper Aircraft, and electrical lighting wholesaler GE Lighting Systems.

The businesses and organizations at these sites earn about $5.7 billion in estimated annual sales and employ about 14,566 people, earning an estimated $853 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. More detailed information is presented in Table 1.[4]

Table 1. Site and Business Information for Region 4 Sites in Reuse and Continued Use (2017)

	Sites[a]	Sites with Businesses[b]	Businesses[c]	Total Annual Sales[d]	Total Employees	Total Annual Employee Income
In Reuse	*67*	*38*	*140*	*$458 million*	*2,664*	*$115 million*
In Continued Use	*52*	*37*	*242*	*$2.9 billion*	*7,895*	*$447 million*
In Reuse and in Continued Use	*27*	*21*	*160*	*$2.3 billion*	*4,007*	*$291 million*
Total	***146***	***96[e]***	***542***	***$5.7 billion***	***14,566***	***$853 million***

[a] 19 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.
[c] Business information is not available for all businesses on all Superfund sites in reuse or continued use.
[d] For information on the collection of business, jobs and sales data, see Sources.
[e] See footnote 1, page 1.

3 See footnote 1, page 1.
4 For additional information on the collection of business, jobs and sales data, see Sources.

Figure 5. Left: Closeup of model aircraft at Fritz Field at the Beulah Landfill site (Florida); Right: Aerial view of the Calhoun Park Area site, including the South Carolina Aquarium, a shopping center, ferry terminal, parking, green space and an electrical substation (South Carolina).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 4 Example
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.*	*Beulah Landfill (Florida) – this closed landfill provides open-space recreation opportunities for the community, including a model airplane and glider flying area.*
In Continued Use	*Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.*	*National Southwire Aluminum Co. (Kentucky) – an aluminum reduction facility has operated on site since 1969.*
In Reuse and Continued Use	*Part of a site is in continued use and part of the site is in reuse.*	*Calhoun Park Area (South Carolina) – an electrical substation remains in place and provides electricity to most of downtown Charleston. New uses after cleanup include businesses, green space and restored shorelines.*

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 Pepper Steel & Alloys, Inc. site in Florida are now valued at nearly $14 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.

Region 4 Sites in Reuse and Continued Use: Property Value and Tax Highlights

Total Property Value: *$733 million*

Total Annual Property Taxes: *$9.9 million*

Figure 6. Industrial use at the Pepper Steel & Alloys, Inc. site (Florida).

EPA has collected property value and tax data for 67 Superfund sites in reuse and continued use in Region 4.[5] These sites span 902 property parcels and 9,659 acres. They have a total property value of $733 million. The average total property value per acre is $76,000.

Land and improvement property value information is available for 65 sites. These properties have a total land value of $302 million and a total improvement value of $314 million.[6]

Property tax information is available for 66 sites. The properties generate a combined $9.9 million in local property taxes annually.

Table 2. Property Value and Tax Information for Sites in Reuse and Continued Use in Region 4[a]

Total Land Value (65 sites)[b]	*Total Improvement Value (65 sites)*	*Total Property Value (67 sites)*	*Total Property Value per Acre (67 sites)[c]*	*Total Annual Property Taxes (66 sites)*
$302 million	*$314 million*	*$733 million*	*$76,000*	*$9.9 million*

[a] Results are based on an EPA Superfund Redevelopment Initiative effort in 2018 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 2016 to 2018 where date information was provided. For additional information, see Sources.

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

[c] Based on total property value amount of $733 million divided by total acreage of 9,659.

5 There are 79 additional sites in reuse or continued use in Region 4 for which EPA does not have property value or tax data, including 19 NPL federal facilities. See footnote 1, page 1.

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

Beneficial Effects from Enhanced Recreational and Ecological Amenities

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 4 sites in reuse and continued use provide recreational and ecological benefits. Greenspace 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 can 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 can serve 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 recreational activities can include outdoor recreation spending and reduced public costs related to healthcare and infrastructure. In 2012, outdoor recreation contributed $646 billion to the U.S. economy, supporting 6.1 million jobs and generating $39.9 billion in national tax revenue and $39.7 billion in state and local tax revenue.[7] Protected green space can also increase the property values of nearby homes by providing amenities that draw people to live and work in the community.

Many sites in Region 4 provide recreational and ecological benefits. At the Hercules 009 site in Brunswick, Georgia, habitat improvements including basking logs, cover boards and bird houses have been installed on site to create a habitat for small animals and insects, resulting in the return of many larger species to the site, including fox, raccoon, squirrel and larger birds. Planting over 30 varieties of plants and trees at the Landia Chemical Company site has provided habitat for native wildlife, migratory birds and pollinators, helped with groundwater cleanup, and earned the city of Lakeland, Florida, an Excellence in Site Reuse Award for its efforts. At the Arlington Blending & Packaging site in Arlington, Tennessee, EPA recognized the town of Arlington with its Excellence in Site Reuse award in 2009 for its transformation of the site into a neighborhood park featuring a playground, field space, trails and exercise stations.

Figure 7. Bird house installed at the Hercules 009 site (Georgia).

7 The Outdoor Recreation Economy. Outdoor Industry Association. Available at outdoorindustry.org/pdf/OIA_OutdoorRecEconomyReport2012.pdf.

Figure 8. Restored wetlands at the Sapp Battery Salvage site (Florida).

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 4. A native plant habitat reserve and wetlands cover part of the Solitron Microwave site in Port Salerno, Florida, and the Wright Chemical Corporation - Livingston Creek site in Riegelwood, North Carolina, includes a wetland and a fishery. Over 30 acres of the Sapp Battery Salvage site in Cottondale, Florida, include restored wetlands and ecological habitat.

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

These benefits also have economic value. Replacing wetlands' water treatment services with manmade facilities, for example, would be expensive. Worldwide, wetlands provide an estimated $14.9 trillion in ecosystem services. To learn more, see:

- EPA's *Economic Benefits of Wetlands*: nepis.epa.gov/Exe/ZyPDF.cgi/2000D2PF.PDF?Dockey=2000D2PF.PDF.
- EPA's *Why Are Wetlands Important?*: www.epa.gov/wetlands/why-are-wetlands-important.

REDEVELOPMENT IN ACTION

HARRIS CORP. (PALM BAY PLANT)

Continued Industrial Use and New Public Service Uses

The 310-acre Harris Corp. (Palm Bay Plant) Superfund site is located in Palm Bay, Florida. Since the 1950s, a variety of manufacturing activities have taken place at the site. These activities include manufacturing of integrated circuits for government defense and aerospace programs, as well as products for consumer electronics and telecommunications equipment. Other previous site uses included drum storage and machine shop, chromium plating, and painting operations. Chemical releases resulting from fires and an acid line leak contaminated site groundwater. EPA added the site to the NPL in 1987. Cleanup activities included extraction and treatment of contaminated groundwater and groundwater use restrictions. Groundwater monitoring is ongoing.

The successful cleanup of the site allowed for continued manufacturing operations on the property. Intersil Corporation (Intersil) makes semiconductors and Harris Corporation makes government communications systems on site. In 2010, Intersil Corporation donated a $13 million state-of-the-art fabrication facility and a 5-acre property to the University of Central Florida as a research center. The university kept the option to accept the donated facility until the summer of 2013 but decided against using the buildings. Intersil Corporation worked with EPA and the Florida Institute of Technology (FIT) to finalize FIT's purchase of the facility and land. FIT plans to use the area as an extended campus for students.

Intersil also leases portions of its property for use by other companies. In February 2015, Harris Corporation opened a new 464,000-square-foot, $130 million technology center on site. The center's construction created nearly 300 jobs for workers in the area. In total, site businesses employ over 870 people, contributing over $81 million in estimated annual employee income. In 2017, site businesses generated nearly $600 million in estimated annual sales. The value of site properties in 2017 exceeded $114 million, generating over $1.7 million in local property taxes.

Figure 9. The Intersil facility at the Harris Corp. (Palm Bay Plant) site (Florida).

REDEVELOPMENT IN ACTION

TOWNSEND SAW CHAIN CO.

Property Redevelopment for Commercial Businesses

The 50-acre Townsend Saw Chain Co. Superfund site is located in Pontiac, South Carolina. From 1964 to 1981, two companies made metal products there, including office recording equipment and components for chainsaws. Improper disposal of facility wastewater contaminated soil and groundwater with heavy metals and volatile organic compounds.

EPA added the site to the NPL in 1990. Cleanup activities included excavation and disposal of contaminated soil and sediment, treatment of contaminated groundwater, long-term monitoring, and land and groundwater use restrictions.

The successful cleanup of the site allowed for redevelopment of the property. Of the original 50 acres, 36 acres have been sold for commercial development. Centerline Development retains ownership of the remaining 15 acres. AMBAC International, a manufacturer and supplier of fuel injection equipment, currently operates out of the former Townsend manufacturing facility. Other site reuses include a veterinary hospital, a kennel, a hotel, an auto-body shop, an industrial park, two retail stores, a gas station and restaurants. Together, these businesses employ over 150 people, contribute close to $7 million in estimated annual employee income, and generate about $16 million in estimated annual sales. The 2017 values of site properties exceeded $12 million, generating nearly $360,000 in local property taxes.

Figure 10. AMBAC International's facility at the Townsend Saw Chain Co. site (South Carolina).

REDEVELOPMENT IN ACTION

MARTIN-MARIETTA, SODYECO, INC.

Eco-Industrial Park

The Martin-Marietta, Sodyeco, Inc. Superfund site is located about 10 miles west of Charlotte, North Carolina. For over 70 years, various companies produced textile dyes, chemicals and other industrial products on site. Improper disposal of chemical wastes and landfilled materials contaminated site soil and groundwater. EPA placed the site on the NPL in 1983. EPA's cleanup included capping some contamination in place, disposing of waste materials and contaminated soil off site, and groundwater treatment. EPA took the site off the NPL in 2012. EPA's Resource Conservation and Recovery Act (RCRA) program took over management of the site.

To make site reuse possible, EPA's Superfund and RCRA programs worked closely with the site owner and the community to make sure reuse plans were compatible with the cleanup. Thanks to those cooperative efforts, Forsite Development has started turning the area into ReVenture Park, a business park focused on energy efficiency, renewable energy and environmental technology. The project is home to a biomass combined heat-and-power project, an algae-to-fuel pilot plant, a fuels and lubricants distributor, a liquids tote washing and recycling facility, a composite walls contractor, a composting operation, a greenhouse facility and a 35-acre aquaculture project, among others.

Environmental stewardship is also an integral part of site redevelopment plans. A 185-acre conservation area enhances the site's natural resources. Projects include wildlife habitat, stream restoration and a trail system connecting the regional Carolina Thread Trail across the site to the nearby U.S. National Whitewater Center. The park also demonstrates how a healthy industrial ecosystem can eliminate waste and support symbiotic relationships. For example, site business Entogenetics received a grant from the U.S. military to create a ballistic vest using spider silk from genetically modified silkworm. These worms eat leaves from mulberry trees grown on site. Another site business, Waste Knot Wood, can then use the leftover brush as a fuel source for its biomass power unit.

Figure 11. Entrance to ReVenture Eco-Industrial Park at the Martin-Marietta, Sodyeco, Inc. site (North Carolina).

REDEVELOPMENT IN ACTION

AIRCO PLATING CO.

Continued Industrial Use

The 2-acre Airco Plating Co. Superfund site is part of a commercial and industrial area in Miami, Florida. A metal-plating facility has operated on site since 1955. Between the mid-1950s and 1973, site operations contaminated soil and groundwater with metals and hazardous chemicals. EPA placed the site on the NPL in 1990. Cleanup included capping contaminated soil, extracting vapors from contaminated soil and ongoing groundwater treatment. Land use restrictions make sure that site activities do not damage the cap or affect the groundwater treatment system.

During the remedy selection process, EPA prioritized design of a remedy that would be compatible with continuing business operations. Because plating operations require lots of water, both EPA and Airco recognized an opportunity to incorporate the groundwater treatment process into business operations. With this in mind, EPA and Airco designed the groundwater remedy so that groundwater is directed to an on-site holding tank after treatment. Treated water is stored until it is used to rinse plated materials. Airco estimates that 20,000 to 30,000 gallons of treated water are used daily.

Airco Plating Company continues to operate on site. The company employs 35 people and provides plating services to aviation, aerospace and commercial industries. In 2017, the business generated over $4 million in estimated annual sales. In 2017, the site property had a value of $1.4 million.

Figure 12. The active metal plating facility at the Airco Plating Co. site (Florida).

REDEVELOPMENT ON THE HORIZON IN REGION 4

TRANSFORMING A FORMER STEEL MILL INTO A STATE-OF-THE-ART NATURAL GAS STORAGE FACILITY

The Florida Steel Corp. Superfund site occupies 152 acres northwest of Indiantown, Florida. The site includes the location of a steel mill operated by Florida Steel Corporation, now known as Gerdau Ameristeel, from 1970 to 1982. EPA placed the site on the Superfund program's National Priorities List (NPL) in 1983 because of contaminated soil, groundwater and wetlands resulting from facility operations.

Cleanup activities included removing structures, removing contaminated soil and placing it in a 6-acre landfill on site, installing a groundwater treatment system, and restoring the nearby wetland. Cleanup finished in 1999. Regular reviews of the site's cleanup approach by EPA have found that the remedy continues to protect people and the environment from remaining site contamination. Today, site monitoring and operation and maintenance activities are ongoing.

The Floridian Natural Gas Storage Company plans to build two large steel natural gas storage tanks on site. The facility, which will start operating in 2018, will provide an economical option for storage of domestically produced natural gas in liquid and gas forms for industrial, transportation, agricultural, utility and marine uses. In 2018, EPA also placed the site on its Redevelopment Focus List of the Superfund NPL sites with the greatest expected redevelopment and commercial potential. The Redevelopment Focus List is part of the Agency's renewed focus on accelerating work and progress at all Superfund sites while working to successfully return Superfund sites to productive use in communities across the country.

Figure 13. Area of the Florida Steel Corp. site ready for redevelopment in support of the Floridan Natural Gas Storage Company (Florida).

CONCLUSION

EPA works closely with its partners at Superfund sites across Region 4 to make sure sites can safely be reused or remain in continued use during and following cleanup. 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 128 NPL sites and 18 non-NPL Superfund sites in Region 4 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 4, including at least one site in each of the eight Region 4 states. EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 4.

Figure 14. The Haywood Vocational Opportunities facility at the Benfield Industries, Inc. site (North Carolina).

The redevelopment of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among EPA, tribes, state agencies, local governments, communities, 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 4, Superfund sites are now home to major commercial and industrial facilities, mid-size developments and small businesses providing services to surrounding communities. EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Site Redevelopment Resources

EPA Region 4 Superfund Redevelopment Initiative Coordinators
Shelby Johnston | 404-562-8287 | johnston.shelby@epa.gov
Joydeb Majumder | 404-562-9121 | majumder.joydeb@epa.gov

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

Superfund Redevelopment Initiative 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

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STATE REDEVELOPMENT PROFILES








ALABAMA REDEVELOPMENT PROFILE

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

Businesses and Jobs

EPA has collected economic data for 43 businesses and organizations operating on seven sites in reuse and continued use in Alabama.

Table 3. Detailed Site and Business Information for Sites in Reuse and Continued Use in Alabama (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	2	0	0	$0	0	$0
In Continued Use	6	6	40	$620 million	628	$46 million
In Reuse and in Continued Use	2	1	3	$710 million	263	$23 million
Total	10	7	43	$1.3 billion	891	$69 million

[a] Three sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for three Superfund sites in reuse and continued use in Alabama. These sites span 59 property parcels and 3,377 acres.

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

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
$47 million	$6 million	$53 million	$322,000

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for data collected.

Figure 15. The fabrication business at the Interstate Lead Co. (ILCO) site.

Did You Know?

From 1970 to 1992, the Interstate Lead Company operated a lead-battery recycling and lead smelting business at the Interstate Lead Co. (ILCO) site in Leeds, Alabama. Today, site areas support many uses, including homes, a restaurant, a fabrication business, a church and a gas station.

FLORIDA REDEVELOPMENT PROFILE

EPA partners with the Florida Department of Environmental Protection to oversee the investigation and cleanup of Superfund sites in Florida. Florida has 58 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 and continued use in Florida.

Businesses and Jobs

EPA has collected economic data for 242 businesses and organizations operating on 40 sites in reuse and continued use in Florida.

Table 5. Detailed Site and Business Information for Sites in Reuse and Continued Use in Florida (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*32*	*21*	*105*	*$334 million*	*1,922*	*$93 million*
In Continued Use	*15*	*9*	*76*	*$1.2 billion*	*951*	*$62 million*
In Reuse and in Continued Use	*11*	*10*	*61*	*$1.3 billion*	*2,345*	*$185 million*
Total	*58*	*40*	*242*	*$2.8 billion*	*5,218*	*$340 million*

[a] Six sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for 38 Superfund sites in reuse and continued use in Florida. These sites span 552 property parcels and 2,536 acres.

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

Total Land Value (37 sites)	Total Improvement Value (37 sites)	Total Property Value (38 sites)	Total Annual Property Taxes (38 sites)
$152 million	*$160 million*	*$426 million*	*$7 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 2016 to 2018 where date information was provided.

Figure 16. One of the commercial businesses at the Anaconda Aluminum Co./Milgo Electronics Corp. site.

Did You Know?

Electrochemical processing and electroplating operations contaminated groundwater, surface water, sediments and soils at the Anaconda Aluminum Co./Milgo Electronics Corp. site in Miami, Florida. Today, the former Anaconda Aluminum facility is a warehouse and several commercial and industrial businesses occupy the former Milgo Electronics facility. These businesses generate over $1.1 million in estimated annual sales and provide about $130,000 in estimated annual income.

GEORGIA REDEVELOPMENT PROFILE

EPA partners with the Environmental Protection Division of the Georgia Department of Natural Resources to oversee the investigation and cleanup of Superfund sites in Georgia. Georgia has 14 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 and continued use in Georgia.

Businesses and Jobs

EPA has collected economic data for 39 businesses and organizations operating on 11 sites in reuse and continued use in Georgia.

Table 7. Detailed Site and Business Information for Sites in Reuse and Continued Use in Georgia (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales[c]	Total Employees	Total Annual Employee Income
In Reuse	*5*	*3*	*4*	*$610,000*	*128*	*$4 million*
In Continued Use	*8*	*7*	*27*	*$254 million*	*796*	*$34 million*
In Reuse and in Continued Use	*1*	*1*	*8*	*$10 million*	*55*	*$3 million*
Total	*14*	*11*	*39*	*$265 million*	*979*	*$41 million*

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.
[c] 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 five Superfund sites in reuse and continued use in Georgia. These sites span 12 property parcels and 1,144 acres.

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

Total Land Value (5 sites)	Total Improvement Value (5 sites)	Total Property Value (5 sites)	Total Annual Property Taxes (5 sites)
$2 million	*$27 million*	*$29 million*	*$165,000*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for data collected.

Figure 17. The Glynn County Sheriff's Office at the LCP Chemicals Georgia site.

Did You Know?

Close coordination between EPA and Glynn County enabled the successful reuse of the LCP Chemicals Georgia site in Brunswick, Georgia. In 2014, Glynn County opened a county detention center and administrative office space for the Glynn County Sheriff's Office on site. The facility provides over $3.3 million in estimated annual income.

KENTUCKY REDEVELOPMENT PROFILE

EPA partners with the Kentucky Department for Environmental Protection to oversee the investigation and cleanup of Superfund sites in Kentucky. Kentucky has seven 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 and continued use in Kentucky.

Businesses and Jobs

EPA has collected economic data for five businesses and organizations operating on three sites in continued use in Kentucky.

Table 9. Detailed Site and Business Information for Sites in Reuse and Continued Use in Kentucky (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*2*	*0*	*0*	*$0*	*0*	*$0*
In Continued Use	*5*	*3*	*5*	*$249 million*	*434*	*$31 million*
In Reuse and in Continued Use	*0*	*0*	*0*	*$0*	*0*	*$0*
Total	*7*	*3*	*5*	*$249 million*	*434*	*$31 million*

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

Property value and tax data were not available for sites in reuse and continued use in Kentucky.

Figure 18. Automobile salvage yard at the National Electric Coil Co./Cooper Industries site.

Did You Know?

From 1951 to 1985, the National Electric Coil Company operated an industrial equipment rebuilding and remanufacturing facility at the National Electric Coil Co./Cooper Industries site in Dayhoit, Kentucky. Since 2010, an automobile salvage yard has operated on site. It generates nearly $70,000 in estimated annual sales.

MISSISSIPPI REDEVELOPMENT PROFILE

EPA partners with the Mississippi Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Mississippi. Mississippi has two 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 and continued use in Mississippi.

Businesses and Jobs

EPA has collected economic data for six businesses and organizations operating on two sites in reuse and continued use in Mississippi.

Table 10. Detailed Site and Business Information for Sites in Reuse and Continued Use in Mississippi (2017)

	Sites	Sites with Businesses	Businesses[a]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*1*	*1*	*2*	*$314,000*	*2*	*$78,000*
In Continued Use	*0*	*0*	*0*	*$0*	*0*	*$0*
In Reuse and in Continued Use	*1*	*1*	*4*	*$18 million*	*25*	*$904,000*
Total	*2*	*2*	*6*	*$18.3 million*	*27*	*$982,000*

[a] 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 one Superfund site in reuse and continued use in Mississippi. These sites span five property parcels and 50 acres.

Table 11. Property Value and Tax Information for Sites in Reuse and Continued Use in Mississippi[a]

Total Land Value (1 site)	Total Improvement Value (1 site)	Total Property Value (1 site)	Total Annual Property Taxes (1 site)
$348,000	*$1 million*	*$1.3 million*	*$29,000*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for data collected.

Figure 19. Buildings in reuse at the Flowood site.

Did You Know?

Corrugated boxes have been made at the Flowood site in Flowood, Mississippi, since 1956. Site reuses include storage space and distribution company, flea market and real estate office operations. In total, these businesses employ 25 people. They provide over $900,000 in estimated annual income and generate close to $18 million in estimated annual sales.

NORTH CAROLINA REDEVELOPMENT PROFILE

EPA partners with the North Carolina Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in North Carolina. North Carolina has 20 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 and continued use in North Carolina.

Businesses and Jobs

EPA has collected economic data for 39 businesses and organizations operating on 15 sites in reuse and continued use in North Carolina.

Table 12. Detailed Site and Business Information for Sites in Reuse and Continued Use in North Carolina (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*7*	*6*	*16*	*$48 million*	*481*	*$14 million*
In Continued Use	*9*	*5*	*13*	*$247 million*	*622*	*$40 million*
In Reuse and in Continued Use	*4*	*4*	*10*	*$239 million*	*808*	*$55 million*
Total	*20*	*15*	*39*	*$534 million*	*1,911*	*$109 million*

[a] Two sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for eight Superfund sites in reuse and continued use in North Carolina. These sites span 216 property parcels and 1,813 acres.

Table 13. Property Value and Tax Information for Sites in Reuse and Continued Use in North Carolina[a]

Total Land Value (8 sites)	Total Improvement Value (8 sites)	Total Property Value (8 sites)	Total Annual Property Taxes (8 sites)
$31 million	*$52 million*	*$83 million*	*$722,000*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for data collected where date information was provided.

Figure 20. The farm storage facility with rail spurs at the Gurley Pesticide Burial site.

Did You Know?

Reuses at the Gurley Pesticide Burial site in Selma, North Carolina, include a farm storage facility and rail spurs. The farm storage facility generates over $3.5 million in estimated annual sales and provides close to $850,000 in estimated annual income.

SOUTH CAROLINA REDEVELOPMENT PROFILE

EPA partners with the South Carolina Department of Health and Environmental Control to oversee the investigation and cleanup of Superfund sites in South Carolina. South Carolina has 19 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 and continued use in South Carolina.

Businesses and Jobs

EPA has collected economic data for 89 businesses and organizations operating on 13 sites in reuse and continued use in South Carolina.

Table 14. Detailed Site and Business Information for Sites in Reuse and Continued Use in South ***Carolina (2017)***

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*9*	*5*	*10*	*$28 million*	*88*	*$4 million*
In Continued Use	*6*	*4*	*5*	*$102 million*	*136*	*$7 million*
In Reuse and in Continued Use	*4*	*4*	*74*	*$62 million*	*511*	*$25 million*
Total	*19*	*13*	*89*	*$192 million*	*735*	*$36 million*

[a] Two sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for eight Superfund sites in reuse and continued use in South Carolina. These sites span 45 property parcels and 553 acres.

Table 15. Property Value and Tax Information for Sites in Reuse and Continued Use in South Carolina[a]

Total Land Value (7 sites)	Total Improvement Value (7 sites)	Total Property Value (8 sites)	Total Annual Property Taxes (7 sites)
$65 million	*$39 million*	*$106 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 was 2017 for data collected.

Figure 21. The mini golf course at the Lexington County Landfill Area site.

Did You Know?

In 2012, the Lexington County Landfill Area site in Cayce, South Carolina, won EPA Region 4's Excellence in Site Reuse award. Site reuses include a recycling center, a driving range, a golf practice facility for the University of South Carolina, a mini golf course and baseball fields. Green remediation practices on site include the use of treated groundwater for land irrigation and the use of recycled tires for part of the site's capped area.

TENNESSEE REDEVELOPMENT PROFILE

EPA partners with the Tennessee Department of Environment & Conservation to oversee the investigation and cleanup of Superfund sites in Tennessee. Tennessee has 16 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 and continued use in Tennessee.

Businesses and Jobs

EPA has collected economic data for 79 businesses and organizations operating on five sites in reuse and continued use in Tennessee.

Table 16. Detailed Site and Business Information for Sites in Reuse and Continued Use in Tennessee (2017)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	9	2	3	$48 million	43	$1 million
In Continued Use	3	3	76	$274 million	4,328	$226 million
In Reuse and in Continued Use	4	0	0	$0	0	$0
Total	16	5	79	$322 million	4,371	$227 million

[a] Four sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for four Superfund sites in reuse and continued use in Tennessee. These sites span 13 property parcels and 187 acres.

Table 17. Property Value and Tax Information for Sites in Reuse and Continued Use in Tennessee[a]

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (4 sites)	Total Annual Property Taxes (4 sites)
$5 million	$29 million	$34 million	$506,000

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for data collected.

Figure 22. The non-profit food bank operates out of this building at the Amnicola Dump site.

Did You Know?

Past uses at the Amnicola Dump site in Chattanooga, Tennessee, included clay mining and a municipal dump. A tool construction supply company, a non-profit food bank and a teaching garden are now located on site. Site businesses and organizations employ 41 people. They provide over $1.2 million in estimated annual income and generate over $47 million in estimated annual sales.

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SOURCES

BUSINESS, JOBS, SALES AND INCOME INFORMATION

Information on the number of employees and sales volume for on-site businesses comes from the Hoovers/Dun & Bradstreet (D&B) (www.dnb.com) database. EPA also gathers information on businesses and corporations from D&B. D&B maintains a database of more than 225 million active and inactive businesses worldwide.

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

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

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

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

Business and employment data used for this profile were collected in 2017. Estimated annual employment income was calculated using 2017 jobs data and BLS average weekly wage data for those jobs from 2016 (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.

PROPERTY VALUE AND TAX INFORMATION

EPA collected on-site property values and property taxes included in this profile for a subset of Superfund sites by comparing available site boundary information with available parcel boundary information and gathering information for selected parcels from county assessor datasets. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which typically varied from 2016 to 2018 where date information was provided. All figures presented have been rounded for the convenience of the reader. Federal facility sites are excluded from all property value and tax calculations.

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 Initiative case studies as well as other resources. Links to EPA's Superfund Redevelopment Initiative case studies and other resources are included below.

EPA Resources

Airco Plating, Co. 2016. Reuse and the Benefit to the Community, Airco Plating, Co. semspub.epa.gov/src/document/HQ/196756.

Martin-Marietta, Sodyeco, Inc. 2014. Return to Use Initiative Demonstration Project. semspub.epa.gov/src/document/04/11121237.

Other Resources

Martin-Marietta, Sodyeco, Inc. 2015. Reclaim, Restore, Reinvent: Creating Jobs and Cleaner Energy. www.reventurepark.com/wp-content/uploads/EPA-Case-Study-ReVenture-Park_Forsite.pdf.

Back cover photos: Martin-Marietta, Sodyeco, Inc. (North Carolina), Camilla Wood Preserving site (Georgia), Solitron Microwave (Florida)

EPA

United States Environmental Protection Agency

Region 4
61 Forsyth Street SW
Atlanta, GA 30303

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